

# Yealink



## VC400 & VC120 Video Conferencing System Administrator Guide

Version 22.15  
Feb. 2017

## Copyright

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## Declaration of Conformity



Hereby, Yealink(Xiamen) Network Technology CO., LTD. declares that this phone is in conformity with the essential requirements and other relevant provisions of the CE, FCC.

You can find the CE and FCC information from the label on the back of the VC400/120 Codec.

Statements of compliance can be obtained by contacting [support@yealink.com](mailto:support@yealink.com).

## CE Mark Warning

This device is marked with the CE mark in compliance with EC Directives 2014/30/EU and 2014/35/EU.

### **Part 15 FCC Rules**

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device is compliant with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

## Industry Canada (IC)

This Class [B] digital apparatus complies with Canadian ICES-003 Rules.

## Class B Digital Device or Peripheral

Note: This device is tested and complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experience radio/TV technician for help.

## WEEE Warning



To avoid potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. WEEE must not be regarded as unsorted municipal waste and must be collected and disposed of separately by a competent authority.

## Customer Feedback

We are striving to improve our documentation quality and we appreciate your feedback. Email your opinions and comments to [DocsFeedback@yealink.com](mailto:DocsFeedback@yealink.com).



## About This Guide

The VC400/VC120 video conferencing system represents a new generation of full high-definition video conferencing launched by Yealink. It features, in addition to a high-definition audio-visual experience, flexible compatibility, easy deployment and intelligent network adaptation. With high product standards, it is an ideal choice for SMEs. The VC400/VC120 video conferencing system allows branch offices, as well as branch and head offices, to communicate flexibly and cooperate efficiently.

The guide is intended for administrators who need to configure, customize, manage, and troubleshoot the video conferencing system properly, rather than for end-users. It provides details on the functionality and configuration of the Yealink video conferencing system.

Many of the features described in this guide involve network and account settings, which could affect the system's performance in the network. Therefore, an understanding of IP networking and a prior knowledge of VoIP telephony concepts are necessary.

## Documentations

This guide covers the VC400/VC120 video conferencing system. In addition to the administrator guide, the following related documentations are available:

- Quick Start Guide, which describes how to assemble the system and configure basic network features on the system.
- User Guides, which describe how to configure and use basic features available on the systems.
- Video Conference Room Deployment Solution, which describes the conference room layout requirements and how to deploy the systems.
- Network Deployment Solution, which describes how to deploy network for your systems.

You can download the above documentations from Yealink website:

<http://support.yealink.com/documentFront/forwardToDocumentFrontDisplayPage>

For support or service, please contact your Yealink reseller or go to Yealink Technical Support online: <http://www.yealink.com/Support.aspx>.

## Firmware

Common reasons for updating firmware include fixing bugs or adding features to the device.

You can download the latest firmware for your product online:

<http://support.yealink.com/documentFront/forwardToDocumentFrontDisplayPage>

For more information on how to upgrade the system firmware, refer to [Upgrading System Firmware](#) on page 249.

## In This Guide

This administrator guide includes the following chapters:

- Chapter 1, "[System Overview](#)" describes system components, icons and Indicator LEDs.
- Chapter 2, "[Getting Started](#)" describes how to install and start up the system and configuration methods.
- Chapter 3, "[Configuring Network](#)" describes how to configure network features on the system.
- Chapter 4, "[Configuring Call Preferences](#)" describes how to configure call preferences on the system.
- Chapter 5, "[Configuring System Settings](#)" describes how to configure basic, audio and video features on the system.
- Chapter 6, "[System Management](#)" describes how to manage system contacts and call history.
- Chapter 7, "[Configuring Security Features](#)" describes how to configure security features on the system.
- Chapter 8, "[System Maintenance](#)" describes how to upgrade system firmware and reset the system.
- Chapter 9, "[Troubleshooting](#)" describes how to troubleshoot the system and provides some common troubleshooting solutions.

## Summary of Changes

This section describes the changes to this guide for each release and guide version.

### Changes for Release 22, Guide Version 22.15

The following section is new for this version:

- [Logging into the StarLeaf Cloud Platform](#) on page 105
- [Account Polling](#) on page 129

Major updates have occurred to the following sections:

- [H.323 Tunneling](#) on page 73
- [H.460 Firewall Traversal](#) on page 91
- [Methods of Transmitting DTMF Digit](#) on page 132
- [Dual-Stream Protocol](#) on page 183
- [Camera Control Protocol](#) on page 195
- [H.235](#) on page 243

## Changes for Release 22, Guide Version 22.5

The following sections are new for this version:

- [Remote Control via Web User Interface](#) on page 32
- [Auto Dialout Mute](#) on page 144
- [Meeting Blacklist](#) on page 171
- [USB Configuration](#) on page 200
- [Upgrading VCC20 Camera Firmware](#) on page 250

Major updates have occurred to the following sections:

- [Icon Instructions](#) on page 25
- [Keep Alive](#) on page 88
- [Configuring Cloud Settings](#) on page 101
- [DTMF](#) on page 131
- [Dual-Stream Protocol](#) on page 183
- [Camera Control Protocol](#) on page 195
- [Secure Real-Time Transport Protocol](#) on page 239

## Changes for Release 21, Guide Version 21.20

The following sections are new for this version:

- [Keyboard Input Method](#) on page 176
- [Configuring Cloud Settings](#) on page 101

Major updates have occurred to the following sections:

- [Icon Instructions](#) on page 25
- [Setup Wizard](#) on page 40
- [Directory](#) on page 209

## Changes for Release 21, Guide Version 21.15

The following section is new for this edition:

- [IPv6 Support](#) on page 56
- [Hiding Icons in a Call](#) on page 172
- [Output Resolution](#) on page 199
- [Video Recording](#) on page 201
- [Screenshot](#) on page 203

- [VCS Integrated with Control Systems](#) on page 226

Major updates have occurred to the following sections:

- [Packaging Contents](#) on page 3
- [System Component Instructions](#) on page 10
- [Configuring LAN Properties](#) on page 48
- [Search Source List in Dialing](#) on page 221
- [8-Way Conference License](#) on page 224

## Changes for Release 20, Guide Version 20.6

The following sections are new for this version:

- [Firmware](#) on page v
- [Physical Features](#) on page 2
- [VCM30 Video Conferencing Microphone Array](#) on page 20
- [Remote Control Battery Safety Information](#) on page 38
- [Static DNS](#) on page 50
- [STUN](#) on page 84
- [Keep Alive](#) on page 88
- [Rport](#) on page 90
- [DTMF](#) on page 131
- [Video Codecs](#) on page 138
- [Ringback Timeout](#) on page 149
- [Auto Refuse Timeout](#) on page 150
- [SIP IP Call by Proxy](#) on page 151
- [Meeting Password](#) on page 168
- [Meeting Whitelist](#) on page 169
- [License](#) on page 223

Major updates have occurred to the following sections:

- [Packaging Contents](#) on page 3
- [VCC18/VCC20 HD Camera](#) on page 12
- [VCR10 Remote Control](#) on page 23
- [LED Instructions](#) on page 29
- [System Installation](#) on page 33
- [VLAN](#) on page 61

- [Configuring the System for Use with a Firewall or NAT](#) on page 77
- [H.460 Firewall Traversal](#) on page 91
- [Configuring SIP Settings](#) on page 122
- [Audio Setting](#) on page 177
- [Dual-Stream Protocol](#) on page 183
- [Camera Control Protocol](#) on page 195
- [Dual Screen](#) on page 221
- [H.235](#) on page 243
- [Capturing Packets](#) on page 260



# Table of Contents

<b>About This Guide .....</b>	<b>V</b>
Documentations.....	v
Firmware .....	v
In This Guide .....	vi
Summary of Changes .....	vi
Changes for Release 22, Guide Version 22.15 .....	vi
Changes for Release 22, Guide Version 22.5 .....	vii
Changes for Release 21, Guide Version 21.20 .....	vii
Changes for Release 21, Guide Version 21.15 .....	vii
Changes for Release 20, Guide Version 20.6 .....	viii
<b>Table of Contents.....</b>	<b>xi</b>
<b>System Overview.....</b>	<b>1</b>
VoIP Principles .....	1
Physical Features.....	2
Packaging Contents .....	3
VC400 Packaging Contents .....	3
VC120 Packaging Contents .....	6
System Component Instructions .....	10
VC400/VC120 Codec.....	10
VCC18/VCC20 HD Camera .....	12
Video Conferencing Phone .....	14
CPE80 Expansion Microphone.....	19
VCM30 Video Conferencing Microphone Array .....	20
VCR10 Remote Control .....	23
Icon Instructions.....	25
Icons on Display Device .....	25
Icons on the Video Conferencing Phone .....	27
LED Instructions .....	29
User Interfaces .....	30
Web User Interface .....	30
Remote Control.....	31
<b>Getting Started.....</b>	<b>33</b>
System Installation .....	33

Installing the VC400 Video Conferencing System.....	34
Installing the VC120 Video Conferencing System.....	35
Installing the Camera .....	36
Installing Batteries in the Remote Control.....	38
Powering the System On and Off.....	39
System Initialization .....	39
System Startup .....	40
Setup Wizard.....	40
Enabling Communication with Other Systems.....	44
Placing a Test Call from VCS.....	45

## **Configuring Network ..... 47**

Preparing the Network.....	47
Configuring LAN Properties .....	48
DHCP .....	48
Configuring Network Settings Manually .....	52
IPv6 Support .....	56
Configuring Network Speed and Duplex Mode.....	60
VLAN.....	61
LLDP.....	62
Manual Configuration for VLAN .....	65
DHCP VLAN .....	67
802.1X Authentication.....	68
H.323 Tunneling .....	73
Configuring the System for Use with a Firewall or NAT .....	77
Reserved Ports .....	78
Network Address Translation .....	80
H.460 Firewall Traversal.....	91
Intelligent Firewall Traversal .....	93
Quality of Service .....	94
VPN.....	97

## **Configuring Call Preferences .....101**

Configuring Cloud Settings .....	101
Logging into the Yealink Cloud Platform .....	101
Logging into the StarLeaf Cloud Platform .....	105
Logging into the Zoom Cloud Platform .....	106
Registering a Pexip Account.....	108
Logging into the BlueJeans Cloud Platform .....	111
Logging into the Mind Platform.....	113
Registering a Custom Account.....	115
Configuring the Third-party Virtual Meeting Room .....	118
Configuring SIP Settings.....	122

SIP Account.....	122
SIP IP Call .....	124
Configuring H.323 Settings .....	126
Account Polling .....	129
DTMF .....	131
Methods of Transmitting DTMF Digit.....	132
Codecs .....	137
Audio Codecs.....	137
Video Codecs .....	138
Call Protocol.....	140
Do Not Disturb.....	141
Auto Answer.....	143
Auto Dialout Mute .....	144
Call Match .....	145
History Record .....	146
Bandwidth .....	147
Ringback Timeout .....	149
Auto Refuse Timeout.....	150
SIP IP Call by Proxy.....	151
Default Layout of Single Screen .....	153
<b>Configuring System Settings .....</b>	<b>155</b>
General Setting .....	155
Site Name .....	155
Backlight of the Video Conferencing Phone.....	156
Language .....	157
Date & Time.....	158
Automatic Sleep Time .....	164
Hide IP Address.....	165
Relog Offtime.....	166
Key Tone .....	167
Meeting Password.....	168
Meeting Whitelist.....	169
Meeting Blacklist .....	171
Hiding Icons in a Call .....	172
Keyboard Input Method .....	176
Audio Setting .....	177
Audio Output Device .....	177
Audio Input Device .....	178
Adjusting MTU of Video Packets .....	181
Dual-Stream Protocol.....	183
Mix Sending .....	187
Configuring Camera Settings .....	188
Far-end Camera Control.....	193

Camera Control Protocol.....	195
Output Resolution.....	199
USB Configuration.....	200
Video Recording .....	201
Screenshot .....	203
Tones .....	204
<b>System Management .....</b>	<b>209</b>
Directory .....	209
LDAP .....	214
Call History.....	219
Search Source List in Dialing .....	221
Dual Screen.....	221
Default Layout of Dual Screen.....	222
License .....	223
Device Type License .....	223
8-Way Conference License .....	224
VCS Integrated with Control Systems.....	226
<b>Configuring Security Features.....</b>	<b>227</b>
User Mode .....	227
Administrator Password .....	228
Web Server Type .....	229
Transport Layer Security.....	232
Secure Real-Time Transport Protocol .....	239
H.235.....	243
Attack Defense in Public Network .....	245
Abnormal Call Answering.....	245
Configuring Safe Mode Call .....	246
<b>System Maintenance .....</b>	<b>249</b>
Upgrading System Firmware .....	249
Upgrading VCC20 Camera Firmware .....	250
Importing/Exporting Configuration .....	250
Resetting to Factory .....	251
SNMP .....	252
<b>Troubleshooting.....</b>	<b>257</b>
Troubleshooting Methods.....	257
Viewing Log Files .....	257
Capturing Packets .....	260

---

Getting Information from Status Indicators.....	263
Analyzing Configuration Files.....	264
Viewing Call Statistics.....	264
Using Diagnostic Methods.....	264
Troubleshooting Solutions.....	266
General Issues.....	267
Camera Issues.....	268
Video & Audio Issues.....	269
Why does the far-site display black screen when local starts a presentation? .....	271
System Maintenance.....	272
<b>Appendix.....</b>	<b>275</b>
Appendix A: Time Zones.....	275
Appendix B: Trusted Certificates.....	278
<b>Index.....</b>	<b>281</b>



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# System Overview

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This chapter contains the following information about VC400/VC120 video conferencing system:

- [VoIP Principles](#)
- [Physical Features](#)
- [Packaging Contents](#)
- [System Component Instructions](#)
- [Icon Instructions](#)
- [LED Instructions](#)
- [User Interfaces](#)

## VoIP Principles

### VoIP

**VoIP** (Voice over Internet Protocol) is a technology that uses the Internet Protocol instead of traditional Public Switch Telephone Network (PSTN) technology for voice communications.

It is a family of technologies, methodologies, communication protocols, and transmission techniques for the delivery of voice communications and multimedia sessions over IP networks. The H.323 and Session Initiation Protocol (SIP) are two popular VoIP protocols that are found in widespread implementation.

### H.323

**H.323** is a recommendation from the ITU Telecommunication Standardization Sector (ITU-T) that defines the protocols to provide audio-visual communication sessions on any packet network. The H.323 standard addresses call signaling and control, multimedia transport and control, and bandwidth control for point-to-point and multi-point conferences.

It is widely implemented by voice and video conference equipment manufacturers, is used within various Internet real-time applications, such as GnuGK and NetMeeting, and is widely deployed by service providers and enterprises for both voice and video services over IP networks.

## SIP

**SIP** (Session Initiation Protocol) is the Internet Engineering Task Force's (IETF's) standard for multimedia conferencing over IP. It is an ASCII-based, application-layer control protocol (defined in RFC 3261) that can be used to establish, maintain, and terminate calls between two or more system. Like other VoIP protocols, SIP is designed to address the functions of signaling and session management within a packet telephony network. Signaling allows call information to be carried across network boundaries. Session management provides the ability to control the attributes of an end-to-end call.

## Physical Features

Video conferencing systems are in the overall network topology, which are designed to interoperate with other compatible equipment, including application servers, media servers, Internet-working gateways, and other systems.

In order to operate systems in your network successfully, the systems must meet the following requirements:

- A working IP network is established.
- VoIP gateway is configured for SIP or H.323, and H.323 gatekeeper is configured for H.323. You can also deploy Cloud server for Cloud platform.
- The latest (or compatible) firmware of system is available.
- A call server is active and configured to receive and send SIP/H.323 messages.

The VC400 and the VC120 have same physical interfaces, camera parameters and video resolutions.

### VC400/VC120 Codec Interface

- 2 x HDMI
- 1x DVI
- 1x VGA
- 1xVCS phone port(RJ-45)
- 1x10/100/1000M Ethernet
- 1 x Line-in (3.5mm)
- 1 x Line-out (3.5mm)
- 2 x USB2.0 port
- 1 x power port
- Others: 1 x power key, 1 x security lock slot, 1 x reset slot

### Full-HD Camera

- 1920x1080 video resolution
- Up to 18x optical zoom PTZ camera
- Pan range:  $\pm 100^\circ$
- Tilt range:  $\pm 30^\circ$
- Up to 10 preset positions
- Beauty shot feature

### Video Resolution

- Full-HD 1080P at 30fps (1920x1080), from 1Mbps
- 720P (1280x720), from 512Kbps
- W448P (768 x 448), WQVGA (400 x 240)
- 4CIF (704x576), CIF (352 x 288)

## Packaging Contents

We recommend that you use the accessories provided or approved by Yealink. The use of unapproved third-party accessories may result in reduced performance

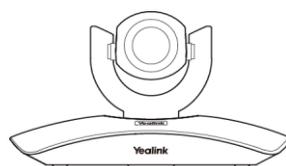
## VC400 Packaging Contents

The following items are included in your package. If you find that anything is missing, contact your system administrator.

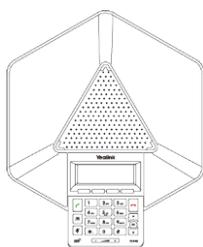
- **VC400 Codec**



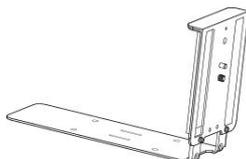
- **VCC18 HD Camera**



- **VCP40 Video Conferencing Phone**



- **L-Bracket** (for installing the camera)



- **Camera Mounting Accessories**

Expansion bolts  × 4

Screws(Specificaiton: T4×30)  × 4

Screws(Specificaiton: M3×8)  × 2

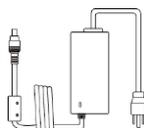
- **VCR10 Remote Control**



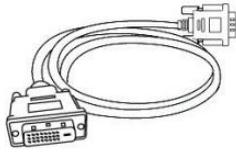
- **AAA Batteries×2**



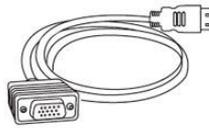
- **Power Adapter**



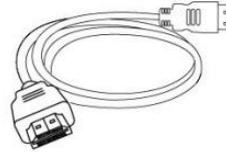
- **Cables**



**DVI Cable**



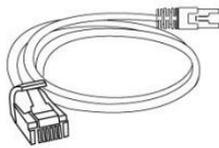
**HDMI-VGA Direct Cable**



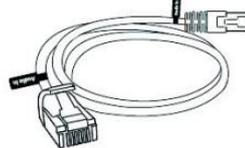
**HDMI Cables X 2**



**3.5mm Audio Cable**  
(For connecting to the Line In/Line Out port on the VC400 Codec)



**Ethernet Cable (2m)**



**Ethernet Cable (7.5m)**

- **Velcrox2**



- **Cable Tiesx7**



- **Quick Start Guide**



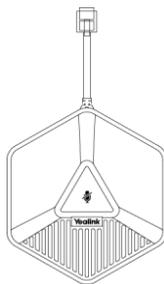
Check the list before installation. If you find that anything is missing, contact your system administrator.

### Optional Accessory

The following item is optional for VC400 video conferencing system. You should purchase it separately if necessary.

The CPE80 expansion microphone is used for expanding the audio pickup range.

- **CPE80 Expansion Microphone**



## VC120 Packaging Contents

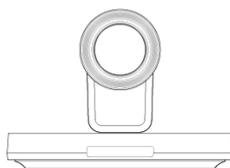
The VC120 video conferencing system can work with the VCP40 video conferencing phone, VCP41 video conferencing phone or VCM30 video conferencing microphone array. You can purchase any combination according to your needs:

### VC120 Package

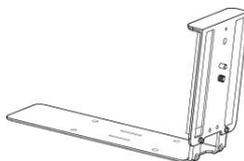
- **VC120 Codec**



- **HD Camera**



- **L-Bracket** (for installing the camera)



- **Camera Mounting Accessories**

- Expansion bolts  × 4
- Screws(Specificaiton: T4×30)  × 4
- Screws(Specificaiton: M3×8)  × 2

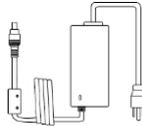
- **VCR10 Remote Control**



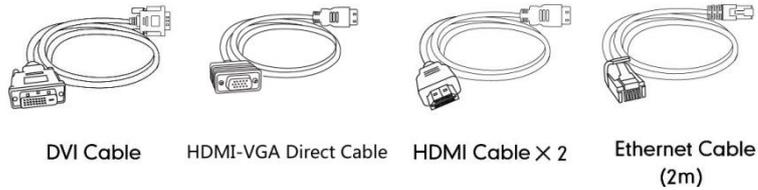
- **AAA Batteries×2**



- **Power Adapter**



- **Cables**



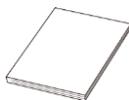
- **Velcro×2**



- **Cable Ties×5**



- **Quick Start Guide**

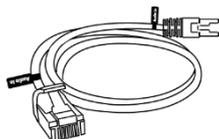


## VCP40 Package

- **VCP40 Video Conferencing Phone**



- **Ethernet Cable (7.5m)**



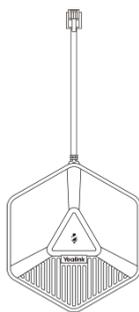
Locate the Audio In port on the VC120 Codec, and connect it to the Audio Out port of the VCP40 video conferencing phone with the 7.5m Ethernet cable. VCP40 video conferencing phone can work as an audio device for the VC120 video conferencing system. You can also place calls, answer calls or view directory and history on the VCP40 video conferencing phone.

## VCP41 Package

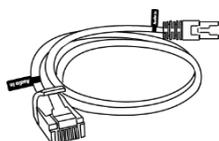
- **VCP41 Video Conferencing Phone**



- **Expansion Microphone CPE80×2**



- **Ethernet Cable (7.5m)**



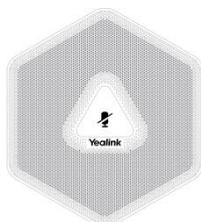
- **3.5mm Audio Cable** (for connecting a PC/Mobile device to the VCP41)



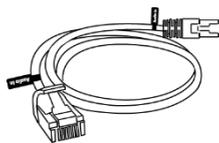
Locate the Audio In port on the VC120 Codec, and connect it to the Audio Out port of the VCP41 video conferencing phone with the 7.5m Ethernet cable. VCP41 Video conferencing phone can work as an audio device for the VC120 video conferencing system. You can also place calls, answer calls or view directory and history on the VCP41 video conferencing phone.

## VCM30 Package

- **VCM30 Video Conferencing Microphone Array**



- **Ethernet Cable (7.5m)**



Locate the Audio In port of on the 120 Codec, and connect it to the Audio Out port of the VCM30 with the 7.5m Ethernet cable. VCM30 video conferencing microphone array can work as the audio input device for the VC120 video conferencing system. For more information, refer to [Audio Input Device](#) on page178.

**Note**

Check the list before installation. If you find anything missing, contact your system administrator.

## System Component Instructions

Before installing and using the VC400/VC120 video conferencing system, you need to be familiar with the following system components, including:

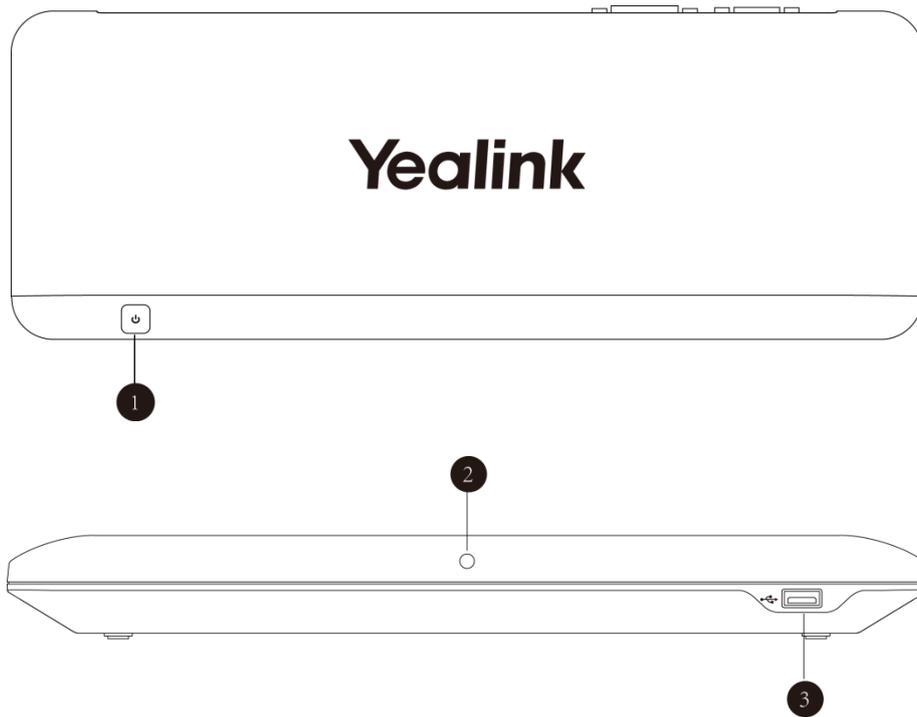
- [VC400/VC120 Codec](#)
- [VCC18/VCC20 HD Camera](#)
- [Video Conferencing Phone](#)
- [CPE80 Expansion Microphone](#)
- [VCM30 Video Conferencing Microphone Array](#)
- [VCR10 Remote Control](#)

### VC400/VC120 Codec

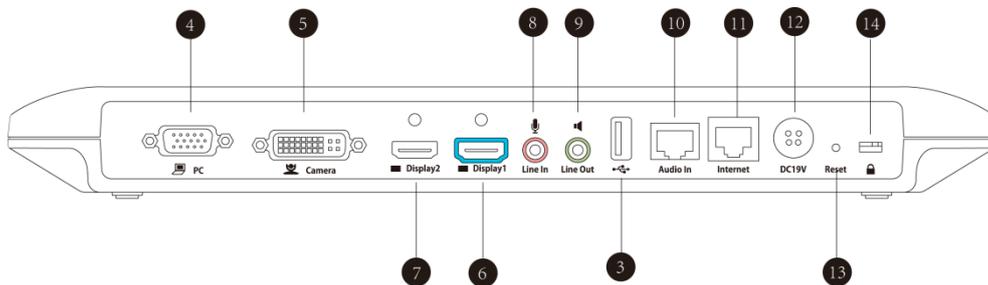
VC400/VC120 codec supports 1080P full HD video. It supports both H. 323 and SIP protocols and can connect to a mainstream video conferencing system.

Strong audio/video processing ability, rich interfaces, compatibility with different display devices and adaptive resolution make it easy to use.

## VC400/VC120 codec front panel



## VC400/VC120 codec back panel



	Port Name	Description
①	Power Button	Powers the system on or off.
②	LED Indicator	Indicates the system statuses. For more information, refer to <a href="#">LED Instructions</a> on page 29.
③	USB	Inserts a USB flash drive to one of the two USB ports for storing screenshots, recording videos or capturing packets. <b>Note:</b> If two USB flash drives are connected, only the latter one can be identified.
④	PC	Connects to a PC for sharing documents or videos during a call.
⑤	Camera	Connects to a camera.
⑥	Display1	Connects to a display device for displaying video images. When connecting only one display device, Display1 port on

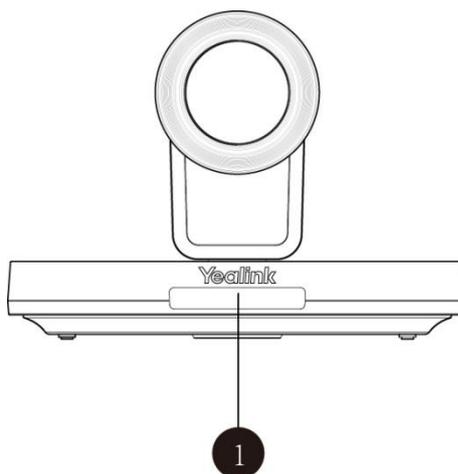
	Port Name	Description
		the VC400/VC120 codec is the only available port.
⑦	Display2	Connects to secondary display device for displaying video images.
⑧	Line In	Connects to an audio input device using an audio cable (3.5mm).
⑨	Line Out	Connects to an audio output device using an audio cable (3.5mm).
⑩	Audio In	Connects to the video conferencing phone.
⑪	Internet	Connects to the network device.
⑫	DC19V	Connects to the power source via a power adapter.
⑬	Reset Key	Resets the system to factory defaults.
⑭	Security Slot	Allows you to connect a universal security cable to VC400/VC120 codec, so you can lock it down. The system cannot be removed when it is locked.

## VCC18/VCC20 HD Camera

The VCC18 HD camera supports 18x optical zoom, white balance and automatic gain. The VCC20 HD camera supports 12x optical zoom, white balance and automatic gain. Exceptionally clear images can bring you an immersive experience.

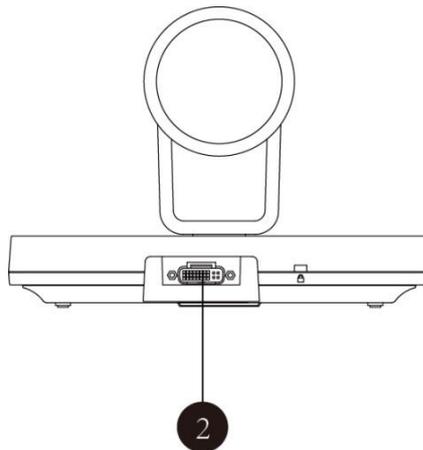
The following takes VCC20 HD camera as an example to introduce camera performance.

### The front of the HD camera



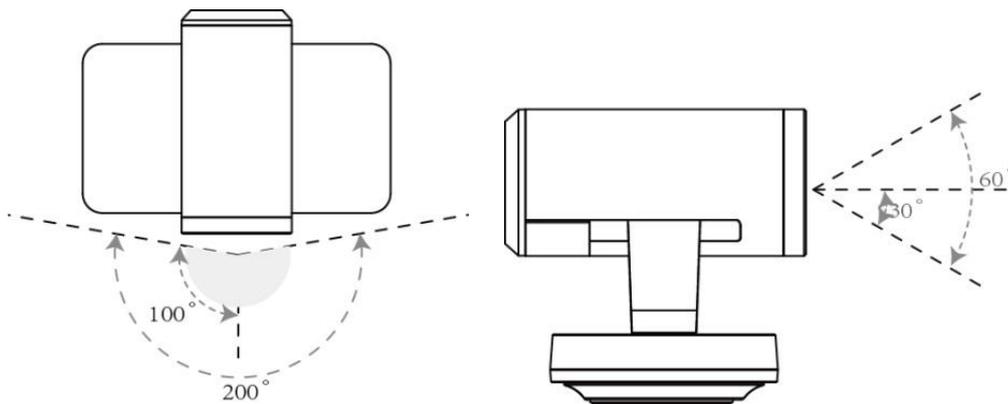
	Port Name	Description
①	LED Indicator	Indicates different system statuses. For more information, refer to <a href="#">LED Instructions</a> on page 29.

### The back of the HD camera



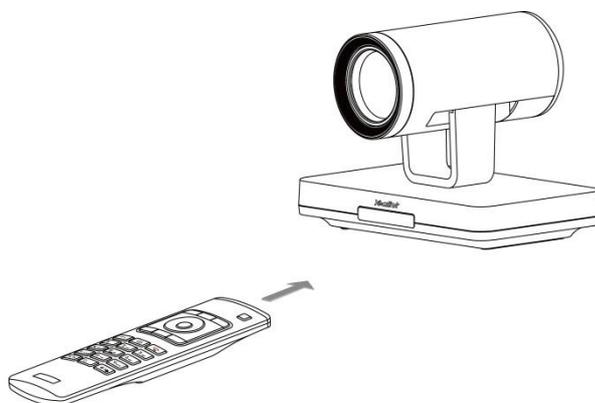
	Port Name	Description
②	Camera	Connects to the Camera port on the VC400/VC120 codec using a DVI cable.

You can use the remote control to adjust the position or focus of the camera. The camera can be panned ( $\pm 100$  degrees range), tilted ( $\pm 30$  degrees range).



## Infrared Sensor

The infrared sensor is located within the Yealink logo. Aim the remote control at the camera IR sensor to operate the unit.



### Note

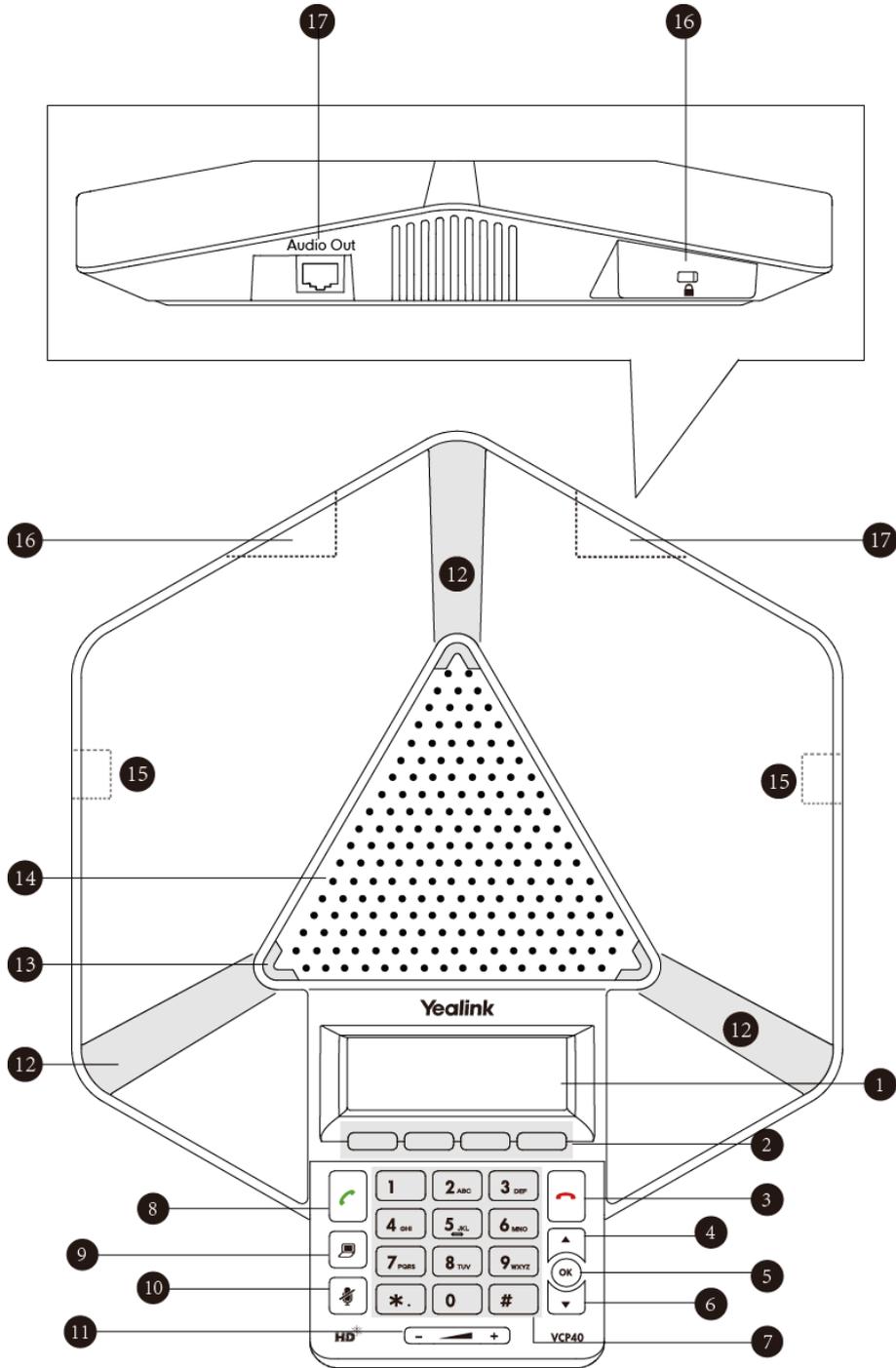
Avoid physically turn camera while system is powered on to prevent permanent damaging the camera. Always use the remote control to pan and tilt the camera head.

## Video Conferencing Phone

### VCP40 Video Conferencing Phone

The VCP40 video conferencing phone supports 360-degree audio pickup to achieve ultra-HD voice.

Connect the VCP40 phone to the VC400/VC120 codec. It can work as an audio device for the system. You can also place calls, answer calls or view directory and history on the VCP40 phone.

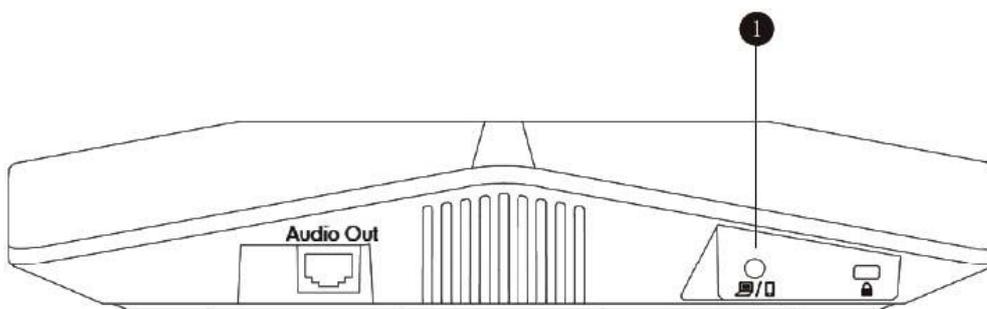


Component instructions of the VCP40 phone are:

	Item	Description
①	LCD Screen	Shows information about calls, messages, soft keys, time, date and other relevant data: <ul style="list-style-type: none"> <li>• Call information—call duration</li> <li>• Icons (for example, )</li> <li>• Missed call information</li> <li>• Time and date</li> </ul>
②	Soft Keys	Label automatically to identify their context-sensitive features.
③	On-hook Key	Rejects or ends a call or returns to the previous screen.
④		Scrolls upwards through the displayed information.
⑤		Enters list or answers incoming calls.
⑥		Scrolls downwards through the displayed information.
⑦	Keypad	Generates the digits and special characters ". " "*" "#".
⑧	Off-hook Key	Initiates a call or answers a call.
⑨	Presentation Key	Enables or disables presentation.
⑩	Mute Key	Toggles the mute feature.
⑪	Volume Key	Adjusts the volume of the speakerphone and ringer.
⑫	Microphone	Picks up voice.
⑬	LED Indicators	Indicate phone and call statuses.
⑭	Speakerphone	Provides ringer and hands-free (speakerphone) audio output.
⑮	MIC Port	Connects a CPE80 expansion microphone to one of two MIC ports.
⑯	Security Slot	Allows you to connect a universal security cable to lock down your phone. The phone cannot be removed when locked.
⑰	Audio Out Port	Connects to the video conferencing phone using the 7.5m Ethernet cable labeled Audio in. Provides the power supply for the video conferencing phone.

## VCP41 Video Conferencing Phone

The features of VCP41 video conferencing phone are similar to VCP40. For more information, refer to [VCP40 Video Conferencing Phone](#) on page 14. The only difference is that the back of VCP41 has a PC/Mobile port, which allows you to connect an optional PC or Mobile Device to your phone, so that VCP41 can work as the audio input/output device of your PC or mobile device.



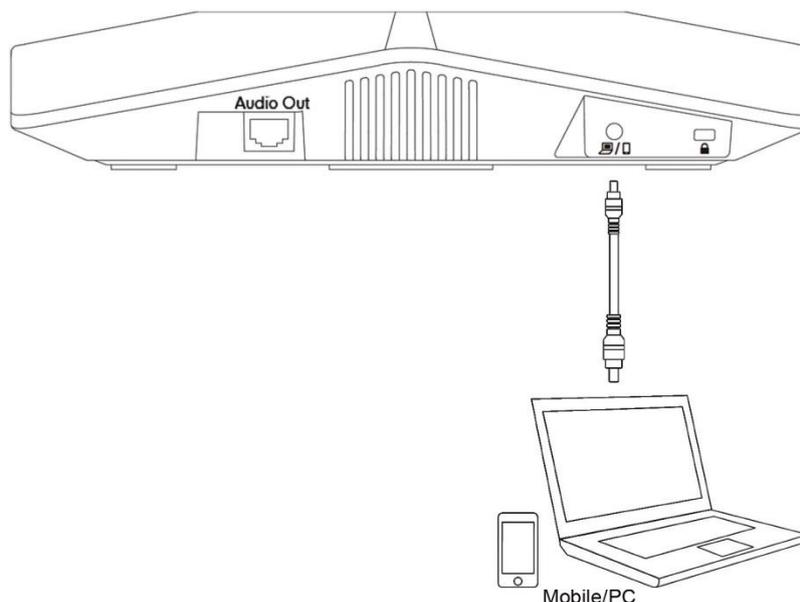
	Item	Description
①	PC/Mobile Port	Allows you to connect an optional PC or Mobile Device to your phone so that you can listen to the PC or mobile audio using your VCP41 video conferencing phone.

### Connecting a PC or Mobile Device to the VCP41

You can connect a PC or mobile device to the VCP41 when your VC120 video conferencing system is idle, is placing a call or during a call.

#### To connect a PC or mobile device to your VCP41:

1. Connect one end of the 3.5mm audio cable to the PC/mobile port on the VCP41 phone, and connect the other end to the headset jack on the mobile device or the AUX/MIC jack on the PC.



The  icon will appear on the display device, and the icon  will appear on the video conferencing phone.



As a result, VCP41 will work as the audio input/output device of your PC or mobile device. For example, when the PC or mobile device is playing a video or music, you can listen to the audio on your VCP41. If your PC or mobile device receives an incoming call, you can use VCP41 to listen and speak.

### Adjusting the Volume of the PC or Mobile Audio

When your PC or mobile device is during a call, you can adjust the output volume of the PC/mobile device via your VCP41.

#### To adjust the volume of the PC or mobile device:

1. When your PC or mobile device is during a call, press  on the VCP41 to adjust the volume.

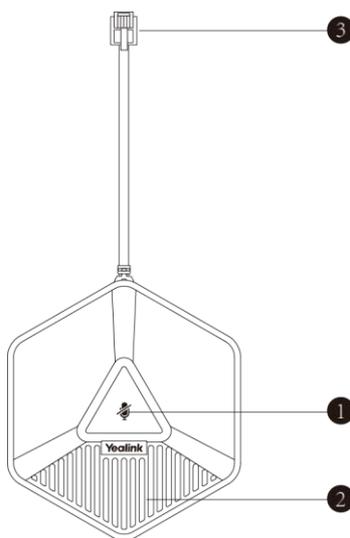
### Removing the PC or Mobile Audio

To remove the PC or mobile device, disconnect the 3.5mm audio cable from the VCP41.

## CPE80 Expansion Microphone

If your video conferencing room is large, you can add extra CPE80 expansion microphones to the MIC ports on the video conferencing phone to expand the audio range.

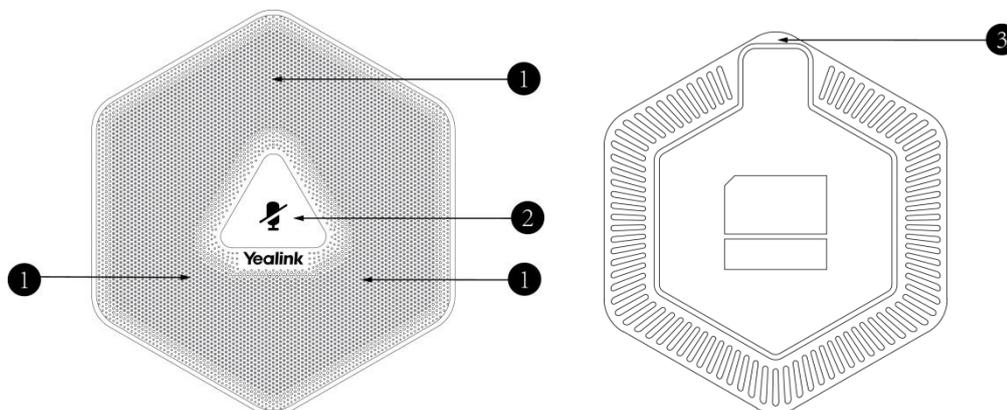
Video conferencing phone has two MIC ports. Up to two expansion microphones can be connected to a video conferencing phone. CPE80 is a directional microphone. Its coverage range is a 120 degree. Always ensure that the speaker faces the expansion microphone.



	Item	Description
①	Mute Indicator LED	Toggles and indicates mute feature.
②	Microphone	Transmits sound to other phones.
③	MIC Connector	Allows you to connect to the MIC port on the video conferencing phone.

## VCM30 Video Conferencing Microphone Array

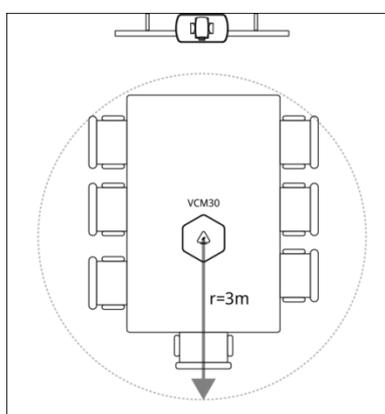
The VCM30 is a video conferencing microphone array which can work as the audio input device for VC120 video conferencing system. It has 3 built-in microphones which support 360-degree audio pickup at a radius of up to 3 meters. There is a mute button on its top. You can mute or unmute the VCM30 by tapping the mute button during a call.



	Name	Description
①	Built-in Microphones	Support 360-degree audio pickup at a radius of up to 3 meters.
②	Mute Button	Mutes or unmutes the VCM30. For more information on the mute indicator LED, refer to <a href="#">LED Instructions</a> on page 29.
③	Audio Out Port	Connects to the Audio In port of VC120 codec using the 7.5m Ethernet cable labeled Audio In. Provides the power supply for the VCM30.

### Placing the VCM30

The VCM30 has a rubber pads on its base to prevent it from sliding. You can place the VCM30 on a stable surface and keep it away from obstacles so that it can effectively pick up sounds.



## Muting or Unmuting the VCM30

There is a mute button at the top of the VCM30. You can mute or unmute it in the following scenarios:

- If you do not want to have your voice broadcast during a call, you can tap the mute button to mute the VCM30.
- If you want to speak again during a call, you can tap mute button to unmute the VCM30.

### To mute the VCM30 during a call:

1. Tap  to mute the call.

The mute indicator LED illuminates solid red. And the  mute icon appears on the local video image.

### To unmute the VCM30 during a call:

1. Tap  again to unmute the call.

The mute indicator LED illuminates solid green. And the  mute icon disappears from the local video image.

## Viewing VCM30 Information

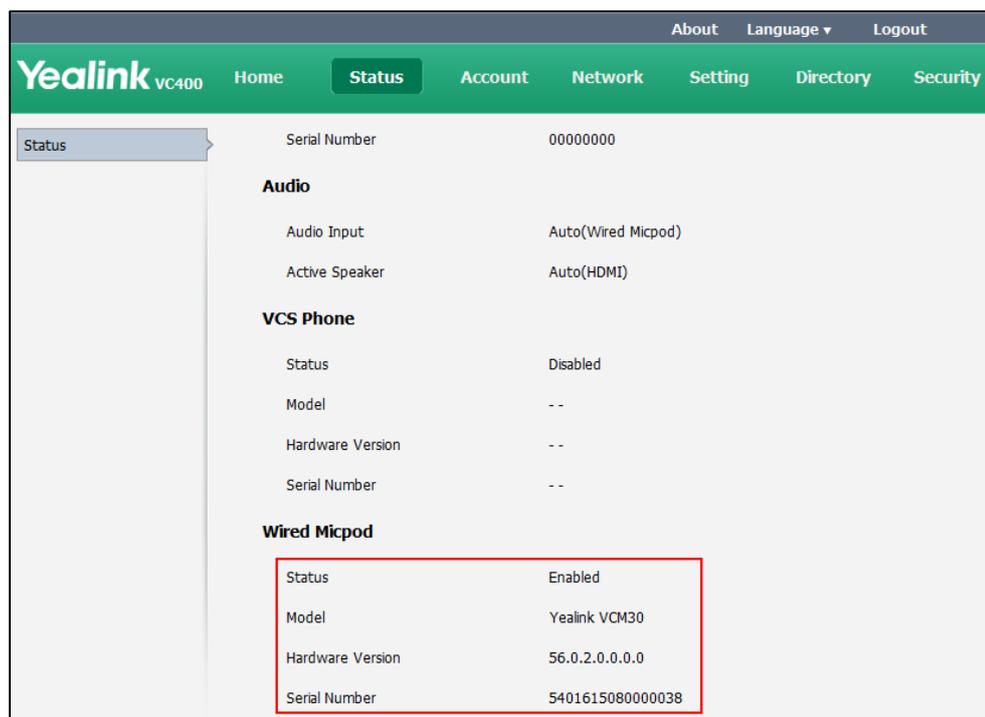
When the VCM30 is connected to the Audio In port of VC120 codec, you can view VCM30 status via the remote control or web user interface.

Available information of VCM30 includes:

- Status
- Model
- Hardware Version
- Serial Number

**To view the VCM30 information via web user interface**

1. Click **Status**.

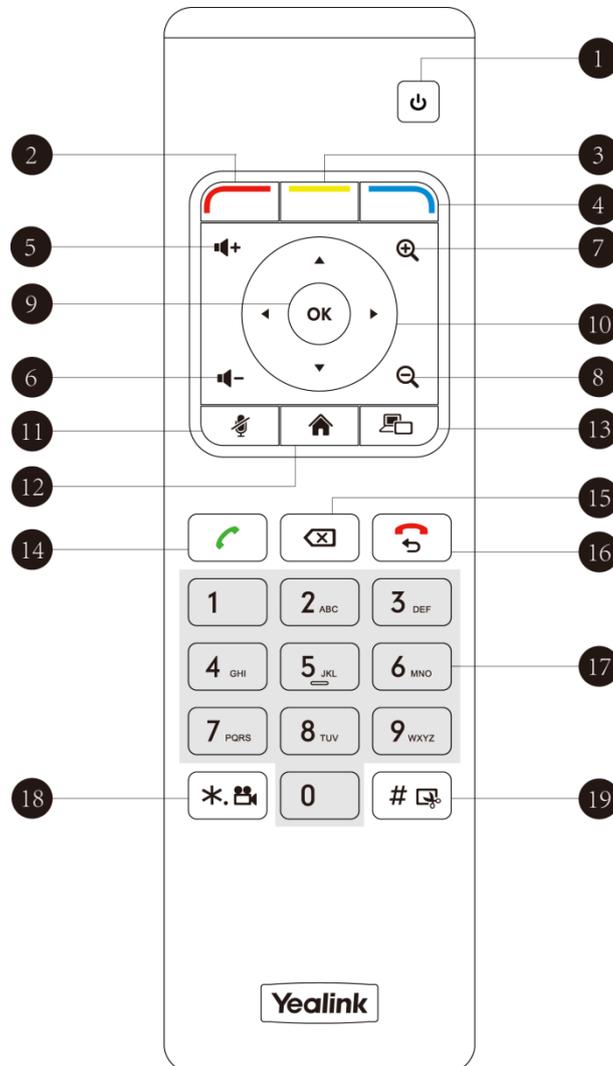


**To view the VCM30 information via the remote control:**

1. Select **Menu->Status->Wired Micpod**.

## VCR10 Remote Control

VCR10 remote control is compact, and has definite function zoning. Users can organize conferences easily using infrared signals.



Hardware components of the remote control:

	Item	Description
①	Sleep Key	Puts the system to sleep or wakes the system up.
②	Red Shortcut Key	Located at the bottom left of the screen. Label automatically identifies context-sensitive features. In the idle screen, this is used to enter the main menu screen and corresponds to the Menu soft key.
③	Yellow Shortcut Key	Located at the bottom center of the screen. Label automatically identifies context-sensitive features. In the idle screen, this is used to enter the pre-dialing screen, and corresponds to the Call soft key.

	Item	Description
④	Blue Shortcut Key	Located at the bottom right of the screen. Label automatically identifies context-sensitive features. In the idle screen, this is used to save and check the camera preset position, and corresponds to the Preset soft key.
⑤	Vol+	Increases the system volume.
⑥	Vol-	Decreases the system volume.
⑦	Zoom out Key	<ul style="list-style-type: none"> <li>Decreases the camera zoom or the captured image magnifications.</li> <li>Behaves as page down in a multiple page list.</li> </ul>
⑧	Zoom in Key	<ul style="list-style-type: none"> <li>Increases the camera zoom or the captured image magnifications.</li> <li>Behaves as page up in a multiple page list.</li> </ul>
⑨	OK Key	Confirms actions or answers incoming calls.
⑩	Navigation Key	<ul style="list-style-type: none"> <li>In the menu screen, press ◀ or ▶ to switch menus, press ▲ or ▼ to select items.</li> <li>In the idle screen, pan and tilt the camera to adjust the viewing angle.</li> </ul>
⑪	Mute Key	Toggles the mute feature.
⑫	Home Key	<ul style="list-style-type: none"> <li>Returns to the idle screen when in the menu screen.</li> <li>Enters the pre-dialing screen during a call.</li> </ul>
⑬	Video Source Key	Switches the input source between Camera, Camera-PC, or PC.
⑭	Off-hook Key	<ul style="list-style-type: none"> <li>Enters the pre-dialing screen.</li> <li>Places a call.</li> <li>Answers a call.</li> </ul>
⑮	Delete key	<ul style="list-style-type: none"> <li>Deletes one character at a time.</li> <li>Long press to delete all characters in the input field.</li> <li>On the idle screen or during a call, long press it for 2 seconds to start capturing packets and long press it for 2 seconds again to stop capturing packets.</li> </ul>
⑯	On-hook Key	<ul style="list-style-type: none"> <li>Ends a call or exits from a conference call.</li> <li>Returns to the previous screen when not in a call.</li> </ul>

	Item	Description
⑰	Keypad	<ul style="list-style-type: none"> <li>Enters digits.</li> <li>Long press  to generate a special character "@" in the input field.</li> <li>Enters the pre-dialing screen.</li> <li>Stores the preset position of the camera.</li> </ul>
⑱	Video Recording Key	<ul style="list-style-type: none"> <li>Generates a special characters ".".</li> <li>On the idle screen, press  to start/stop recording video.</li> <li>During a call, long press  to start/stop recording video.</li> </ul>
⑲	Snapshot Key	<ul style="list-style-type: none"> <li>Generates a pound key (#).</li> <li>Captures the image from the camera.</li> <li>On the idle screen, press  to capture the image from the camera.</li> <li>During a call, long press  to capture the image from the camera.</li> </ul>

## Icon Instructions

### Icons on Display Device

Icons appearing on the display device are described in the following table:

Icon	Description
 (flashing)	Network is disconnected
	Network is available
	Packet loss
 (flashing)	Video conferencing phone is not connected
 (flashing)	Camera is not connected
	SIP account is registered

Icon	Description
	H.323 account is registered
	Log into the Yealink Cloud platform
	Log into the StarLeaf/Zoom/Pexip/BlueJeans/Mind platform
	Lowercase letters input mode of the on-screen keyboard
	Uppercase letters input mode of the on-screen keyboard
	Characters input mode of the on-screen keyboard
	Auto answer
	Missed calls
	Volume is 0
	Do not disturb
	Do not disturb during a call
	Call mute
	Call encryption
	Call Hold
	Output volume is 0 during a call
	The content of the local camera
	Focus content
	Camera position
	Record a video
	Dialed calls (H.323 account/SIP account/IP Call)
	Dialed calls (Cloud platform)

Icon	Description
	Received calls (H.323 account/SIP account/IP Call)
	Received calls (Cloud platform)
	Missed calls (H.323 account/SIP account/IP Call)
	Missed calls (Cloud platform)
	PC/Mobile mode (when a PC or mobile device is connected to the VCP41)
	Dual screen mode
	Dual video sources (when a PC is connected to the PC port on the VC400/VC120 codec)
	A USB flash drive is inserted to the USB port on the VC400/VC120 codec
	Local contact
	Yealink Cloud contact
	Conference contact (not applicable to VC120)
	VPN is enabled

## Icons on the Video Conferencing Phone

Icons appearing on the video conferencing phone LCD screen are described in the following table:

Icon	Description
 (Flashing)	Network is unavailable
	SIP account is registered (the icon flashes when the SIP account is not registered successfully)
	H.323 account is registered (the icon flashes when the H.323 account is not registered successfully)
	Log into the Yealink Cloud platform
	Log into the StarLeaf/Zoom/Pexip/BlueJeans/Mind platform

Icon	Description
	Auto answer
	Do not disturb
	Call is muted
	Volume is 0
	A USB flash drive is inserted into the port on the VC400/VC120 codec
	Record a video
	Local contact
	Yealink Cloud contact
	Conference contact (not applicable to VC120)
	Conference call
	Dialed calls (H.323 account/SIP account/IP Call)
	Dialed calls (Cloud platform)
	Received calls (H.323 account/SIP account/IP Call)
	Received calls (Cloud platform)
	Missed calls (H.323 account/SIP account/IP Call)
	Missed calls (Cloud platform)
	PC/Mobile mode (when a PC or mobile device is connected to the VCP41)

## LED Instructions

### Indicator LED on the VC400/VC120 codec:

LED Status	Description
Solid green	The VC400/VC120 codec is powered on. The VC400/VC120 codec is upgrading firmware.
Solid red	The VC400/VC120 codec is in sleep mode.
Solid orange	System exception (e.g., network unavailable, update failure).
Off	The VC400/VC120 codec is powered off, is not connected to the power adapter.

### Indicator LED on the camera:

LED Status	Description
Solid green	The camera is properly connected to the VC400/VC120 codec, and the VC400/VC120 codec is powered on.
Solid red	The VC400/VC120 codec is in sleep mode.
Flashing green	Press the key on the remote control.
Off	The camera is not connected properly to the VC400/VC120 codec, or the VC400/VC120 codec is powered off.

### Indicator LED on the video conferencing phone:

LED Status	Description
Solid red	The phone is initializing. The video conferencing phone is muted when the VC400 is during a call.
Flashing red	The phone is ringing.
Solid green	The phone is placing a call. There is an active call on the phone.
Off	The phone is idle. The phone is not connected to the VC400/VC120 codec correctly.

### Indicator LED of the Internet port on the VC400/VC120 codec:

LED Status	Description
Indicator LED on the left is off.	Network is not connected.
Indicator LED on the left is solid green.	Network is connected.
Indicator LED on the right is flashing yellow.	Sending and receiving data.

**Mute Indicator LED on the VCM30 video conferencing microphone array:**

LED Status	Description
Solid red	The VCM30 is muted when the VC120 is during a call.
Flashing red	The VC120 is ringing.
Solid green	The VCM30 is connected to the VC120 codec within the first 5 seconds. The VC120 is placing a call. The VCM30 is unmuted when the VC120 is during a call.
Off	The VCM30 is not connected to the VC120 codec. The VCM30 is idle.

## User Interfaces

There are two ways to customize the configurations of your system:

- [Web User Interface](#)
- [Remote Control](#)

The following describes how to configure the VC400/VC120 video conferencing system via the two methods above.

Detailed operation steps will be introduced in the feature section.

## Web User Interface

You can customize your system via web user interface. To access the web user interface, you need to know the user name and the administrator's password. The default user name is "admin" (case-sensitive), and the default password is "0000". You can also access the web user interface with user credential, which is disabled by default. For more information on how to enable the user credential, refer to [User Mode](#) on page 227.

The system uses the HTTPS protocol to access the web user interface by default. For more information on the access protocol for web user interface access, refer to [Web Server Type](#) on page 229.

### Log into the web user interface of the system:

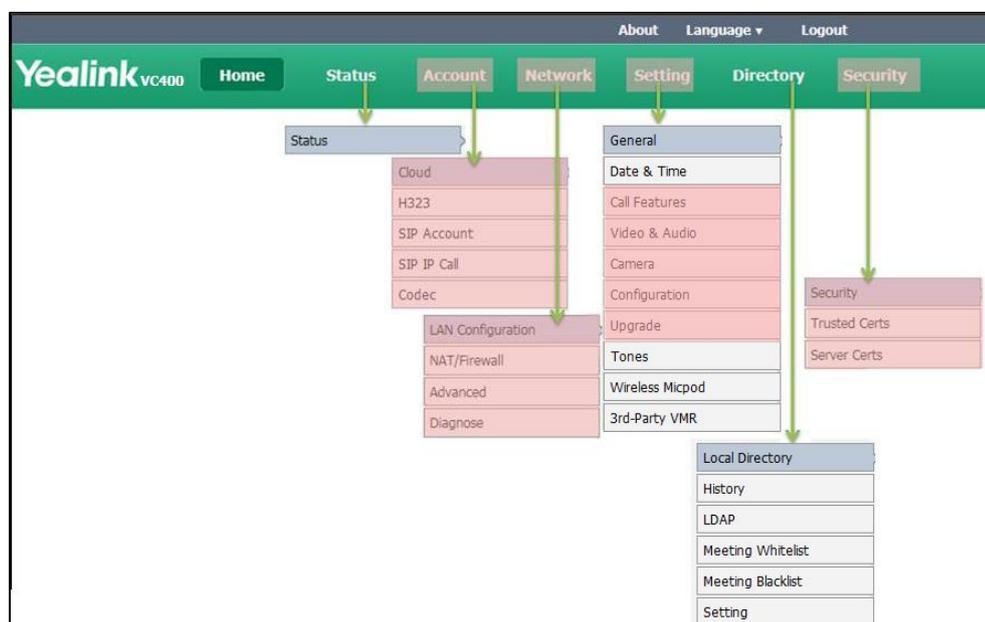
1. Enter the IP address (e.g., 192.168.0.10) in the address bar of a web browser on your computer, and then press the **Enter** key.
2. Enter the administrator user name and password.
3. Click **Login**.

After you log into the web user interface successfully, you can click **Logout** on the top right corner of the web interface to log out.

Administrator has full permission to access every menu in the web user interface. User can log

into the web user interface with user credentials.

The web structure tree of VC400 is shown as below, (the red highlight is hidden for users with user credentials):



You can monitor or place calls via web user interface. You can do the following in the **Home** page.

- Placing or ending calls
- Viewing remote and nearby sites
- Enabling the mute mode or the DND mode for a call
- Changing the video input source
- Adjusting the position and focus of the camera
- Saving the camera preset
- Capturing the video images
- Control the video conferencing system remotely via the virtual remote control

#### Note

Although the web user interface is used to initiate the call, it is the video conferencing system that is used for the call. It is not the PC running the web user interface.

## Remote Control

You can use the remote control and display device to configure and use the VC400/VC120 video conferencing system.

For more information on the function of each key on the remote control, refer to [VCR10 Remote Control](#) on page 23. The **Advanced** option is only accessible to the user with the administrator's

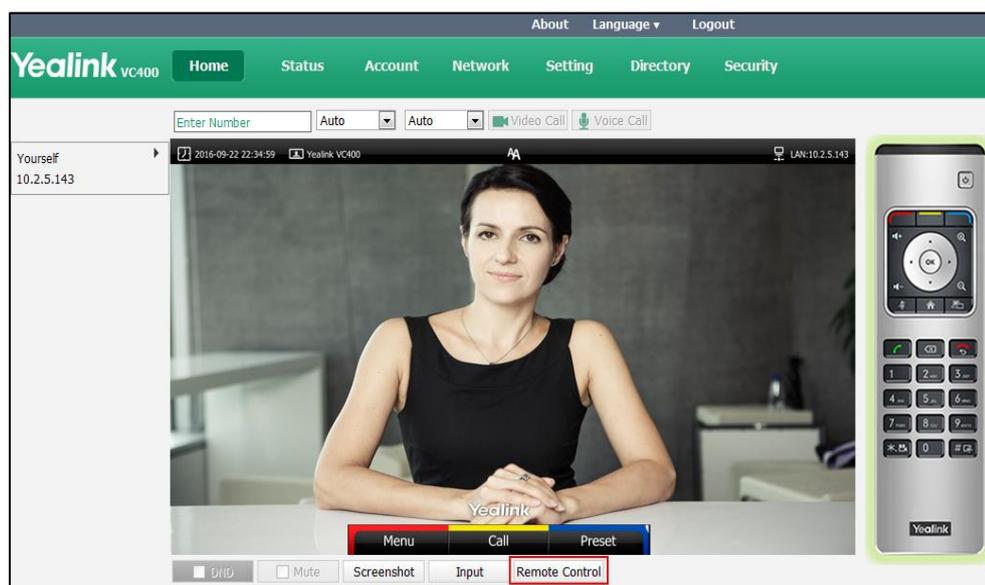
permission. The default administrator password is "0000".

## Remote Control via Web User Interface

In addition to using the remote control, you can also control the video conferencing system via web user interface.

**To control video conferencing system via web user interface:**

1. Click **Home->Remote Control** when the system is idle or during a call.



2. Click the keys on the virtual remote control to control the video conferencing system.
3. Click **Remote Control** to hide the virtual remote control.

# Getting Started

This chapter provides basic information and installation instructions for Yealink VCS systems in the following sections:

- [System Installation](#)
- [Powering the System On and Off](#)
- [System Initialization](#)
- [System Startup](#)
- [Setup Wizard](#)
- [Enabling Communication with Other Systems](#)
- [Placing a Test Call from VCS](#)

## System Installation

### Placing the System

Do not place the camera facing a window or other bright light. Ensure sufficient space to connect the cables. Ensure all participants are facing both the display device and the camera at the same time by putting camera and display device together.

### System Components Installation

This section introduces the following:

- Installing the VC400 video conferencing system
- Installing the VC120 video conferencing system
- Installing the camera
- Installing batteries in the remote control

#### Note

Up to two display devices can be connected to the VC400/VC120 codec. Because the display device is not included in the package, you need to purchase it separately if required. Ensure that the purchased display device supports HDMI input.

When connecting just one display device to the VC400/VC120 codec, Display1 port is the only available port. If dual screen mode is required, you can connect secondary display device to the Display2 port.

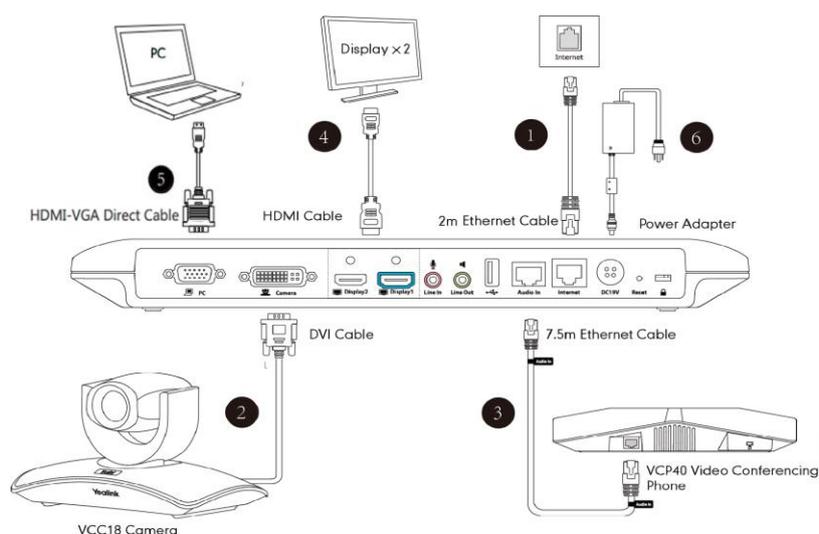
Because the DVI cable is tailor-made, please use the Yealink-supplied DVI cable.

To prevent shock damage, do not connect the power adapter and turn on the power before connecting all system components.

## Installing the VC400 Video Conferencing System

**Do the following:**

1. Connect the Internet port on the VC400 codec to a switch/hub device port with the supplied 2m Ethernet cable.
2. Locate the Camera port on the back of the VC400 codec, and connect it to the Camera port of the camera with the supplied DVI cable.
3. Connect the Audio In port on the VC400 codec to the Audio Out port on VCP40 video conferencing phone with the 7.5m Ethernet cable labeled Audio in.
4. Locate the Display1 port on the VC400 codec, and connect it to the HDMI port on the display device with the supplied HDMI cable (Make sure the display device is powered on)
5. (Optional.) Locate the PC port of the VC400 codec and connect it to the HDMI port on the PC with the supplied HDMI-VGA direct cable for sharing content.
6. Connect the DC19V port on the VC400 codec to an AC power outlet with the supplied power adapter and power cord.

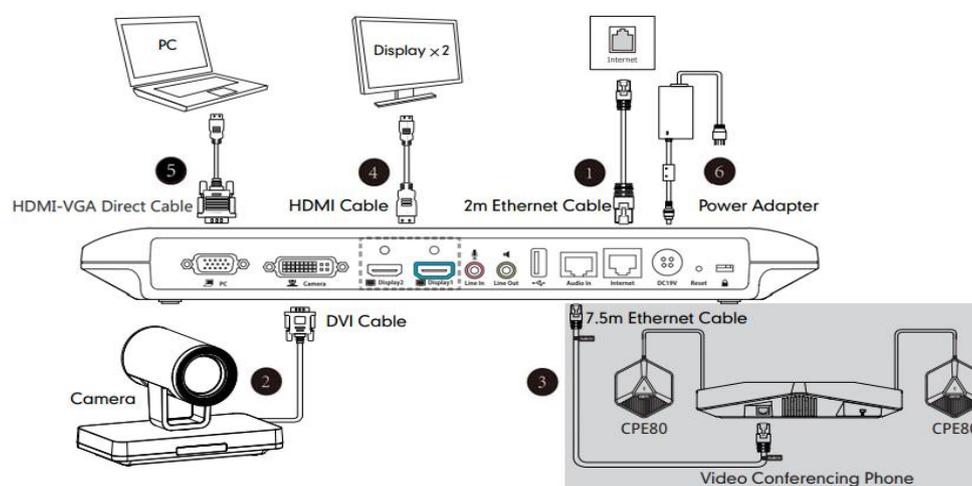


**Note** The VC400 video conferencing system should be used with Yealink original power adapter (19V/3.42A) only. The use of the third-party power adapter may cause the damage to the system.

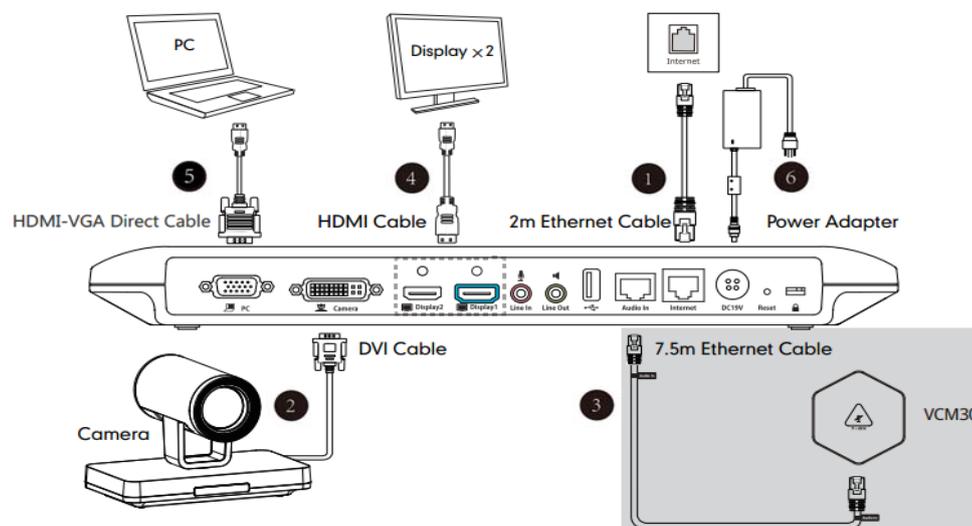
## Installing the VC120 Video Conferencing System

### Do the following:

1. Connect the Internet port of the VC120 codec to a switch/hub device port with the supplied 2m Ethernet cable.
2. Locate the Camera port on the back of the VC120 codec, and connect it to the Camera port on the camera with the supplied DVI cable.
3. (Optional) Locate the Audio In port of the VC120 codec, do one of the following:
  - Connect it to the Audio Out port on the video conferencing phone with the 7.5m Ethernet cable that labeled Audio In, and then connect the free end of the expansion microphone cables to MIC ports on the video conferencing phone.



- Connect it to the Audio Out port on the VCM30 video conferencing microphone array with the 7.5m Ethernet cable that labeled Audio In.



4. Locate the Display1 port on the VC120 codec, and connect it to the HDMI port on the display device with the supplied HDMI cable (Make sure the display device is powered on)
5. (Optional.) Locate the PC port of the VC120 codec and connect it to the HDMI port on the PC with the supplied HDMI-VGA direct cable for sharing content.
6. Connect the DC19V port on the VC120 codec to an AC power outlet with the supplied power adapter and power cord.

**Note**

The VC120 video conferencing system should be used with Yealink original power adapter (19V/3.42A) only. The use of the third-party power adapter may cause the damage to the system.

You can fasten all cables with cable ties after all devices are connected.

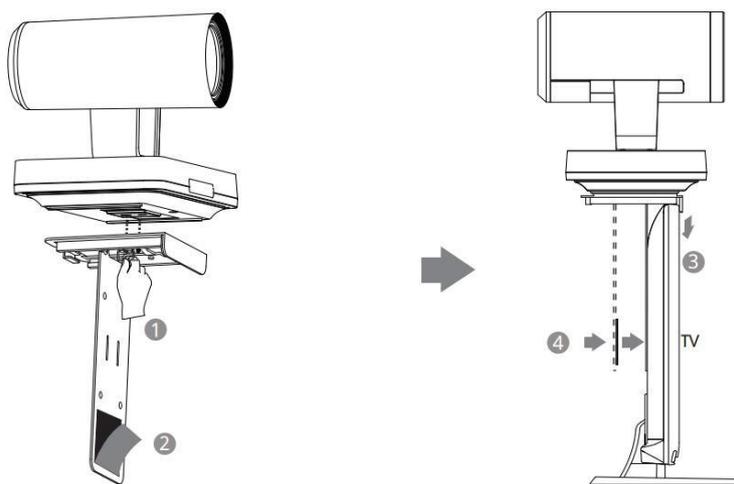


## Installing the Camera

You can choose to mount the camera on your TV or a wall, depending on your actual needs.

### a) Mounting the camera on a TV

When the thickness of your TV is between 35-120 mm, you can mount the camera on your TV.



**Do the following:**

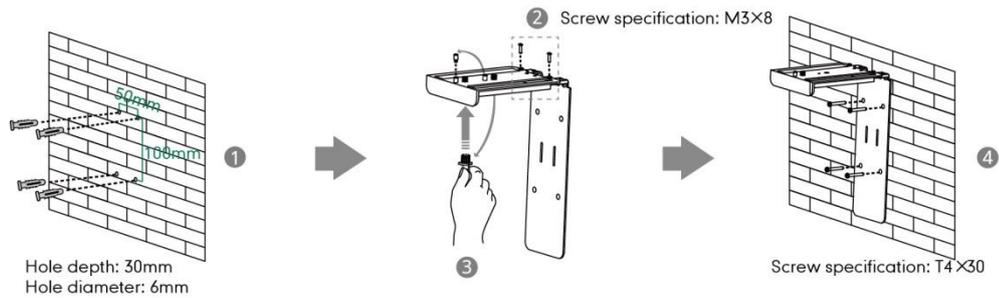
1. Lock the camera to the L-bracket.
2. Remove the protection of the Velcro.
3. Put the L-bracket on the top of the TV.

4. Make sure the back of the TV is clean, and then adjust the bracket to ensure close adhesion to the back of the TV with Velcro.

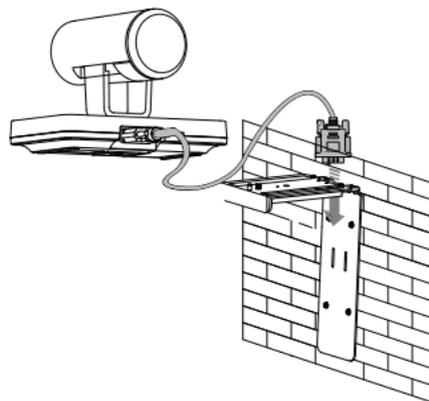
#### b) Mounting the camera on a wall

You can also decide to mount the camera on a wall. The recommended height for camera positioning is 1.5m-1.8m above the ground.

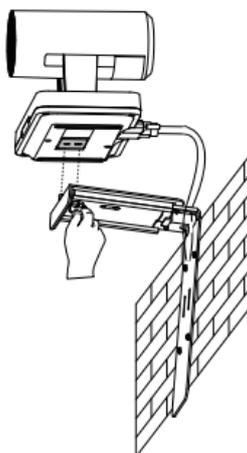
#### Do the following:



1. Punch holes into the wall and then insert the expansion bolts.  
Installation location for the expansion bolts and punching requirement are shown above.
2. Lock the L-bracket with the M3×8 screws.
3. Move the setscrews on the L-bracket to the left holes.
4. Lock the L-bracket to the wall with T4×30 screws.
5. Connect one end of the DVI cable to the camera and put the other end of the cable through the L-bracket.



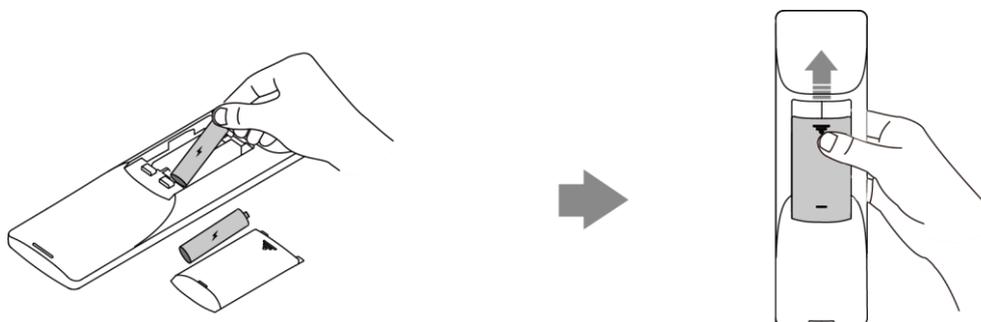
6. Lock the camera to the L-bracket, and then connect the other end of the DVI cable to the VC120 codec.



## Installing Batteries in the Remote Control

### Do the following:

1. Open the battery cover on the back of the remote control.
2. Insert the batteries with the correct polarity.
3. Replace the battery cover.



## Remote Control Battery Safety Information

- Never make wrong polarity connection when charging and discharging battery packs.
- Avoid crushing, puncturing, or putting a high degree of pressure on any battery, as this can cause an internal short-circuit, resulting in overheating.
- Remove the batteries if they are not in use for long period of time. Battery leakage and corrosion can damage the remote control, dispose batteries safely.
- Do not dispose used batteries in domestic waste. Dispose batteries at special collection points or return to stores if applies.
- Do not dispose batteries in a fire.

## Powering the System On and Off

### Note

**Caution!** To avoid corrupting the system, you should always power off the system using the power button on the VC400/VC120 codec. After turning the power off in this way, wait at least 15 seconds before you unplug the power adapter from the VC400/VC120 codec. This helps to ensure that the system powers off correctly.

### To power on the system:

After all components are connected, press  on the VC400/VC120 codec. The indicator LED on the VC400/VC120 codec then illuminates solid green.

### To power off the system:

Do one of the following:

- Long press  on the VC400/VC120 codec.
- Short press  on the VC400/VC120 codec, the display device will prompt "Press the power button to turn off the system. Press any button on remote control to cancel". Press  again to power off the system or press any button on the remote control to cancel.

## System Initialization

Once you have power on the system, it will begin its initialization process.

During the initialization process, the following events take place:

### Loading the ROM file

The ROM file sits in the flash memory of the system. Systems come from the factory with a ROM file preloaded. During initialization, systems run a bootstrap loader that loads and executes the ROM file.

### Configuring the VLAN

If the system is connected to a switch, the switch will notify the system about the VLAN information defined on the switch.

### Querying the DHCP (Dynamic Host Configuration Protocol) Server

The system is capable of querying a DHCP server. DHCP is enabled on the system by default. The following network settings can be obtained from the DHCP server during initialization:

- IP Address
- Subnet Mask
- Gateway

- Primary DNS (Domain Name Server)
- Secondary DNS

You need to configure the network settings of the system manually if any of them are not provided by the DHCP server. For more information on configuring network settings manually, refer to [Configuring Network Settings Manually](#) on page 52.

## System Startup

After the initializing process, the system will complete startup by cycling the following steps:

1. The LED indicator on the VC400/VC120 codec illuminates solid green.
2. The LED indicator on the camera illuminates solid green.
3. The display device displays the boot up screen.
4. The camera pans to the middle position automatically.
5. The display device displays the setup wizard (when you first start up or reset the system, the display device will display the setup wizard)

For more information on how to complete the setup wizard, refer to [Setup Wizard](#) on page 40.

6. After completing the setup wizard, the display device displays the main screen.

The main screen displays the following:

- Time and date
  - System IP address and site name
  - Status icon
  - Soft key labels
  - Video image
7. The video conferencing phone starts up normally. The phone's LCD screen displays the site name, status icon, soft keys, time and date.

If the system has successfully passed through these steps, it starts up correctly and is ready for use.

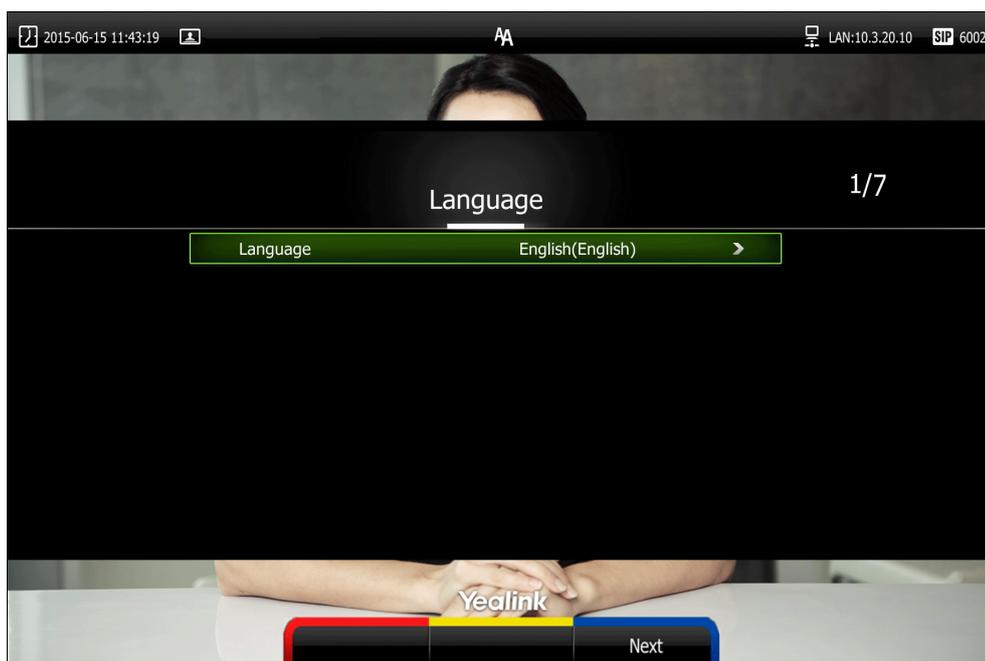
## Setup Wizard

When you first start up or reset the system, the display device will display the setup wizard.

**To complete the setup wizard via the remote control:**

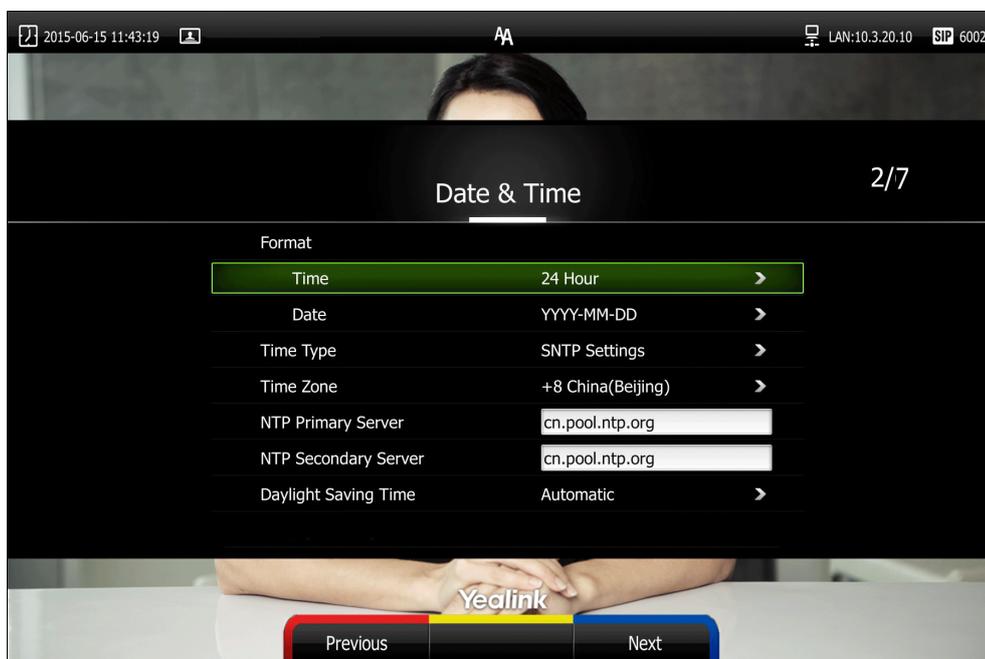
1. Set the language displayed on the display device.

The default language is English.



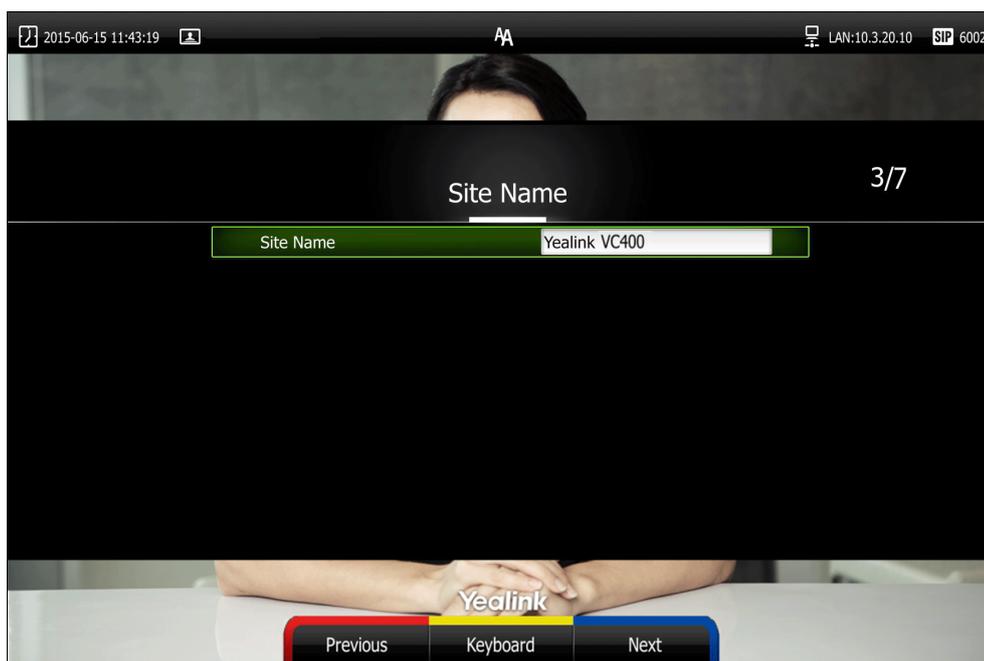
2. Press  (**Next** soft key) to continue.
3. Set the date and time (e.g., set the time zone, time format, date format and the type of the daylight saving time).

The system obtains the time and date from the NTP server automatically by default. You can also configure the time and date manually. For more information, refer to on [Date & Time](#) on page 158.



4. Press  (**Next** soft key) to continue or press  (**Previous** soft key) to return to the previous screen.
5. Edit the site name.

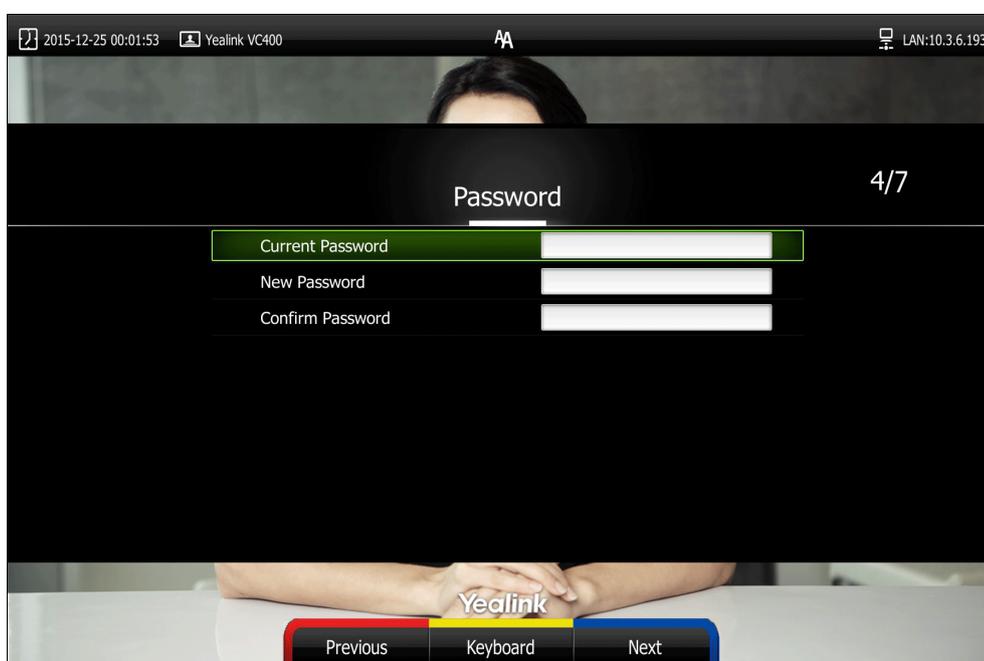
The default site name is "Yealink VC400" or "Yealink VC120".



6. Press  (**Next** soft key) to continue or press  (**Previous** soft key) to return to the previous screen.

7. Change the administrator password.

The default administrator password is "0000". For security reasons, the administrator should change the default administrator password as soon as possible.



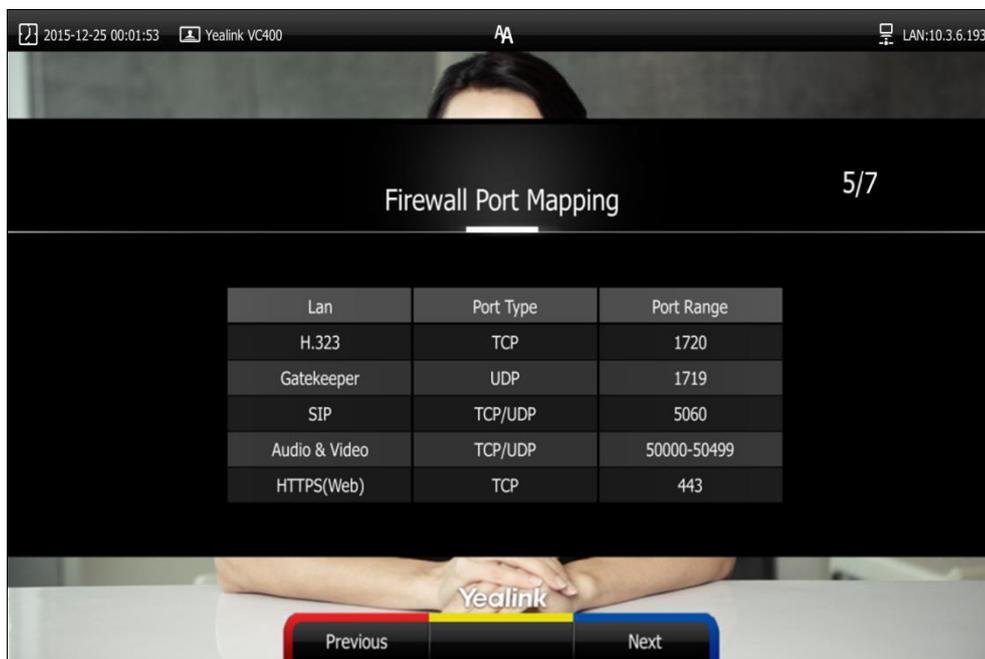
**Note**

Do remember the new administrator password or keep a copy of the password in a safe place. If you forget the password, you will need to reset the system to the factory settings, and then reset the password or use the default password "0000".

For more information, refer to [Resetting to Factory](#) on page 251.

8. Press  (**Next** soft key) to continue or press  (**Previous** soft key) to return to the previous screen.

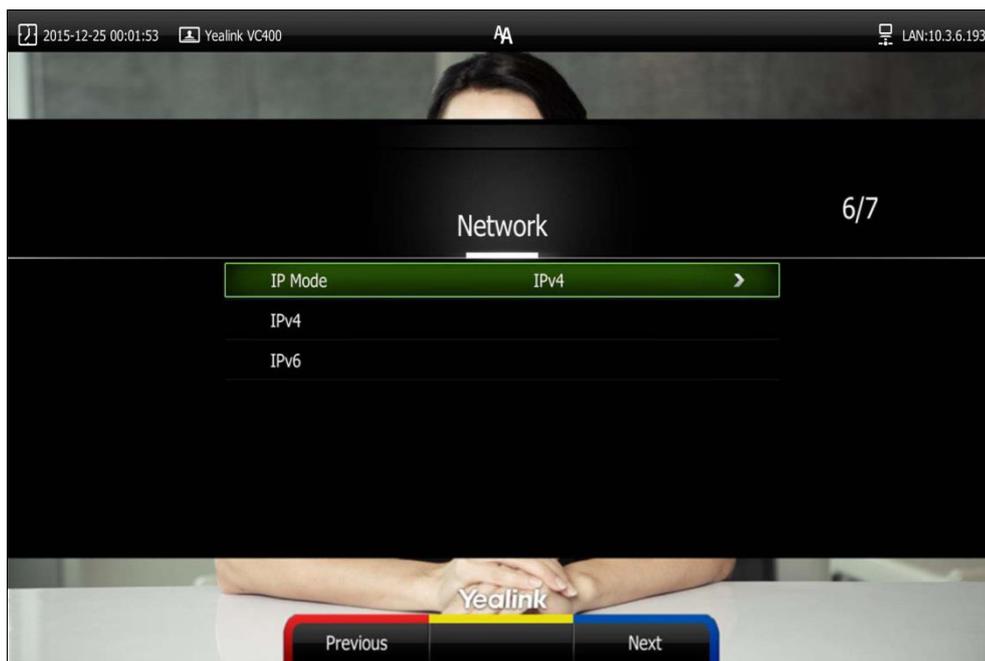
The display device displays firewall port mapping information.



9. Press  (**Next** soft key) to continue or press  (**Previous** soft key) to return to the previous screen.

10. Configure network settings.

The phone will try to contact a DHCP server in your network to obtain network parameters by default. If you uncheck the DHCP checkbox, you will need to configure IPv4 or IPv6 network manually. For more information, refer to [Configuring LAN Properties](#) on page 48.

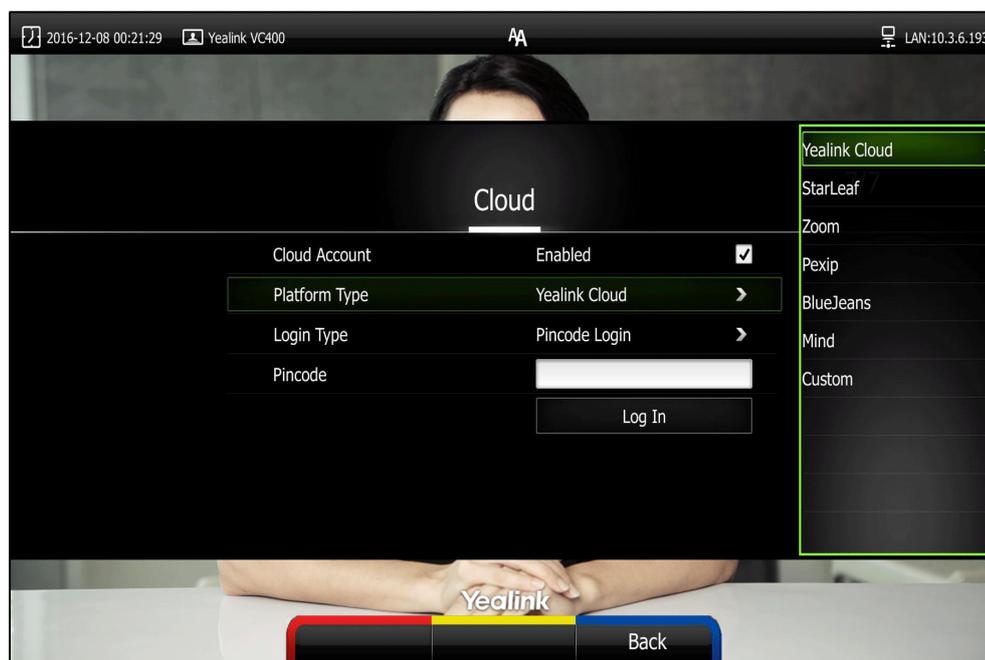


11. Press  (**Next** soft key) to continue or press  (**Previous** soft key) to return to

the previous screen.

12. (Optional.) Log into the Cloud platform.

Yealink video conferencing system supports Yealink/StarLeaf/Zoom/Pexip/BlueJeans/Mind/Custom platform. For more information, refer to [Configuring Cloud Settings](#) on page 101.



13. Press  (Complete soft key) to complete the setup wizard.

## Enabling Communication with Other Systems

- If you use Network Address Translation (NAT) to assign a public IP address to your VC400/VC120 system for communication with devices outside your private network, you must enable NAT on your VC400/VC120 system before placing calls. For more information, refer to [Network Address Translation](#) on page 80.
- If your VC400/VC120 system communicates with other devices through a firewall, you must configure your firewall to allow incoming and outgoing traffic to the VC400/VC120 system through the reserved ports specified in [Reserved Ports](#) on page 78. And the required ports specified in [Configuring the System for Use with a Firewall or NAT](#) on page 77. Users placing calls through a firewall to system may experience one-way audio or video if the firewall is not properly configured.
- If you are using Cloud server in your environment to place calls, refer to [Configuring Cloud Settings](#) on page 101.
- If you are using Session Initiation Protocol (SIP) servers in your environment to place calls using the SIP protocol, refer to [Configuring SIP Settings](#) on page 122.
- If you are using H.323 gatekeepers in your environment and want to place calls using a name or extension with the H.323 protocol, refer to [Configuring H.323 Settings](#) on page

126.

## Placing a Test Call from VCS

Yealink Demo1 to Yealink Demo3 are three default contacts stored in the local directory.

You can place a test call to the default contact, and the test call will be routed to the Yealink demo video conferencing system. Yealink demo contacts can help users to test quickly whether the system is normal after installation.



## Configuring Network

This chapter provides information on how to configure network settings for the system. Proper network settings allow the system work efficiently in your network environment.

This chapter provides the following sections:

- [Preparing the Network](#)
- [Configuring LAN Properties](#)
- [Configuring Network Speed and Duplex Mode](#)
- [VLAN](#)
- [802.1X Authentication](#)
- [H.323 Tunneling](#)
- [Configuring the System for Use with a Firewall or NAT](#)
- [Intelligent Firewall Traversal](#)
- [Quality of Service](#)
- [VPN](#)

## Preparing the Network

Before you begin configuring the network options, you must make sure your network is ready for video conferencing.

The following table lists the network information you need to obtain from the network administrator when preparing your network.

Type	Network Information
<b>Type of system</b>	DHCP
	Static IP Address <ul style="list-style-type: none"> <li>• IP address</li> <li>• Subnet mask</li> <li>• Gateway</li> </ul>
<b>DNS Server</b>	IP address of DNS server
<b>Call Protocol</b>	Register information of SIP account
	Register information of H.323 account
<b>Cloud Server</b>	Register information of Cloud platform
<b>802.1X</b>	Authentication information

## Configuring LAN Properties

### DHCP

DHCP (Dynamic Host Configuration Protocol) is a network protocol used to dynamically allocate network parameters to network hosts. The automatic allocation of network parameters to hosts eases the administrative burden of maintaining an IP network. The system complies with the DHCP specifications documented in RFC 2131. DHCP by default, which allows the system connected to the network to become operational by obtaining IP addresses and additional network parameters from the DHCP server.

#### DHCP Option

DHCP provides a framework for passing information to TCP/IP network devices. Network and other control information are carried in tagged data items that are stored in the options field of the DHCP message. The data items themselves are also called options.

DHCP can be initiated by simply connecting the system to the network. The system broadcasts DISCOVER messages to request network information carried in DHCP options. The DHCP server responds with the specific values in the corresponding options.

The following table lists the common DHCP options supported by the system.

Parameter	DHCP Option	Description
<b>Subnet Mask</b>	1	Specifies the client's subnet mask.
<b>Time Offset</b>	2	Specifies the offset of the client's subnet in seconds from Coordinated Universal Time (UTC).
<b>Router</b>	3	Specifies a list of IP addresses for routers on the client's subnet.
<b>Time Server</b>	4	Specifies a list of time servers available to the client.
<b>Domain Name Server</b>	6	Specifies a list of domain name servers available to the client.
<b>Log Server</b>	7	Specifies a list of MIT-LCS UDP servers available to the client.
<b>Host Name</b>	12	Specifies the name of the client.
<b>Domain Server</b>	15	Specifies the domain name that client should use when resolving hostnames via DNS.
<b>Broadcast Address</b>	28	Specifies the broadcast address in use on the client's subnet.
<b>Network Time</b>	42	Specifies a list of the NTP servers available to the

Parameter	DHCP Option	Description
<b>Protocol Servers</b>		client by IP address.
<b>Vendor-Specific Information</b>	43	Identifies the vendor-specific information.
<b>Vendor Class Identifier</b>	60	Identifies the vendor type.
<b>TFTP Server Name</b>	66	Identifies a TFTP server when the 'name' field in the DHCP header has been used for DHCP options.
<b>Bootfile Name</b>	67	Identifies a bootfile when the 'file' field in the DHCP header has been used for DHCP options.

For more information on DHCP options, refer to <http://www.ietf.org/rfc/rfc2131.txt?number=2131> or <http://www.ietf.org/rfc/rfc2132.txt?number=2132>.

To make the system gather network settings via DHCP options, you need to contact your network administrator to configure the DHCP server properly.

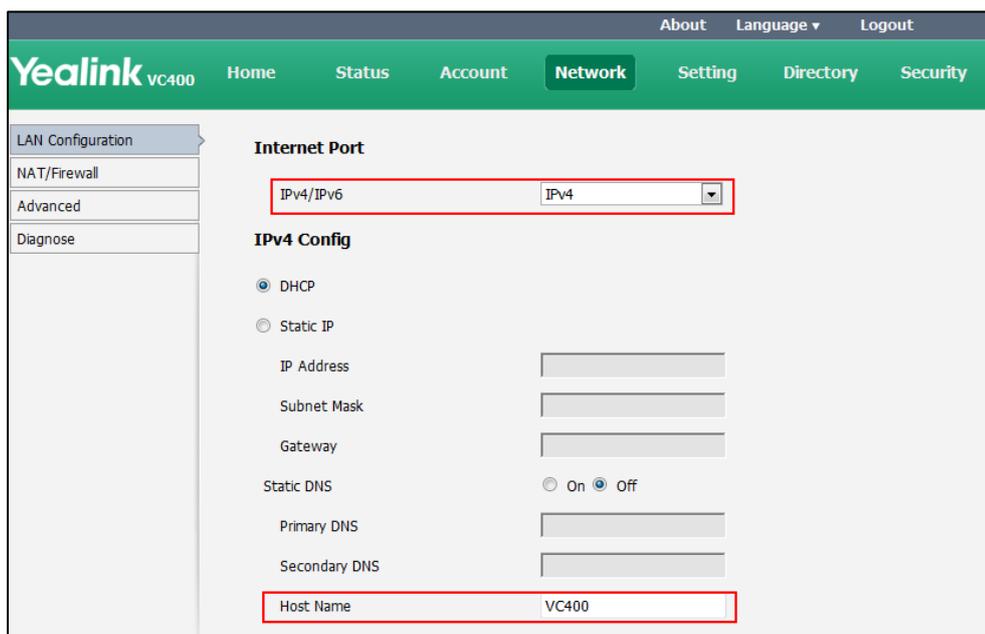
DHCP feature parameters on the system are described below:

Parameter	Description	Configuration Method
<b>DHCP</b>	Enables or disables the system to obtain network settings from the DHCP server. <b>Default:</b> Enabled <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Host Name</b>	Configures the host name of the system. <b>Default:</b> Blank <b>Note:</b> When the system broadcasts DHCP DISCOVER messages, it will report the configured host name to the DHCP server via DHCP option 12. Host name is optional, so it is not a mandatory configuration item. For more information, contact your network administrator. If you change this parameter, the system will reboot to make the	Web User Interface

Parameter	Description	Configuration Method
	change take effect.	

**To configure DHCP via web user interface:**

1. Click on **Network**->**LAN Configuration**.
2. In the **IPv4 Config** block, mark the **DHCP** radio box.
3. (Optional.) Enter the host name of the system in the **Host Name** field.



4. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that settings will take effect after a reboot.
5. Click **Confirm** to reboot the system immediately.

**To configure DHCP via the remote control:**

1. Select **Menu**->**Advanced** (default password: 0000) ->**Internet Configuration**->**IPv4**.
2. Check the **DHCP** checkbox.
3. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
4. Select **OK** to reboot the system immediately.

### Static DNS

Even though DHCP is enabled, you can manually configure the static DNS address(es).

Parameters of static DNS on the system are described below:

Parameter	Description	Configuration Method
<b>Static DNS</b>	Triggers the static DNS feature to on	Remote Control

Parameter	Description	Configuration Method
	<p>or off.</p> <p><b>Default:</b> Off</p> <p><b>Note:</b> If it is set to Off, the system will use the IPv4 DNS obtained from DHCP.</p> <p>If it is set to On, the system will use manually configured static IPv4 DNS.</p> <p>It only works if the value of the "IPv4 Config" is set to DHCP. If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>Primary DNS</b>	<p>Configures the primary IPv4 DNS server.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the value of the " Static IPv4 DNS" is set to On. If you change this parameter, the system will reboot to make the change take effect.</p>	Remote Control Web User Interface
<b>Secondary DNS</b>	<p>Configures the secondary IPv4 DNS server.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the value of the " Static IPv4 DNS" is set to On. If you change this parameter, the system will reboot to make the change take effect.</p>	Remote Control Web User Interface

**To configure static DNS address when DHCP is used via web user interface:**

1. Click on **Network->LAN Configuration**.
2. In the **IPv4 Config** block, mark the **DHCP** radio box.
3. In the **Static DNS** block, mark the **On** radio box.

- Enter the desired values in the **Primary DNS** and **Secondary DNS** fields.

The screenshot displays the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network' (selected), 'Setting', 'Directory', and 'Security'. On the left, a sidebar shows 'LAN Configuration' with sub-items: 'NAT/Firewall', 'Advanced', and 'Diagnose'. The main content area is titled 'IPv4 Config' and has 'DHCP' selected. Below this, there are input fields for 'IP Address', 'Subnet Mask', and 'Gateway'. A red box highlights the 'Static DNS' section, which includes a radio button for 'On' (selected) and 'Off', and two input fields: 'Primary DNS' with the value '192.168.1.166' and 'Secondary DNS' with the value '192.168.1.167'. Below the red box is the 'Host Name' field with the value 'VC400'. The 'IPv6 Config' section is also visible, with 'DHCP' selected and an 'IPv6 prefix' field set to '64'.

- Click **Confirm** to accept the change.

A dialog box pops up to prompt that settings will take effect after a reboot.

- Click **Confirm** to reboot the phone.

#### To configure static DNS when DHCP is used via the remote control:

- Select **Menu->Advanced** (default password: 0000) ->**Internet Configuration** ->**IPv4**.
- Check the **DHCP** checkbox.
- Check the **Static DNS** checkbox.
- Enter the desired values in the **DNS Primary Server** and **DNS Secondary Server** fields respectively.
- Press the **Save** soft key to accept the change.

The display device prompts "Reboot now?".

## Configuring Network Settings Manually

If DHCP is disabled or the system cannot obtain network settings from the DHCP server, you need to configure them manually.

The following parameters should be configured for systems to establish network connectivity:

- **IP Address:** Configure the system to use the assigned IP address.
- **Subnet Mask:** Enter the subnet mask address when the system does not automatically obtain the subnet mask.

- **Gateway:** A gateway is a network point that works as an entrance to another network.
- **Primary DNS /Secondary DNS:** Domain Name System (DNS) servers translates domain names (for example: www.example.com), which can be easily memorized by humans, to the numerical IP addresses (192.168.1.15) needed for the purpose of computer services and devices worldwide.

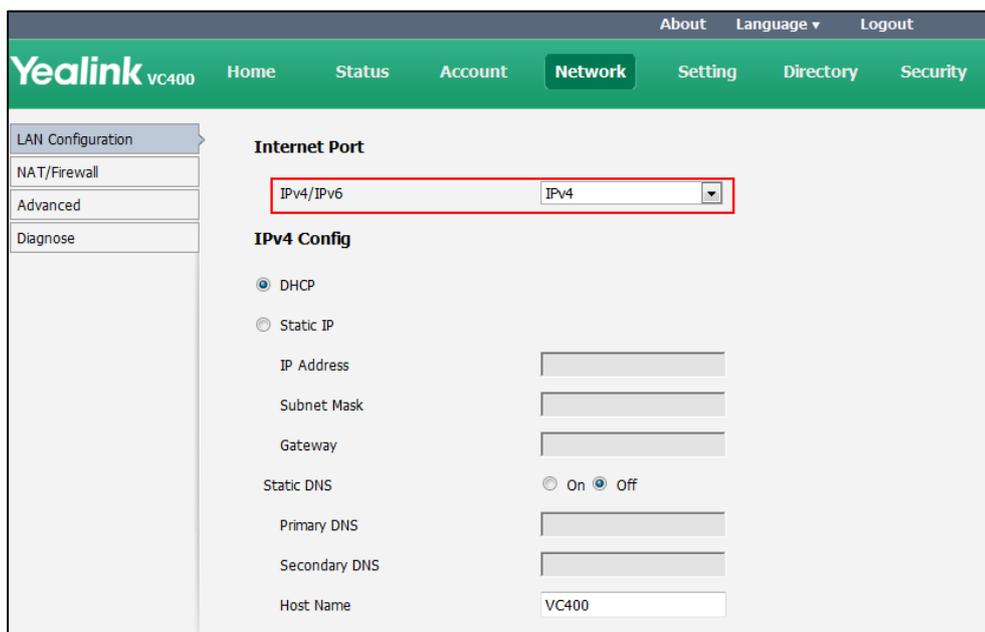
Network parameters need to be configured manually on the system are described below.

Parameter	Description	Configuration Method
<b>Mode (IPv4/IPv6)</b>	Configures the IP address mode. <b>Default:</b> IPv4 <b>Note:</b> If you change this parameter, the IP phone will reboot to make the change take effect.	Remote Control Web User Interface
<b>Static IP</b>	Enables or disables the system to use manually configured network settings. <b>Default:</b> Disabled <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>IP Address</b>	Configures the IP address assigned to the system. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Subnet Mask</b>	Configures the subnet mask assigned to the system. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Gateway</b>	Configures the gateway assigned to the system. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Static DNS</b>	Triggers the static DNS feature to on	Remote Control

Parameter	Description	Configuration Method
	or off. <b>Default:</b> Off <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Web User Interface
<b>Primary DNS</b>	Configures the primary DNS server assigned to the system. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Secondary DNS</b>	Configures the secondary DNS server assigned to the system. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface

**To configure the IP address mode via web user interface:**

1. Click on **Network->LAN Configuration**.
2. Select desired value from the pull-down list of **IPv4/IPv6**.



3. Click **Confirm** to accept the change.  
 A dialog box pops up to prompt that settings will take effect after a reboot.

4. Click **OK** to reboot the phone.

**To configure a static IPv4 address via web user interface:**

1. Click on **Network->LAN Configuration**.
2. In the **IPv4 Config** block, mark the **Static IP** radio box.
3. Enter the desired values in the **IP Address, Subnet Mask, Gateway, Primary DNS** and **Secondary DNS** fields.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'Home', 'Status', 'Account', 'Network' (selected), 'Setting', 'Directory', and 'Security'. The left sidebar shows 'LAN Configuration' selected, with sub-items 'NAT/Firewall', 'Advanced', and 'Diagnose'. The main content area is titled 'Internet Port' and shows 'IPv4/IPv6' set to 'IPv4'. Under 'IPv4 Config', the 'Static IP' radio button is selected. The following fields are filled: IP Address (192.168.1.10), Subnet Mask (255.255.255.0), Gateway (192.168.1.254), Static DNS (On), Primary DNS (192.168.1.166), and Secondary DNS (192.168.1.167). The 'Host Name' field is set to 'VC400'.

4. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that settings will take effect after a reboot.
5. Click **Confirm** to reboot the system immediately.

**To configure the IP address mode via phone user interface:**

1. Select **Menu->Advanced** (default password: 0000) ->**Internet Configuration**.
2. Select **IPv4** or **IPv4 & IPv6** from the **IP Mode** field.
3. Press the **Save** soft key to accept the change.

The IP phone reboots automatically to make settings effective after a period of time.

**To configure a static IPv4 address via phone user interface:**

1. Select **Menu->Advanced** (default password: 0000) ->**Internet Configuration->IPv4**.
2. Uncheck the **DHCP** checkbox.
3. Enter the desired values in the **IP Address, Subnet Mask, Gateway, DNS Primary Server** and **DNS Secondary Server** fields respectively.
4. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
5. Select **OK** to reboot the system immediately.

## IPv6 Support

Because Internet Protocol version 4 (IPv4) uses a 32-bit address, it cannot meet the increased demands for unique IP addresses for all devices that connect to the Internet. Therefore, Internet Protocol version 6 (IPv6) is the next generation network layer protocol, which designed as a replacement for the current IPv4 protocol.

IPv6 is developed by the Internet Engineering Task Force (IETF) to deal with the long-anticipated problem of IPv4 address exhaustion. Yealink IP Phone supports IPv4 addressing mode, IPv6 addressing mode, as well as an IPv4&IPv6 dual stack addressing mode. IPv4 uses a 32-bit address, consisting of four groups of three decimal digits separated by dots; for example, 192.168.1.100. IPv6 uses a 128-bit address, consisting of eight groups of four hexadecimal digits separated by colons; for example, 2026:1234:1:1:215:65ff:fe1f:caa.

VoIP network based on IPv6 can provide end-to-end security capabilities, enhanced Quality of Service (QoS), a set of service requirements to deliver performance guarantee while transporting traffic over the network.

If you configure the network settings on the phone for an IPv6 network, you can set up an IP address for the phone either by using DHCPv6 or by manually entering an IP address. Ensure that your network environment supports IPv6. Contact your ISP for more information.

### IPv6 Address Assignment Method

Supported IPv6 address assignment methods:

- **Manual Assignment:** An IPv6 address and other configuration parameters (e.g., DNS server) for the IP phone can be statically configured by an administrator.
- **Stateful DHCPv6:** The Dynamic Host Configuration Protocol for IPv6 (DHCPv6) has been standardized by the IETF through RFC 3315. DHCPv6 enables DHCP servers to pass configuration parameters such as IPv6 network addresses to IPv6 nodes. It offers the capability of automatic allocation of reusable network addresses and additional configuration flexibility. This protocol is a stateful counterpart to "IPv6 Stateless Address Autoconfiguration" ([RFC 2462](#)), and can be used separately or concurrently with the latter to obtain configuration parameters.

### How the system obtains the IPv6 address and network settings?

The following table lists where the system obtains the IPv6 address and other network settings:

DHCPv6	How the IP phone obtains the IPv6 address and network settings?
Disabled	You have to manually configure the static IPv6 address and other network settings.
Enabled	The IP phone can obtain the IPv6 address and the other network settings via DHCPv6.

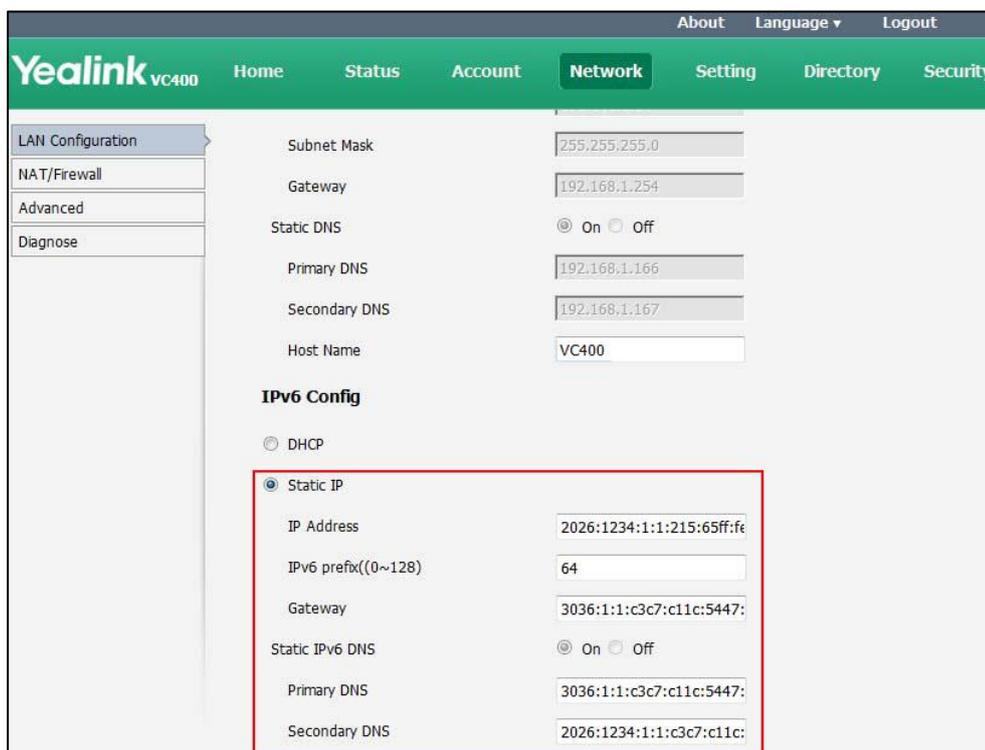
IPv6 Network parameters need to be configured manually on the system are described below.

Parameter	Description	Configuration Method
<b>Mode (IPv4/IPv6)</b>	Configures the IP address mode. <b>Default:</b> IPv4 <b>Note:</b> If you change this parameter, the IP phone will reboot to make the change take effect.	Remote Control Web User Interface
<b>Static IP</b>	Enables or disables the system to use manually configured IPv6 network settings. <b>Default:</b> Disabled <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>IP Address</b>	Configures the IPv6 address assigned to the system. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>IPv6 prefix((0~128)</b>	Configures the IPv6 prefix. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Gateway</b>	Configures the IPv6 default gateway. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Static DNS/Static IPv6 DNS</b>	Triggers the static IPv6 DNS feature to on or off. <b>Default:</b> Off <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>DNS Primary Server/Primary</b>	Configures the primary IPv6 DNS server.	Remote Control Web User Interface

Parameter	Description	Configuration Method
<b>DNS</b>	<b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	
<b>DNS Secondary Server/Secondary DNS</b>	Configures the secondary IPv6 DNS server. <b>Default:</b> Blank <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface

**To configure IPv6 address assignment method via web user interface:**

1. Click on **Network->LAN Configuration**.
2. Select the desired IP mode (**IPv6** or **IPv4 & IPv6**) from the pull-down list of **IPv4/IPv6**.
3. In the **IPv6 Config** block, mark the **DHCP** or the **Static IP** radio box.
  - If you mark the **Static IP** radio box, configure the IPv6 address and other configuration parameters in the corresponding fields.



- (Optional.) If you mark the **DHCP** radio box, you can configure the static DNS address in the corresponding fields.

The screenshot displays the 'Network' configuration page for a Yealink VC400 device. The interface includes a navigation menu with options like Home, Status, Account, Network (selected), Setting, Directory, and Security. The main configuration area is divided into sections: LAN Configuration, NAT/Firewall, Advanced, and Diagnose. Under the 'IPv6 Config' section, the 'DHCP' radio button is selected. The 'Static IPv6 DNS' section is highlighted with a red box, showing the 'Static IPv6 DNS' radio button selected, and the 'Primary DNS' and 'Secondary DNS' fields filled with IPv6 addresses: 3036:1:1:c3c7:c11c:5447: and 2026:1234:1:1:c3c7:c11c: respectively.

4. Click **Confirm** to accept the change.

A dialog box pops up to prompt that the settings will take effect after a reboot.

5. Click **OK** to reboot the phone.

#### To configure IPv6 address assignment method via phone user interface:

1. Select **Menu->Advanced** (default password: 0000) ->**Internet Configuration**.
2. Select **IPv4 & IPv6** or **IPv6** from the **IP Mode** field.
3. Press **▲** or **▼** to highlight **IPv6** and press **OK**.
4. Select the desired IPv6 address assignment method.

If you uncheck the **DHCP** checkbox, configure the IPv6 address and other network parameters in the corresponding fields.

5. Press the **Save** soft key to accept the change.

The IP phone reboots automatically to make settings effective after a period of time.

#### To configure static DNS when DHCP is used via phone user interface:

1. Select **Menu->Advanced** (default password: 0000) ->**Internet Configuration** ->**IPv6**.
2. Check the **DHCP** checkbox.
3. Check the **Static DNS** checkbox.
4. Enter the desired values in the **DNS Primary Server** and **DNS Secondary Server** fields respectively.
5. Press the **Save** soft key to accept the change.

6. The display device prompts "Reboot now?".
7. Select **OK** to reboot the system immediately.

## Configuring Network Speed and Duplex Mode

You can configure the network speed and duplex mode the system uses. The network speed and duplex mode you select for the system must be supported by the switch. The network speeds and duplex modes supported by the system are:

- Auto
- 10 Mb/s Full Duplex
- 100 Mb/s Full Duplex
- 10 Mb/s Half Duplex
- 100 Mb/s Half Duplex
- 1000 Mb/s Full Duplex

Auto is configured on the system by default.

### Auto

Auto means that the switch will negotiate the network speed and duplex mode for the systems to transmit voice or data over Ethernet. This process entails devices first sharing transmission capabilities and then selecting the highest performance transmission mode supported by both systems.

### Half-duplex

Half-duplex transmission refers to transmitting voice or data in both directions, but in one direction at a time; this means one system can send data on the line, but not receive data simultaneously.

### Full-duplex

Full-duplex transmission refers to transmitting voice or data in both directions at the same time; this means one system can send data on the line while also receiving data.

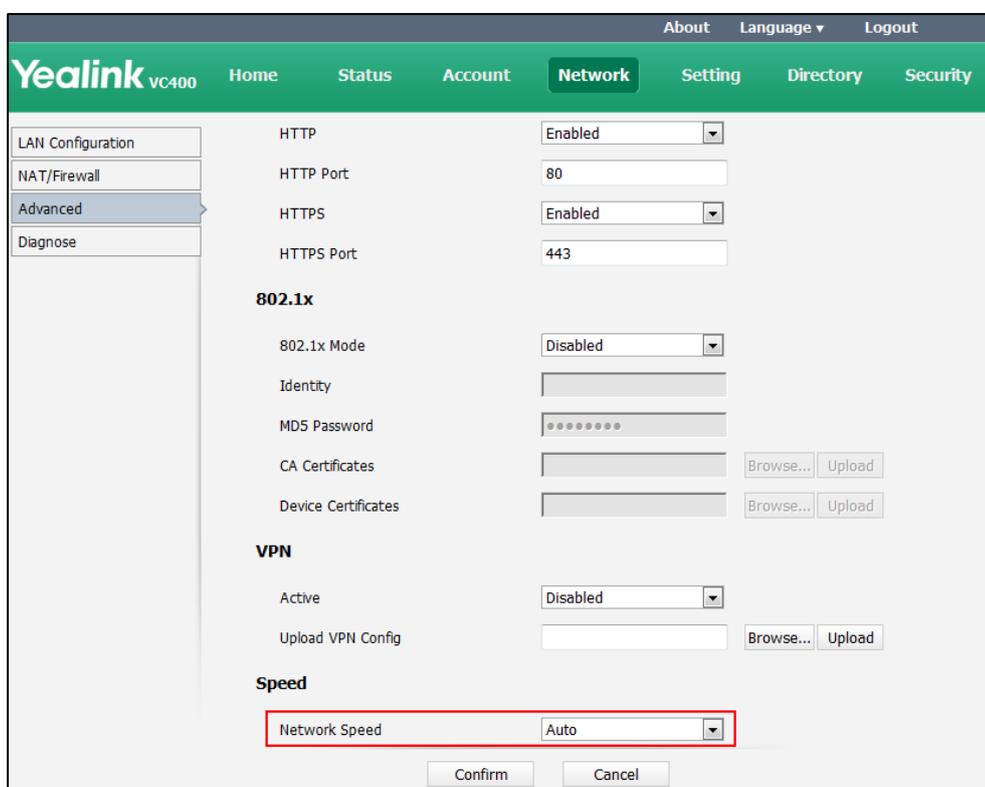
Parameter of network speed feature on the system is described below:

Parameter	Description	Configuration Method
<b>Network Speed</b>	Specifies the network speed and duplex mode for the system to use. <b>Default:</b> Auto <b>Note:</b> If <b>Auto</b> is selected, the network speed and duplex mode will be negotiated by the switch	Web User Interface

Parameter	Description	Configuration Method
	<p>automatically.</p> <p>The network speed and duplex mode you select must be supported by the switch.</p> <p>If you change this parameter, the system will reboot to make the change take effect.</p>	

**To configure the network speed via web user interface:**

1. Click on **Network->Advanced**.
2. Select the desired value from the pull-down list of **Network Speed**.



3. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that settings will take effect after a reboot.
4. Click **Confirm** to reboot the system immediately.

## VLAN

VLAN (Virtual Local Area Network) is used to divide a physical network logically into several broadcast domains. VLAN membership is configurable through software instead of physically relocating devices or connections. Grouping devices with a common set of requirements

regardless of their physical location can greatly simplify network design. VLANs can address issues such as scalability, security, and network management.

The purpose of VLAN configurations on the system is to insert a tag with VLAN information to the packets generated by the system. When VLAN is configured on the system properly, the system will tag all packets with the VLAN ID. The switch receives and forwards the tagged packets to the corresponding VLAN according to the tag's VLAN ID, as described in IEEE Std 802.3.

In addition to manual configuration, the system also supports automatic VLAN discovery via LLDP or DHCP. The assignment takes effect in the following order: assignment via LLDP, manual configuration, then assignment via DHCP.

For more information on VLAN, refer to [VLAN Feature on Yealink IP Phones](#).

## LLDP

LLDP (Linker Layer Discovery Protocol) is a vendor-neutral Link Layer protocol, which allows the system to receive and/or transmit device-related information from/to directly connected devices on the network that are also using the protocol, and store the information about other devices. LLDP transmits information as packets called LLDP Data Units (LLDPDUs). An LLDPDU consists of a set of Type-Length-Value (TLV) elements, each of which contains a particular type of information about the device or port transmitting it.

### LLDP-MED (Media Endpoint Discovery)

LLDP-MED is published by the Telecommunications Industry Association (TIA). It is an extension to LLDP that operates between endpoint devices and network connectivity devices. LLDP-MED provides the following capabilities for the system:

- Capabilities Discovery -- allows LLDP-MED system to determine the capabilities that the connected switch supports and has enabled.
- Network Policy -- provides voice VLAN configuration to notify the system which VLAN to use and QoS-related configuration for voice data. It provides a "plug and play" network environment.
- Power Management -- provides information related to how the system is powered, power priority, and how much power the system needs.
- Inventory Management -- provides a means to effectively manage the system and its attributes, such as model number, serial number and software revision.

TLVs supported by the system are summarized in the following table:

TLV Type	TLV Name	Description
<b>Mandatory TLVs</b>	Chassis ID	The network address of the system.
	Port ID	The MAC address of the system.
	Time To Live	Seconds until data unit expires.

TLV Type	TLV Name	Description
		The default value is 180s.
	End of LLDPDU	Marks end of LLDPDU.
<b>Optional TLVs</b>	System Name	Name assigned to the system. The default value is "VCS".
	System Description	Description of the system. Description includes firmware version of the system.
	System Capabilities	The supported and enabled system capabilities. The Telephone capability is supported and enabled by default.
	Port Description	Description of port that sends data unit. The default value is "WAN PORT".
<b>IEEE Std 802.3 Organizationally Specific TLV</b>	MAC/PHY Configuration/Status	Duplex mode and network speed settings of the system. The Auto Negotiation is supported and enabled by default. The advertised capabilities of PMD. Auto-Negotiation is: 1000BASE-T (full duplex mode) 100BASE-TX (full duplex mode) 100BASE-TX (half duplex mode) 10BASE-T (full duplex mode) 10BASE-T (half duplex mode)
<b>TIA Organizationally Specific TLVs</b>	Media Capabilities	The MED device type of the system and the supported LLDP-MED TLV type can be encapsulated in LLDPDU. The supported LLDP-MED TLV types are: LLDP-MED Capabilities, Network Policy, Extended Power via MDI-PD, Inventory.
	Network Policy	Port VLAN ID, application type, L2 priority and DSCP value.
	Extended Power-via-MDI	Power type, source, priority and value.
	Inventory - Hardware Revision	Hardware revision of the system.

TLV Type	TLV Name	Description
	Inventory - Firmware Revision	Firmware revision of the system.
	Inventory - Software Revision	Software revision of the system.
	Inventory - Serial Number	Serial number of the system.
	Inventory - Manufacturer Name	Manufacturer name of the system. The default value is "Yealink".
	Inventory - Model Name	Model name of the system. The default value is "VCS".
	Asset ID	Assertion identifier of the system.

Parameters of LLDP feature on the system are described below.

Parameter	Description	Configuration Method
<b>LLDP-&gt;Active</b>	Enables or disables LLDP feature on the system. <b>Default:</b> Disabled <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Packet Interval(1-3600s)</b>	Configures the interval (in seconds) for the system to send LLDP requests. <b>Default:</b> 60 <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface

**To configure LLDP via web user interface:**

1. Click on **Network->Advanced**.
2. In the **LLDP** block, select the desired value from the pull-down list of **Active**.

- Enter the desired time interval in the **Packet Interval (1-3600s)** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network' (highlighted), 'Setting', 'Directory', and 'Security'. On the left, there is a sidebar with 'LAN Configuration', 'NAT/Firewall', 'Advanced' (selected), and 'Diagnose'. The main content area is titled 'LLDP' and contains the following settings:

- LLDP**
  - Active: Enabled (dropdown)
  - Packet Interval(1-3600s): 60 (text input)
- VLAN**
  - Internet Port
    - Active: Disabled (dropdown)
    - VID(1-4094): 1 (text input)
    - Priority: 0 (dropdown)
  - DHCP VLAN
    - Active: Enabled (dropdown)
    - Option: 132 (text input)

- Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
- Click **Confirm** to reboot the system immediately.

#### To configure LLDP via the remote control:

- Select **Menu**->**Advanced** (default password: 0000) ->**Advanced Network**.
- In the **LLDP** block, check the **Active** checkbox.
- Enter the desired value in the **Packet Interval (1-3600s)** field.
- Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
- Select **OK** to reboot the system immediately.

## Manual Configuration for VLAN

VLAN is disabled on systems by default. You can configure VLAN manually. Before configuring VLAN on the systems, you need to obtain the VLAN ID from your network administrator.

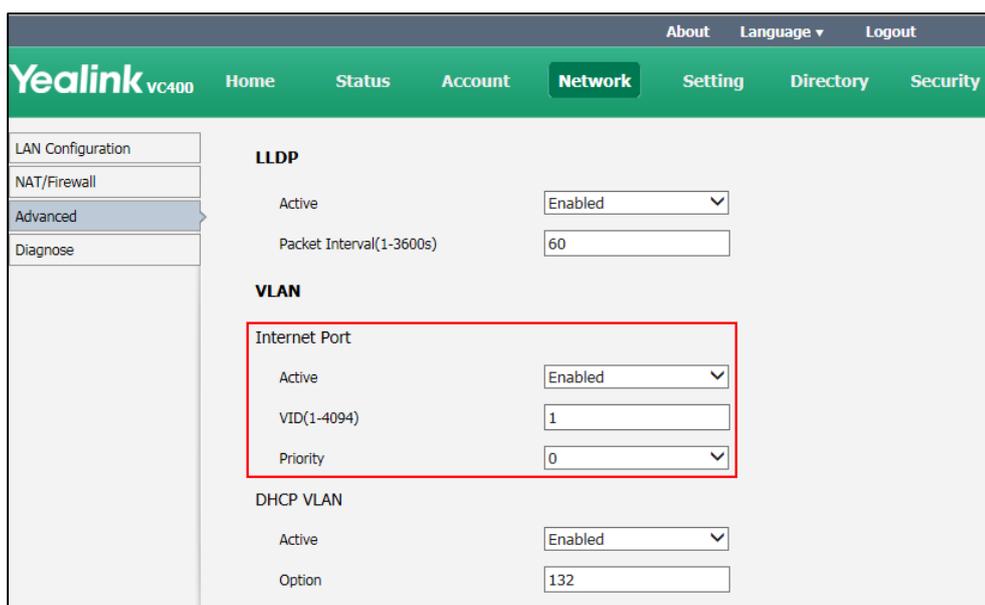
Parameters of manual VLAN on the system are described below.

Parameter	Description	Configuration Method
<b>Internet Port-&gt;Active</b>	<p>Enables or disables VLAN for the Internet (WAN) port.</p> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the</p>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	change take effect.	
<b>VID(1-4094)</b>	Configures VLAN ID for the Internet (WAN) port. <b>Default: 1</b> <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Priority</b>	Configures VLAN priority for the Internet (WAN) port. <b>Valid values: 0-7</b> 7 is the highest priority, 0 is the lowest priority. <b>Default: 0</b> <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface

**To configure VLAN for Internet port via web user interface:**

1. Click on **Network->Advanced**.
2. In the **VLAN** block, select the desired value from the pull-down list of **Internet Port Active**.
3. Enter the VLAN ID in the **VID (1-4094)** field.
4. Select the desired value (0-7) from the pull-down list of **Priority**.



5. Click **Confirm** to accept the change.

A dialog box pops up to prompt that the settings will take effect after a reboot.

- Click **OK** to reboot the phone.

**To configure VLAN via the remote control:**

- Select **Menu->Advanced** (default password: 0000) -> **Advanced Network**.
- In the **VLAN** block, check the **Active** checkbox.
- Enter the VLAN ID in the **VID(1-4094)** field.
- Enter the priority value (0-7) in the **Priority** field.
- Press the **Save** soft key to accept the change.

The display device prompts "Reboot now?".

- Select **OK** to reboot the system immediately.

## DHCP VLAN

The system supports VLAN discovery via DHCP. When the VLAN Discovery method is set to DHCP, the system will examine the DHCP option for a valid VLAN ID. The predefined option 132 is used to supply the VLAN ID by default. You can customize the DHCP option used to request the VLAN ID. For more information on VLAN, refer to [VLAN Feature on Yealink IP Phones](#).

Parameters of VLAN feature on the system are described below.

Parameter	Description	Configuration Method
<b>DHCP VLAN-&gt;Active</b>	<p>Enables or disables the DHCP VLAN discovery feature on the system.</p> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>Option</b>	<p>Configures the DHCP option from which the system obtains the VLAN settings.</p> <p>You can configure at most five DHCP options and separate them by commas.</p> <p><b>Valid Values:</b> 128-254</p> <p><b>Default:</b> 132</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface

**To configure DHCP VLAN discovery via web user interface:**

1. Click on **Network->Advanced**.
2. In the **VLAN** block, select the desired value from the pull-down list of **DHCP VLAN Active**.
3. Enter the desired option in the **Option** field.

The default option is 132.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below that, a green bar contains 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Network' menu is selected. On the left, a sidebar shows 'LAN Configuration', 'NAT/Firewall', 'Advanced' (selected), and 'Diagnose'. The main content area is divided into sections: 'LLDP' (Active: Disabled, Packet Interval: 60), 'VLAN' (Internet Port: Active: Disabled, VID: 1, Priority: 0), and 'DHCP VLAN' (Active: Enabled, Option: 132). The 'DHCP VLAN' section is highlighted with a red box. Below it is the 'QoS' section with Audio Priority: 63, Video Priority: 34, and Data Priority: 63.

4. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
5. Click **Confirm** to reboot the system immediately.

## 802.1X Authentication

IEEE 802.1X authentication is an IEEE standard for Port-based Network Access Control (PNAC), part of the IEEE 802.1 group of networking protocols. It offers an authentication mechanism for devices to connect to a LAN or WLAN. The 802.1X authentication involves three parties: a supplicant, an authenticator and an authentication server. The supplicant is the system that wishes to attach to the LAN or WLAN. With 802.1X port-based authentication, the system provides credentials, such as user name and default password, for the authenticator. The authenticator then forwards the credentials to the authentication server for verification. If the authentication server determines the credentials are valid, the system is allowed to access resources located on the protected side of the network.

The system supports the authentication protocols EAP-MD5, EAP-TLS, PEAP-MSCHAPv2 and EAP-TTLS/EAP-MSCHAPv2 for 802.1X authentication.

For more information on 802.1X authentication, refer to [Yealink 802.1X Authentication](#).

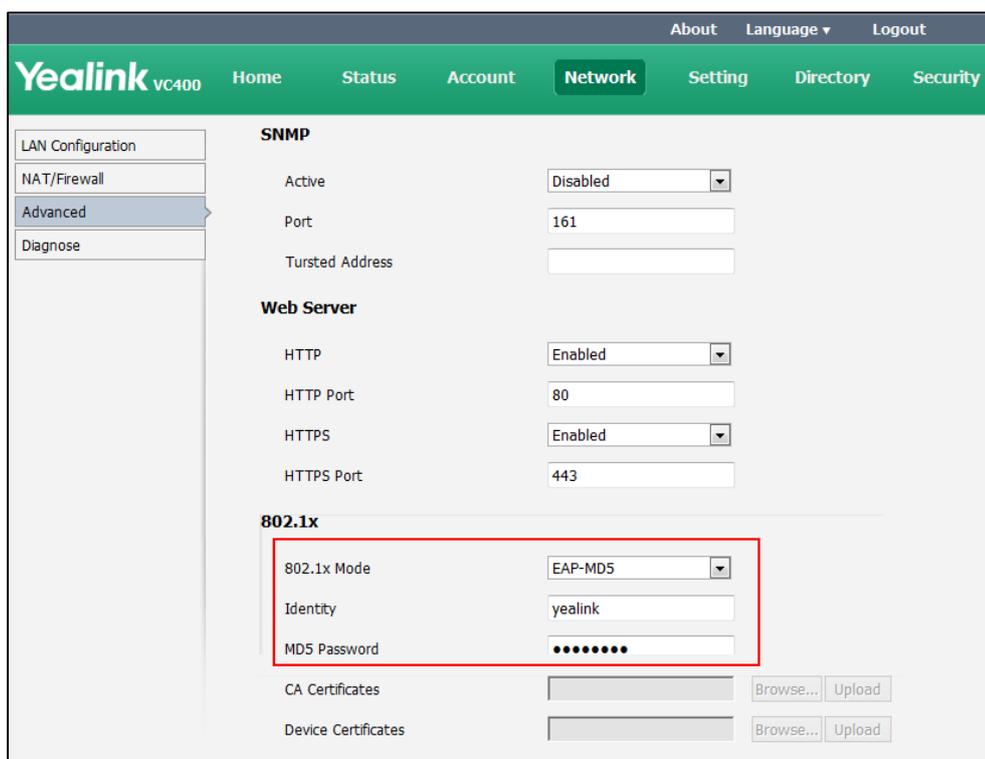
802.1X feature parameters on the system are described below:

Parameter	Description	Configuration Method
<b>802.1x Mode</b>	<p>Specifies the 802.1x authentication mode.</p> <ul style="list-style-type: none"> <li>• Disabled</li> <li>• EAP-MD5</li> <li>• EAP-TLS</li> <li>• PEAP-MSCHAPv2</li> <li>• EAP-TTLS/EAP-MSCHAPv2</li> </ul> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Identity</b>	<p>Configures the user name for 802.1x authentication.</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	<p>Web User Interface</p>
<b>MD5 Password</b>	<p>Configures the password for 802.1x authentication.</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	<p>Web User Interface</p>
<b>CA Certificates</b>	<p>Configures the access URL of the CA certificate when the 802.1x authentication mode is configured as EAP-TLS, PEAP-MSCHAPV2 or EAP-TTLS/EAP-MSCHAPV2.</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	<p>Web User Interface</p>
<b>Device Certificates</b>	<p>Configures the access URL of the device certificate when the 802.1x authentication mode is configured as EAP-TLS.</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the</p>	<p>Web User Interface</p>

Parameter	Description	Configuration Method
	change take effect.	

**To configure 802.1X via web user interface:**

1. Click on **Network->Advanced**.
2. In the **802.1x** block, select the desired protocol from the pull-down list of **Mode 802.1x**.
  - a) If you select **EAP-MD5**:
    - 1) Enter the user name for authentication in the **Identity** field.
    - 2) Enter the password for authentication in the **MD5 Password** field.



- b) If you select **EAP-TLS**:
  - 1) Enter the user name for authentication in the **Identity** field.
  - 2) Leave the **MD5 Password** field blank.
  - 3) In the **CA Certificates** field, click **Browse** to locate the desired CA certificate (\*.pem,\*.crt, \*.cer or \*.der) from your local system.
  - 4) In the **Device Certificates** field, click **Browse** to locate the desired client certificate (\*.pem or \*.cer) from your local system.

- 5) Click **Upload** to upload the certificates.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The left sidebar shows 'LAN Configuration', 'NAT/Firewall', 'Advanced', and 'Diagnose'. The main content area is titled 'SNMP' and 'Web Server'. The '802.1x' section is highlighted with a red box and contains the following fields:

802.1x	
802.1x Mode	EAP-TLS
Identity	yealink
MD5 Password	••••••••
CA Certificates	C:\fakepath\ca.crt <input type="button" value="Browse..."/> <input type="button" value="Upload"/>
Device Certificates	C:\fakepath\client.pem <input type="button" value="Browse..."/> <input type="button" value="Upload"/>

- c) If you select **PEAP-MSCHAPv2**:

- 1) Enter the user name for authentication in the **Identity** field.
- 2) Enter the password for authentication in the **MD5 Password** field.
- 3) In the **CA Certificates** field, click **Browse** to locate the desired certificate (\*.pem, \*.crt, \*.cer or \*.der) from your local system.

- 4) Click **Upload** to upload the certificate.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network' (selected), 'Setting', 'Directory', and 'Security'. The left sidebar shows 'LAN Configuration', 'NAT/Firewall', 'Advanced' (selected), and 'Diagnose'. The main content area is divided into sections: 'SNMP' (Active: Disabled, Port: 161, Trusted Address: empty), 'Web Server' (HTTP: Enabled, HTTP Port: 80, HTTPS: Enabled, HTTPS Port: 443), and '802.1x' (highlighted in red). The '802.1x' section includes:
 

- 802.1x Mode: PEAP-MSCHAPV2
- Identity: yealink
- MD5 Password: masked with dots
- CA Certificates: C:\fakepath\ca.crt
- Device Certificates: empty

 Each field has a 'Browse...' button and an 'Upload' button.

- d) If you select **EAP-TTLS/EAP-MSCHAPv2**:

- 1) Enter the user name for authentication in the **Identity** field.
- 2) Enter the password for authentication in the **MD5 Password** field.
- 3) In the **CA Certificates** field, click **Browse** to locate the desired certificate (\*.pem, \*.crt, \*.cer or \*.der) from your local system.

- 4) Click **Upload** to upload the certificate.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The left sidebar shows 'LAN Configuration', 'NAT/Firewall', 'Advanced', and 'Diagnose'. The main content area is titled 'SNMP' and 'Web Server'. The '802.1x' section is highlighted with a red box and contains the following fields:

802.1x	
802.1x Mode	EAP-TTLS/EAP-MSCHA
Identity	yealink
MD5 Password	••••••••
CA Certificates	C:\fakepath\ca.crt <input type="button" value="Browse..."/> <input type="button" value="Upload"/>
Device Certificates	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/>

3. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
4. Click **Confirm** to reboot the system immediately.

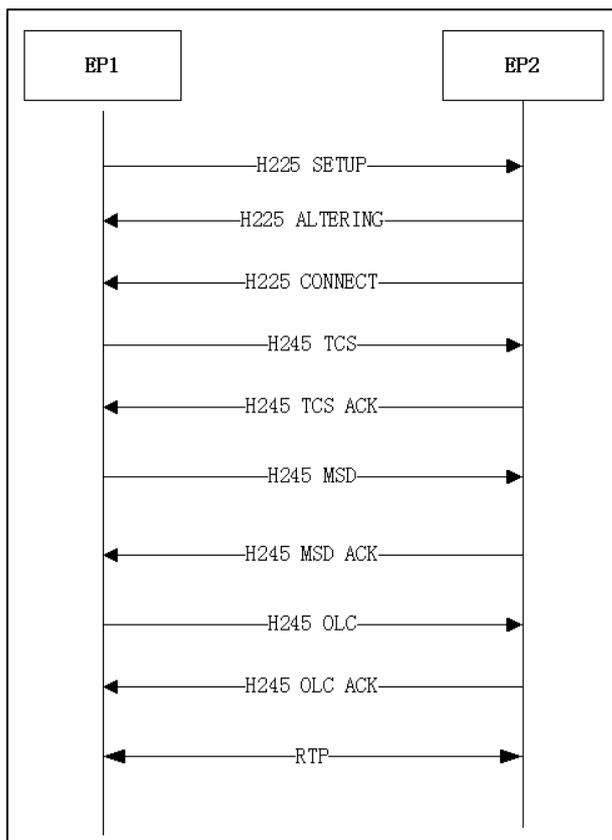
#### To configure the 802.1X via the remote control:

1. Select **Menu->Advanced** (default password: 0000) -> **Advanced Network**.
2. Select the desired mode from the pull-down list of **802.1x Mode**.
3. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
4. Select **OK** to reboot the system immediately.

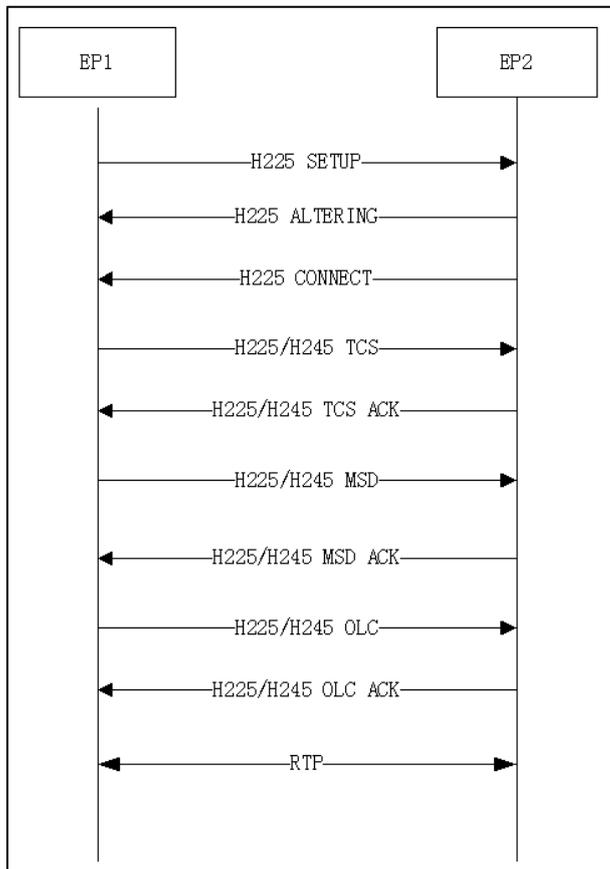
## H.323 Tunneling

The H.245 protocol is a control protocol that manages the media sessions. It is a part of the H.323 protocol suite. The H.245 protocol is used primarily to negotiate the master-slave relationship between communicating systems. The H.245 messages can be encapsulated and carried between H.225 controlled system within H.225 messages. This way of "piggy-backing" an H.245 message to the H.225 message is referred to as H.323 Tunneling. The tunneling feature relies on H.225 system-to-system connectivity (via TCP) to pass H.245 messages, and uses the H.225 communication channel without creating a separate TCP socket connection (per H.323 call) for media control.

If H.323 tunneling feature is disabled, the setup processes of an H.323 call are shown below:



If H.323 tunneling feature is enabled on both sites, the setup processes of an H.323 call are shown below:



The parameter of the H.323 tunneling feature on the system is described below:

Parameter	Description	Configuration Method
<b>H.323 Tunneling</b>	Enables or disables the H.323 tunneling on the system. You can configure it for the StarLeaf Cloud platform or H.323 call separately. <b>Default:</b> Disabled	Remote Control Web User Interface

**To configure the H.323 tunneling for StarLeaf Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **StarLeaf** from the pull-down list of **Platform Type**.

3. Select the desired value from the pull-down list of **H.323 Tunneling**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The left sidebar shows a tree view with 'Cloud' selected, containing sub-items: 'H.323', 'SIP Account', 'SIP IP Call', and 'Codec'. The main content area is titled 'Cloud' and contains the following settings:

Register Status	Registered
Cloud Account	Enabled
Platform Type	StarLeaf
QCP Code	367037241953
<b>Advanced Setting</b>	
H.323 Tunneling	Disabled
H.235 Encryption	Disabled
Protocol Monitor Port	1720
DTMF Type	Auto
Local Early Media	Disabled
H.239	Enabled
FECC(H.323)	Enabled

4. Click **Confirm** to accept the change.

**To configure H.323 tunneling for H.323 via web user interface:**

1. Click on **Account->H.323**.
2. Select the desired value from the pull-down list of **H.323 Tunneling**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The left sidebar shows a tree view with 'Cloud' selected, containing sub-items: 'H323', 'SIP Account', 'SIP IP Call', and 'Codec'. The main content area is titled 'H323' and contains the following settings:

Register Status	Registered	
H323 Protocol	Enabled	
H.323 Account	Enabled	
H.323 Name	9000	
H.323 Extension	9000	
Gatekeeper Mode	Manual	
Gatekeeper IP Address 1	10.2.1.43	Port: 1719
Gatekeeper IP Address 2		Port: 1719
Gatekeeper Authentication	Disabled	
Gatekeeper Username		
Gatekeeper Password	••••••••	
H.460 Active	Disabled	
H.323 Tunneling	Enabled	
H235 Encryption	Disabled	
Protocol Monitor Port	1720	

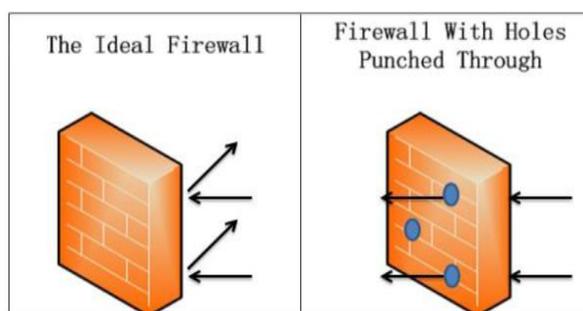
3. Click **Confirm** to accept the change.

**To configure H.323 tunneling via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) ->**H.323**.
2. Check the **H.323 Tunneling** checkbox.
3. Press the **Save** soft key to accept the change.

## Configuring the System for Use with a Firewall or NAT

A firewall protects an organization's IP network by controlling data traffic from outside the network. Unless the firewall is designed to work with video conferencing equipment, you must configure the firewall to allow incoming and outgoing traffic to the VC400/VC120 system through the reserved ports. Users placing calls through a firewall to system may experience one-way audio or video if the firewall is not properly configured.



You must configure your firewall to allow incoming and outgoing traffic through the following ports:

Description	Port Range	Port Type
H.323 register/call request	1719	UDP
H.323 call setup	1720	TCP
SIP (default transport protocol)	5060	UDP
SIP (when selecting the TCP transport protocol)	5060	TCP
SIP (when selecting the TLS transport protocol)	5061	TCP
Reserved ports on the system. For more information, refer to <a href="#">Reserved Ports</a> on page 78.	50000-50499 (default range)	TCP/UDP
HTTPS (Optional)	443	TCP

## Reserved Ports

By default, the system communicates through TCP and UDP ports in the 50000 - 54999 range for video, voice, presentations, and camera control. The system uses only a small number of these ports during a call. The exact number depends on the number of participants in the call, the protocol used, and the number of ports required for the type of call: video or voice.

The following tables identify the number of ports required per connection by protocol and the type of call.

### Required ports for an H.323 two-way call:

Call Type	Number of Required Ports
Video	8 UDP ports (6 if presentation is disabled) 2 TCP ports
Voice	2 UDP ports 2 TCP ports
Each additional video participant requires 8 UDP ports and 2 TCP ports.	
Each additional audio participant requires 2 UDP ports and 2 TCP ports.	

### Required ports for a SIP two-way call:

Call Type	Number of Required Ports
Video	8 UDP ports (6 if presentation is disabled)
Voice	2 UDP ports
Each additional video participant requires 8 UDP ports.	
Each additional audio participant requires 2 UDP ports.	

The following table lists the number of UDP and TCP ports needed for the video conferencing system. This information can help you to determine the range of port number to be entered in the **Reserved Port** field.

System	Maximum Connections	Required Ports for an H.323 Call		Required Ports for a SIP Call	
		UDP	TCP	UDP	TCP
Basic version of VC400	Four-way video call and a presentation and a voice call	26	8	26	0
Basic version of VC120	Two-way video call and a presentation and a voice call	10	4	10	0

System	Maximum Connections	Required Ports for an H.323 Call		Required Ports for a SIP Call	
Upgraded version of VC400/VC120	Eight-way video call and a presentation and a voice call	58 UDP 16 TCP	50000-50057 50000-50015	58 UDP	50000-50057

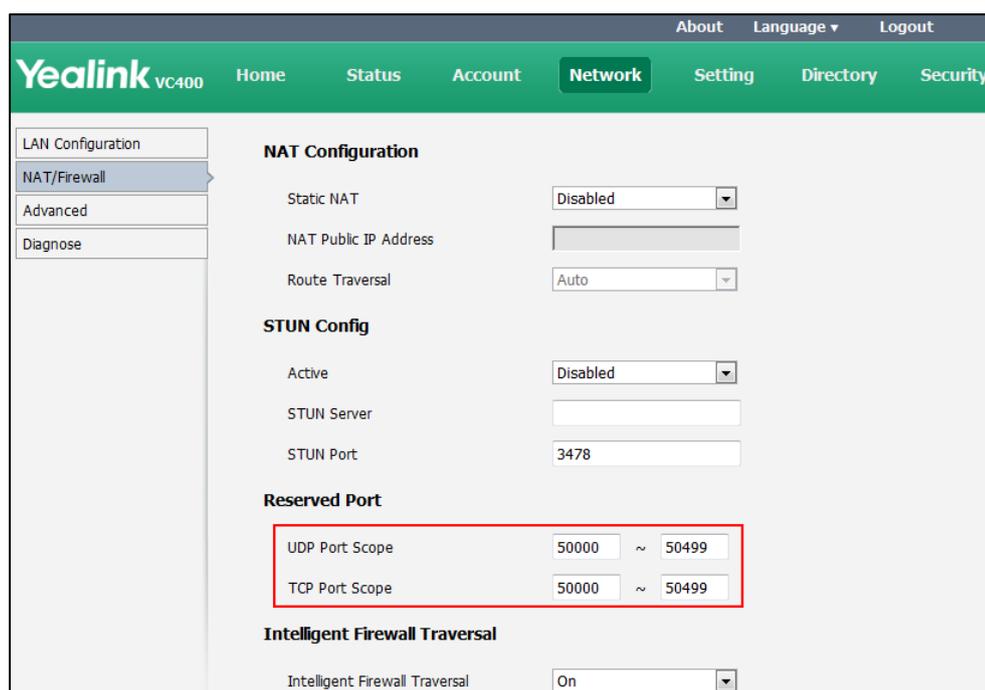
Parameters for reserved ports on the system are described below:

Parameter	Description	Configuration Method
<b>UDP Port Scope</b>	<p>Configures the range of the UDP ports.</p> <p><b>Valid values:</b> 1-65535</p> <p><b>Default range:</b> 50000-50499</p> <p><b>Note:</b> SIP and H.323 calls share the configured ports.</p> <p>If you change this parameter, the system will reboot to make the change take effect.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>TCP Port Scope</b>	<p>Configures the range of the TCP ports.</p> <p><b>Valid values:</b> 1-65535</p> <p><b>Default range:</b> 50000-50499</p> <p><b>Note:</b> SIP and H.323 calls share the configured ports. If you change this parameter, the system will reboot to make the change take effect.</p>	<p>Remote Control</p> <p>Web User Interface</p>

**To configure reserved ports via web user interface:**

1. Click on **Network->NAT/Firewall**.
2. In the **Reserve Port** block, configure the UDP port range in the **UDP Port Scope** field.

3. In the **Reserve Port** block, configure the TCP port range in the **TCP Port Scope** field.



4. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will be implemented after a reboot.
5. Click **Confirm** to reboot the system immediately.

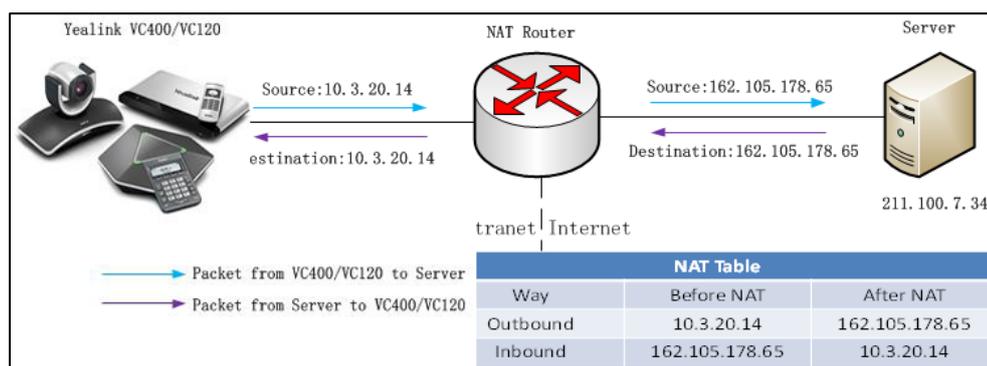
**To configure reserved ports via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) -> **NAT/Firewall**.
2. In the **Reserved** block, configure the range of the UDP ports and TCP ports.
3. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
4. Select **OK** to reboot the system immediately.

## Network Address Translation

NAT device usually connects two networks together, and translates the private (not globally unique) addresses in the internal network into legal addresses. NAT can be configured to advertise only one address for the entire network to the outside world. This provides additional security by effectively hiding the entire internal network behind that address.

Multiple solutions for NAT traversal are available, for example, application layer gateway (ALG), simple traversal of UDP through NAT (STUN), and H.460 firewall traversal.



### Static NAT

If NAT/Firewall devices do not support the ALG, VC400/VC120 must be configured with the static NAT.

Static NAT defines a one-to-one mapping from one IP subnet to another IP subnet. The mapping includes destination IP address translation in one direction and source IP address translation in the reverse direction. From the NAT device, the original destination address is the virtual host IP address while the mapped-to address is the real host IP address.

If your system is connected to a LAN that uses a NAT, you need to configure NAT Public IP Address so that your system can communicate to WAN.

**Note** If H.460 firewall traversal is enabled on the system, the system will automatically ignore the static NAT settings for H.323 calls. For more information on H.460 firewall traversal, refer to [H.460 Firewall Traversal](#) on page 91.

Static NAT feature parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Static NAT</b>	<p>Specifies the static NAT type.</p> <ul style="list-style-type: none"> <li><b>Disabled</b>—the system does not use the NAT feature.</li> <li><b>Manual</b>—the system uses the manually configured NAT public address.</li> <li><b>Auto</b>—the system obtains the NAT public address from the Yealink-supplied server.</li> </ul> <p><b>Default:</b> Disabled</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>NAT Public IP</b>	<ul style="list-style-type: none"> <li>Displays the NAT public</li> </ul>	Remote Control

Parameter	Description	Configuration Method
<b>Address</b>	<p>address automatically obtained from the Yealink-supplied server if the static NAT is set to <b>Auto</b>.</p> <ul style="list-style-type: none"> <li>Configures the NAT public address for the system if the static NAT is set to <b>Manual</b>.</li> </ul>	Web User Interface
<b>Route Traversal</b>	<p>Configures the route traversal type.</p> <ul style="list-style-type: none"> <li><b>Auto</b>—NAT works only when making a call to public network or receiving a call from the public network.</li> <li><b>Compulsory</b>—NAT works when you are in multi-level intranet network to solve the one-way audio or video problem.</li> </ul> <p><b>Default:</b> Auto</p>	Web User Interface
<b>NAT Traversal</b>	<p>Configures the NAT traversal type. You can configure it for the SIP account or SIP IP call separately.</p> <ul style="list-style-type: none"> <li><b>Disabled</b></li> <li><b>STUN</b></li> <li><b>StaticNat</b></li> </ul> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> Static NAT works only if this parameter is set to StaticNat.</p>	<p>Remote Control</p> <p>Web User Interface</p>

**To configure static NAT via web user interface:**

1. Click on **Network->NAT/Firewall**.
2. Select the desired value from the pull-down list of **Static NAT**.
3. Configure the NAT public address in the **NAT Public IP Address** field if **Manual** is selected from the pull-down list of **Static NAT**.

- If multi-level intranet network has deployed in your environment, and you experience the one-way audio or video problem, select **Compulsory** from the pull-down list of **Route Traversal** to solve this problem.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The left sidebar has 'LAN Configuration', 'NAT/Firewall', 'Advanced', and 'Diagnose'. The main content area is titled 'NAT Configuration' and contains the following settings:

- Static NAT:** Auto (dropdown)
- NAT Public IP Address:** 117.28.234.34 (text input)
- Route Traversal:** Auto (dropdown)
- STUN Config:**
  - Active: Disabled (dropdown)
  - STUN Server: (text input)
  - STUN Port: 3478 (text input)
- Reserved Port:**
  - UDP Port Scope: 50000 ~ 50499 (text input)
  - TCP Port Scope: 50000 ~ 50499 (text input)
- Intelligent Firewall Traversal:**
  - Intelligent Firewall Traversal: On (dropdown)

- Click **Confirm** to accept the change.

**To configure Static NAT for SIP account via web user interface:**

- Click on **Account**->**SIP Account**.
- Select **StaticNat** from the pull-down list of **NAT Traversal**.

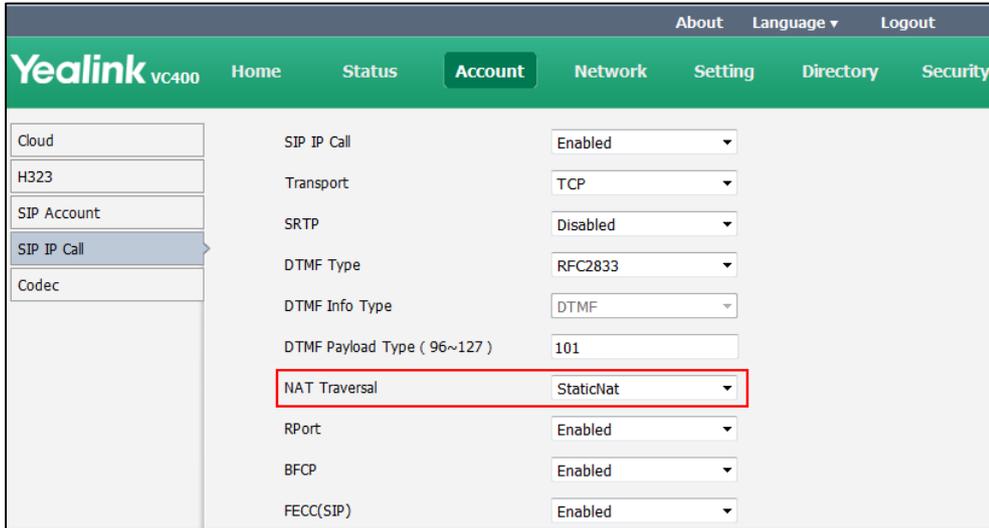
The screenshot shows the Yealink VC400 web interface with the 'Account' tab selected. The left sidebar has 'Cloud', 'H323', 'SIP Account', 'SIP IP Call', and 'Codec'. The main content area is titled 'SIP Account' and contains the following settings:

- Register Status:** Registered
- SIP Account:** Enabled (dropdown)
- Username:** 9000 (text input)
- Register Name:** 9000 (text input)
- Password:** (masked with dots)
- Server Host:** 10.2.1.48 (text input) Port: 5060
- Enable Outbound Proxy Server:** Disabled (dropdown)
- Outbound Proxy Server:** (text input) Port: 5060
- Transport:** UDP (dropdown)
- Server Expires:** 3600 (text input)
- SRTP:** Disabled (dropdown)
- DTMF Type:** RFC2833 (dropdown)
- DTMF Info Type:** DTMF-Relay (dropdown)
- DTMF Payload Type (96~127):** 101 (text input)
- NAT Traversal:** StaticNat (dropdown, highlighted with a red box)

3. Click **Confirm** to accept the change.

**To configure Static NAT for SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select **StaticNat** from the pull-down list of **NAT Traversal**.



3. Click **Confirm** to accept the change.

**To configure static NAT via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) ->**NAT/Firewall**.
2. Select the desired value from the pull-down list of **Type**.
3. Configure the NAT public address in the **Public IP Address** field if **Manual Settings** is selected from the pull-down list of **Type**.
4. Press the **Save** soft key to accept the change.

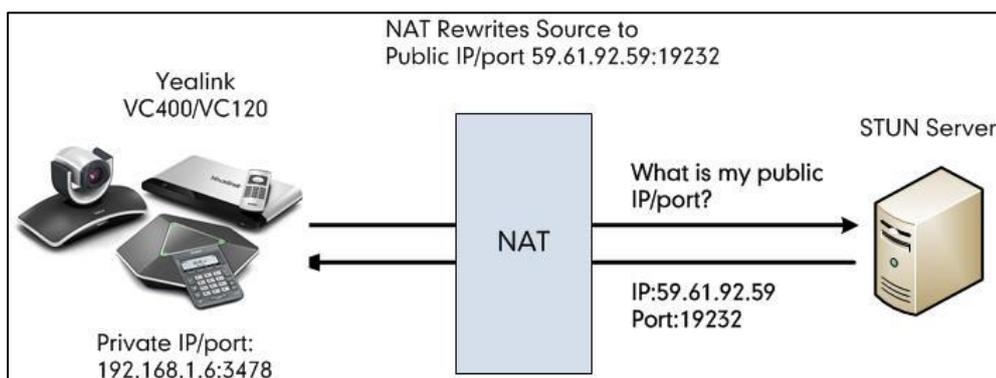
**To configure static NAT for SIP IP call via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) ->**SIP IP Call**.
2. Select **StaticNat** from the pull-down list of **NAT Traversal**.
3. Press the **Save** soft key to accept the change.

## STUN

STUN is a network protocol, used in NAT traversal for applications of real-time voice, video, messaging, and other interactive IP communications. The STUN protocol allows entities behind a NAT to first discover the presence of a NAT and the type of NAT (for more information on the NAT types, refer to [NAT Types](#) on page 88.) and to obtain the mapped (public) IP address and port number that the NAT has allocated for the UDP connections to remote parties. The protocol requires assistance from a third-party network server (STUN server) usually located on public Internet. The IP phone can be configured to work as a STUN client, to send exploratory STUN messages to the STUN server. The STUN server uses those messages to determine the public IP address and

port used, and then informs the client. For more information, refer to [RFC3489](#).



Capturing packets after you enable the STUN feature, you can find that the VC400/VC120 sends Binding Request to the STUN server, and then mapped IP address and port is placed in the Binding Response: Binding Success Response MAPPED-ADDRESS: 59.61.92.59:19232.

No.	Time	Source	Destination	Protocol	Length	Info
444	8.711349	192.168.1.6	218.107.220.74	STUN	64	Binding Request
447	18.711349	218.107.220.74	192.168.1.6	STUN	98	Binding Success Response MAPPED-ADDRESS: 59.61.92.59:19232

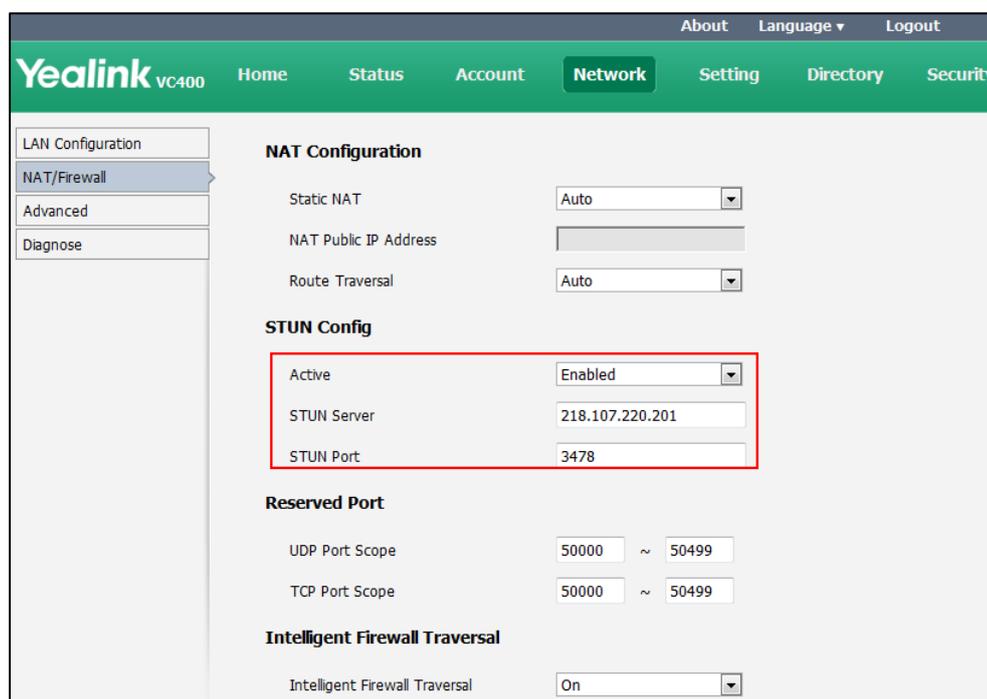
STUN feature parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Active</b>	Enables or disables the STUN (Simple Traversal of UDP over NATs) feature on the system. <b>Default:</b> Disabled	Remote Control Web User Interface
<b>STUN Server</b>	Configures the IP address or the domain name of the STUN (Simple Traversal of UDP over NATs) server. <b>Default:</b> Blank	Remote Control Web User Interface
<b>STUN Port</b>	Configures the port of the STUN (Simple Traversal of UDP over NATs) server. <b>Default:</b> 3478	Remote Control Web User Interface
<b>NAT Traversal</b>	Configures the NAT traversal type. You can configure it for the SIP account or SIP IP call separately. <ul style="list-style-type: none"> <li>• <b>Disabled</b></li> <li>• <b>STUN</b></li> <li>• <b>StaticNat</b></li> </ul> <b>Default:</b> Disabled	Remote Control Web User Interface

Parameter	Description	Configuration Method
	<b>Note:</b> STUN works only if this parameter is set to STUN.	

**To configure STUN server via web user interface:**

1. Click on **Network->NAT/Firewall**.
2. In the **STUN Config** block, select the desired value from the pull-down list of **Active**.
3. Enter the IP address or the domain name of the STUN server in the **STUN Server** field.
4. Enter the port of the STUN server in the **Port** field.



5. Click **Confirm** to accept the change.

**To configure STUN for SIP account via web user interface:**

1. Click on **Account->SIP Account**.

2. Select **STUN** from the pull-down list of **NAT Traversal**.

The screenshot shows the Yealink VC400 web interface. The 'Account' tab is selected in the top navigation bar. On the left sidebar, 'SIP Account' is highlighted. The main content area displays various configuration fields. The 'NAT Traversal' field is highlighted with a red box and is set to 'STUN'. Other visible fields include Register Name (9000), Password (masked), Server Host (10.2.1.48), Port (5060), Enable Outbound Proxy Server (Disabled), Outbound Proxy Server (empty), Transport (UDP), Server Expires (3600), SRTP (Disabled), DTMF Type (RFC2833), DTMF Info Type (DTMF-Relay), DTMF Payload Type (96~127) (101), Keep Alive Interval (30), RPort (Enabled), BFCP (Disabled), and FECC(SIP) (Disabled).

3. Click **Confirm** to accept the change.

**To configure STUN for SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select **STUN** from the pull-down list of **NAT Traversal**.

The screenshot shows the Yealink VC400 web interface with the 'SIP IP Call' sub-tab selected under the 'Account' tab. The 'NAT Traversal' field is highlighted with a red box and is set to 'STUN'. Other visible fields include SIP IP Call (Enabled), Transport (TCP), SRTP (Disabled), DTMF Type (RFC2833), DTMF Info Type (DTMF), DTMF Payload Type (96~127) (101), RPort (Enabled), BFCP (Enabled), and FECC(SIP) (Enabled).

3. Click **Confirm** to accept the change.

**To configure STUN server via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) -> **NAT/Firewall**.

2. Check the **STUN Active** checkbox.
3. Enter the IP address or the domain name of the STUN server in the **STUN Server** field.
4. Enter the port of the STUN server in the **Port** field.
5. Press the **Save** soft key to accept the change.

**To configure STUN server for SIP IP call via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) ->**SIP IP Call**.
2. Select **STUN** from the pull-down list of **NAT Traversal**.
3. Press the **Save** soft key to accept the change.

## NAT Types

### Full Cone:

A full cone NAT is one where all requests from the same internal IP address and port are mapped to the same external IP address and port. Furthermore, any external host can send a packet to the internal host, by sending a packet to the mapped external address.

### Restricted Cone:

A restricted cone NAT is one where all requests from the same internal IP address and port are mapped to the same external IP address and port. Unlike a full cone NAT, an external host (with IP address X) can send a packet to the internal host only if the internal host had previously sent a packet to IP address X.

### Port Restricted Cone:

A port restricted cone NAT is like a restricted cone NAT, but the restriction includes port numbers. Specifically, an external host can send a packet, with source IP address X and source port P, to the internal host only if the internal host had previously sent a packet to IP address X and port P.

### Symmetric:

A symmetric NAT is one where all requests from the same internal IP address and port, to a specific destination IP address and port, are mapped to the same external IP address and port. If the same host sends a packet with the same source address and port, but to a different destination, a different mapping is used. Furthermore, only the external host that receives a packet can send a UDP packet back to the internal host.

## Keep Alive

The system can send keep-alive packets to NAT device for keeping the communication port open.

The keep alive interval parameter on the system is described below:

Parameter	Description	Configuration Method
<b>Keep Alive Interval</b>	<p>Configures the interval (in seconds) that the system sends keep-alive packets to the NAT device. The packet is used to keep the communication port open, so that NAT can continue to effect.</p> <p>You can configure it for the Zoom/Pexip/BlueJeans/Mind/Custom platform or SIP account separately.</p> <p><b>Default:</b> 30</p> <p><b>Note:</b> You cannot configure it for the Yealink/StarLeaf Cloud platform.</p>	Web User Interface

**To configure the keep-alive interval for Zoom/Pexip/BlueJeans/Mind/Custom platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Zoom/Pexip/BlueJeans/Mind/Custom** from the pull-down list of **Platform Type**.
3. Enter the keep alive interval in the **Keep Alive Interval** field.

The screenshot shows the Yealink VC400 web user interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' section is expanded to show 'Cloud' configuration. The 'Cloud' section includes 'Register Status' (Registered), 'Cloud Account' (Enabled), 'Platform Type' (Zoom), and 'Server Host' (zoomcrc.com). The 'Advanced Setting' section includes 'Transport' (TCP), 'Server Expires' (3600), 'SRTP' (Disabled), 'DTMF Type' (RFC2833), 'DTMF Info Type' (DTMF-Relay), and 'DTMF Payload Type (96~127)' (101). The 'Keep Alive Interval' field is highlighted with a red box and set to 30. Other fields include 'BFCP' (Enabled) and 'FECC(SIP)' (Enabled).

4. Click **Confirm** to accept the change.

**To configure the keep-alive interval for SIP account via web user interface:**

1. Click on **Account->SIP Account**.

2. Enter the keep alive interval in the **Keep Alive Interval** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below this is a menu with 'Home', 'Status', 'Account' (selected), 'Network', 'Setting', 'Directory', and 'Security'. On the left, a sidebar lists configuration categories: 'Cloud', 'H323', 'SIP Account' (selected), 'SIP IP Call', and 'Codec'. The main content area displays various configuration fields for the SIP account, including 'Register Name' (9000), 'Password' (masked), 'Server Host' (10.2.1.48), 'Port' (5060), 'Enable Outbound Proxy Server' (Disabled), 'Outbound Proxy Server' (empty), 'Transport' (UDP), 'Server Expires' (3600), 'SRTP' (Disabled), 'DTMF Type' (RFC2833), 'DTMF Info Type' (DTMF-Relay), 'DTMF Payload Type (96~127)' (101), 'NAT Traversal' (Disabled), 'Keep Alive Interval' (30, highlighted with a red box), 'RPort' (Enabled), 'BFCP' (Disabled), and 'FECC(SIP)' (Disabled).

3. Click **Confirm** to accept the change.

## Rport

Rport in [RFC 3581](#), allows a client to request that the server sends the response back to the source port from which the request came. Rport feature depends on support from a SIP server.

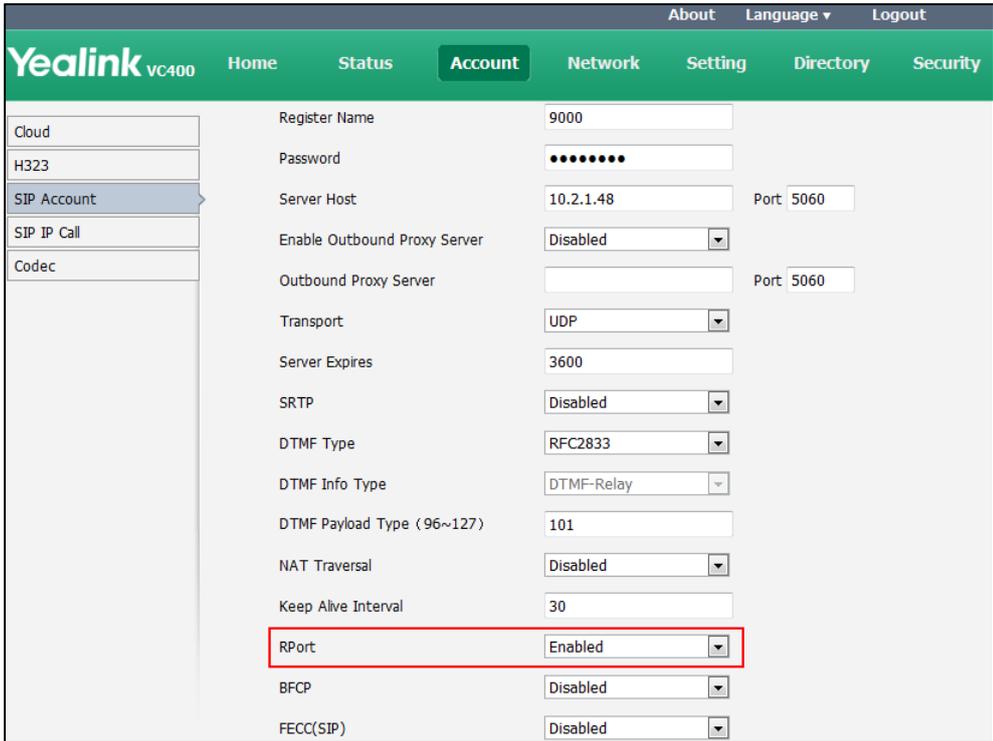
The rport parameter on the system is described below:

Parameter	Description	Configuration Method
<b>RPort</b>	Enables or disables NAT Rport feature. You can configure it for the SIP account or SIP IP call separately. <b>Default:</b> Enabled	Web User Interface

**To configure rport feature for SIP account via web user interface:**

1. Click on **Account**->**SIP Account**.

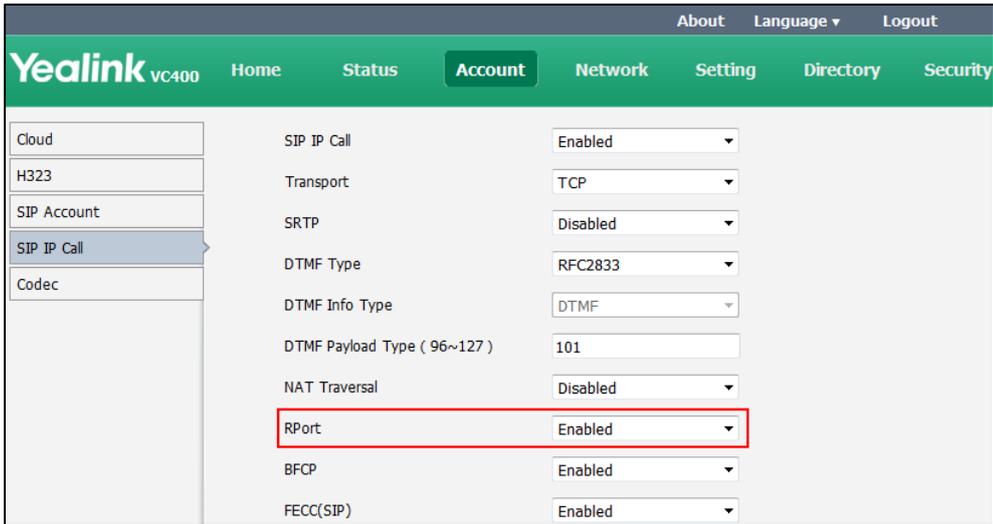
2. Select the desired value from the pull-down list of **RPort**.



3. Click **Confirm** to accept the change.

**To configure rport feature for SIP IP call via web user interface:**

- 1. Click on **Account->SIP IP Call**.
- 2. Select the desired value from the pull-down list of **RPort**.



3. Click **Confirm** to accept the change.

### H.460 Firewall Traversal

H. 323 includes signal based on TCP, while the STUN solution cannot realize the NAT traversal of

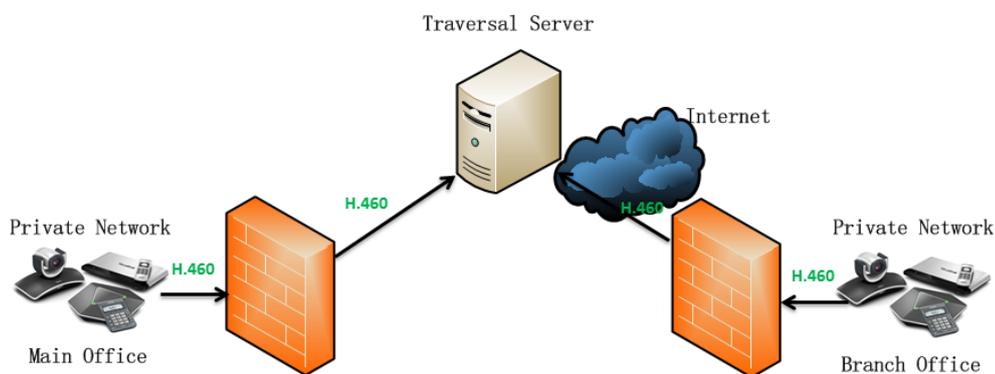
TCP. Before the emergence of H.460, Enterprises have their own firewall/NAT traversal solutions, which are incompatible with each other. Therefore, IP communication between enterprises is difficult. H.460 resolves the compatibility problem.

H.460 enables H.323 signaling and media to traverse firewall. H.460 is a set of extensions to the ITU H.323 standard that include methods to traverse firewalls. Devices that use H.460, implement a set of security policies that a firewall is configurable to accept. Therefore using H.460, video conferencing system can communicate across a firewall. You can configure the system to use standard-based H.460.18 and H.460.19 firewall traversal, which allows the system to establish IP connections across firewalls more easily.

The H.460.18 deals with signaling. The H.460.18 solution perpetually hunts in order to open pinholes from the internal network to the external one. Without using the H.460.18 solution, which permits the gatekeeper to open a connection, the external device could not communicate with internal device, because the firewall would obstruct its attempt to setup a call. H.460.19 extends H.323 by defining the NAT/firewall mechanism for media. In addition, H.460.19 provides a solution for opening RTP and RTCP pinholes and a method for maintaining them using a keep-alive mechanism.

To use H.460, you need to deploy a Traversal Server (TS) at public network.

The following illustration shows how a H.460 traversal server works between two enterprise locations.



The H.460 firewall traversal parameter is described below:

Parameter	Description	Configuration Method
<b>H.460 Active</b>	Enables or disables H.460 firewall traversal feature on the system. <b>Default:</b> Disabled	Remote Control Web User Interface

**To configure H.460 firewall traversal for H.323 via web user interface:**

1. Click on **Account->H.323**.

- Select the desired value from the pull-down list of **H.460 Active**.

The screenshot shows the Yealink VC400 web interface. The 'Account' tab is selected. The 'H323' section is active in the left sidebar. The configuration parameters are as follows:

Parameter	Value	Port
Register Status	Registered	
H323 Protocol	Enabled	
H.323 Account	Enabled	
H.323 Name	9000	
H.323 Extension	9000	
Gatekeeper Mode	Manual	
Gatekeeper IP Address 1	10.2.1.43	Port 1719
Gatekeeper IP Address 2		Port 1719
Gatekeeper Authentication	Disabled	
Gatekeeper Username		
Gatekeeper Password	••••••••	
<b>H.460 Active</b>	<b>Disabled</b>	
H.323 Tunneling	Disabled	
H235 Encryption	Disabled	
Protocol Monitor Port	1720	

- Click **Confirm** to accept the change.

#### To configure H.460 firewall traversal via the remote control:

- Select **Menu->Advanced** (default password: 0000) ->**H.323**.
- Check the **H.460 Active** checkbox.
- Press the **Save** soft key to accept the change.

## Intelligent Firewall Traversal

The video conferencing system can provide efficiency and continuous communication for both the head office and a branch office.

In some cases, the head office is in the WAN and lacks a VPN network, while the branch office is in the LAN, and no port mapping is configured on its firewall. You can enable the intelligent firewall traversal feature, so that the head office can share content with branch office, or control the camera of branch office.

The intelligent firewall traversal parameter is described below:

Parameter	Description	Configuration Method
<b>Intelligent Firewall Traversal</b>	Enables or disables the intelligent firewall traversal feature on the system. <b>Default:</b> Disabled	Web User Interface

**To configure intelligent firewall traversal via web user interface:**

1. Click on **Network->NAT/Firewall**.
2. Select the desired value from the pull-down list of **Intelligent Firewall Traversal**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below it, a green header contains 'Yealink VC400' and navigation tabs: 'Home', 'Status', 'Account', 'Network' (selected), 'Setting', 'Directory', and 'Security'. On the left, a sidebar menu shows 'LAN Configuration', 'NAT/Firewall' (selected), 'Advanced', and 'Diagnose'. The main content area is titled 'NAT Configuration' and contains several sections:
 

- NAT Configuration:** 'Static NAT' (Auto), 'NAT Public IP Address' (empty), 'Route Traversal' (Auto).
- STUN Config:** 'Active' (Enabled), 'STUN Server' (218.107.220.201), 'STUN Port' (3478).
- Reserved Port:** 'UDP Port Scope' (50000 ~ 50499), 'TCP Port Scope' (50000 ~ 50499).
- Intelligent Firewall Traversal:** A dropdown menu set to 'On', which is highlighted with a red rectangular box.

3. Click **Confirm** to accept the change.

## Quality of Service

Quality of Service (QoS) is the ability to provide different priorities for different packets in the network. This allows the transport of traffic with special requirements. QoS guarantees are important for applications that require a fixed bit rate and are delay sensitive when the network capacity is insufficient. There are four major QoS factors to be considered when configuring a modern QoS implementation: bandwidth, delay, jitter and loss.

QoS provides a better network service through the following features:

- Supporting dedicated bandwidth
- Improving loss characteristics
- Avoiding and managing network congestion
- Shaping network traffic
- Setting traffic priorities across the network

The Best-Effort service is the default QoS model in the IP networks. It provides no guarantees for data delivery, which means delay, jitter, packet loss and bandwidth allocation are unpredictable. Differentiated Services (DiffServ or DS) is the most widely used QoS model. It provides a simple and scalable mechanism for classifying and managing network traffic and providing QoS on

modern IP networks. Differentiated Services Code Point (DSCP) is used to define DiffServ classes and is stored in the first six bits of the ToS (Type of Service) field. Each router on the network can provide QoS simply based on the DiffServ class. The DSCP value ranges from 0 to 63 with each DSCP specifying a particular per-hop behavior (PHB) applicable to a packet. A PHB refers to the packet scheduling, queuing, policing, or shaping behavior of a node on any given packet.

Four standard PHBs available to construct a DiffServ-enabled network and achieve QoS:

- **Class Selector PHB** - backwards compatible with IP precedence. Class Selector code points are of the form "xxx000". The first three bits are the IP precedence bits. These class selector PHBs retain almost the same forwarding behavior as nodes that implement IP precedence-based classification and forwarding.
- **Expedited Forwarding PHB** - the key ingredient in DiffServ model for providing a low-loss, low-latency, low-jitter and assured bandwidth service.
- **Assured Forwarding PHB** - defines a method by which BAs (Bandwidth Allocations) can be given different forwarding assurances.
- **Default PHB** - specifies that a packet marked with a DSCP value of "000000" gets the traditional best effort service from a DS-compliant node.

VoIP is extremely bandwidth and delay-sensitive. QoS is a major issue in VoIP implementations, with regard to guaranteeing how that packet traffic is not delayed or dropped due to interference from other lower priority traffic. VoIP can guarantee high-quality QoS only if the voice, video and data packets are given priority over other kinds of network traffic. Yealink video conferencing systems support the DiffServ model of QoS. DSCPs for voice, video and data packets that can be specified respectively.

## Voice QoS

To make VoIP transmissions intelligible to receivers, voice packets should not be dropped, excessively delayed, or made to suffer varying delay. DiffServ model can guarantee high-quality voice transmission when the voice packets are configured to a higher DSCP value.

## Video QoS

To ensure acceptable visual quality for video, video packets emanated from the system should be configured with a high transmission priority.

## Data QoS

To ensure good call quality, data packets (e.g., SIP signaling and H.225 call signaling) emanated from the system should be configured with a high transmission priority.

QoS feature parameters on the system are described below.

Parameter	Description	Configuration Method
<b>Audio Priority</b>	Specifies the DSCP value for voice packets. <b>Valid Values: 0-63</b> <b>Default:</b> 63 <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Video Priority</b>	Specifies the DSCP value for video packets. <b>Valid Values: 0-63</b> <b>Default:</b> 34 <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>Data Priority</b>	Specifies the DSCP value for data packets. <b>Valid Values: 0-63</b> <b>Default:</b> 63 <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface

### To configure QoS via web user interface:

1. Click on **Network->Advanced**.

- In the **QoS** block, enter the desired values in the corresponding fields.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Network' menu is selected. On the left, a sidebar shows 'LAN Configuration', 'NAT/Firewall', 'Advanced', and 'Diagnose'. The 'Advanced' option is selected. The main content area displays various network settings:

- LLDP**: Active (Disabled), Packet Interval(1-3600s) (60)
- VLAN**: Internet Port Active (Disabled), VID(1-4094) (1), Priority (0)
- DHCP VLAN**: Active (Enabled), Option (132)
- QoS** (highlighted with a red box): Audio Priority (63), Video Priority (34), Data Priority (63)
- MTU**: Video MTU (1500)

- Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
- Click **Confirm** to reboot the system immediately.

#### To configure QoS via the remote control:

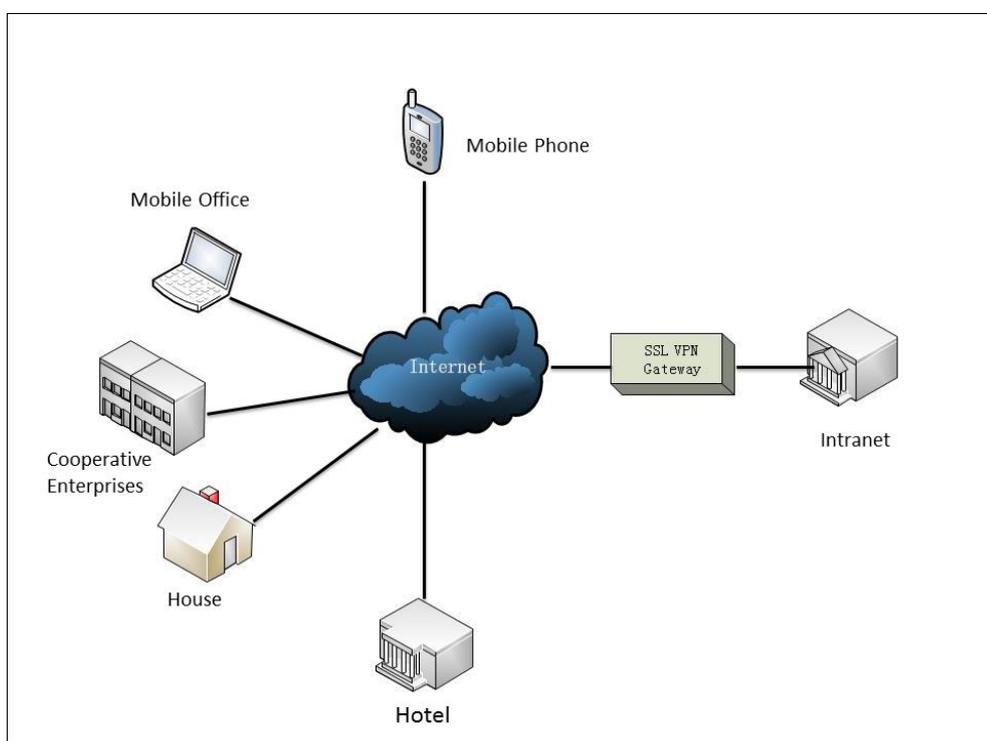
- Select **Menu**->**Advanced** (default password: 0000) ->**Advanced Network**.
- In the **Diffserv QoS** block, enter the desired values in the corresponding fields.
- Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
- Select **OK** to reboot the system immediately.

## VPN

VPN (Virtual Private Network) is a secured private network connection built on top of public telecommunication infrastructures, such as the Internet. VPN has become more prevalent due to the benefits of scalability, reliability, convenience and security. VPN provides remote offices or individual users with secure access to their organization's network. There are two types of VPN access: remote-access VPN (connecting an individual device to a network) and site-to-site VPN (connecting two networks together). Remote-access VPN allows employees to access their company's intranet from home or outside the office, and site-to-site VPN allows employees in

geographically separated offices to share one cohesive virtual network. VPN can also be classified by the protocols used to tunnel the traffic. It provides security through tunneling protocols: IPsec, SSL, L2TP and PPTP.

The system supports SSL VPN, which provides remote-access VPN capabilities through SSL. OpenVPN is a full featured SSL VPN software solution that creates secure connections in remote access facilities and is designed work with the TUN/TAP virtual networking interface. TUN and TAP are virtual network kernel devices. TAP simulates a link layer device and provides a virtual point-to-point connection, while TUN simulates a network layer device and provides a virtual network segment. The system uses OpenVPN to achieve the VPN feature. To prevent disclosure of private information, tunnel system must authenticate each other before secure VPN tunnel is established. After the VPN feature is configured properly on the system, the system acts as a VPN client and uses the certificates to authenticate the VPN server.



To use VPN, the compressed package of VPN-related files should be uploaded to the system in advance. The file format of the compressed package must be \*.tar. The VPN-related files are: certificates (ca.crt and client.crt), key (client.key) and the configuration file (vpn.cnf) of the VPN client. For more information, refer to [OpenVPN Feature on Yealink IP Phones](#).

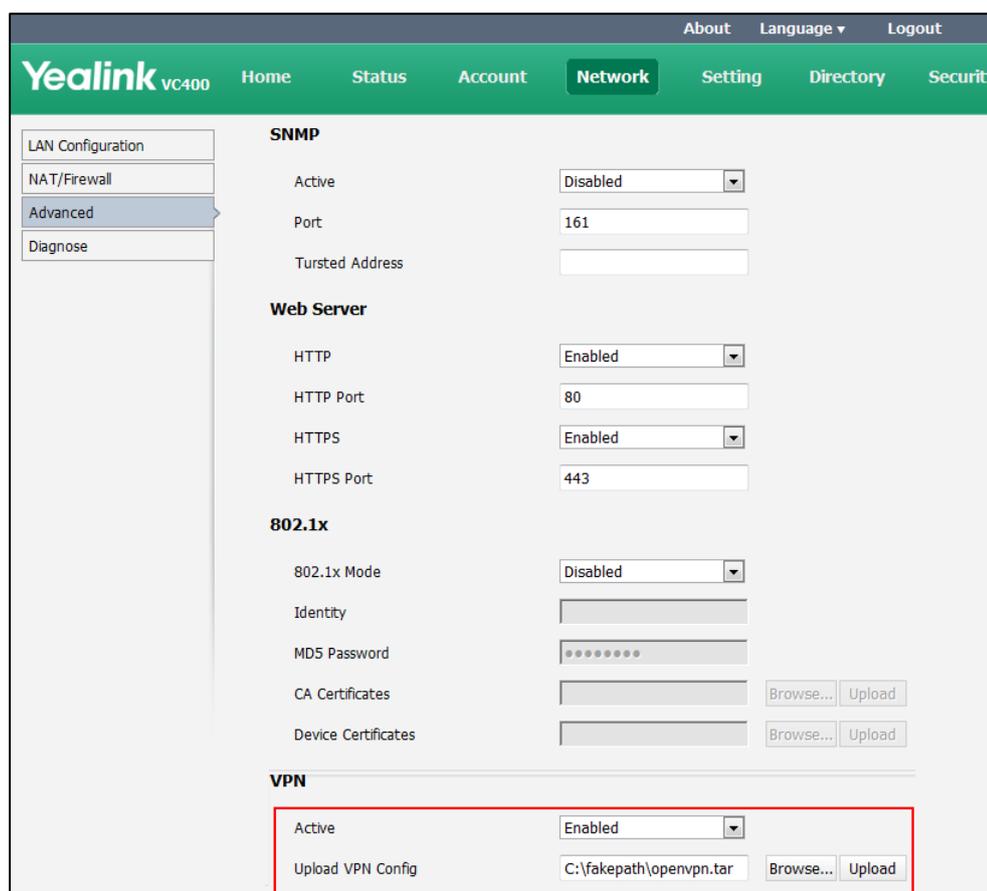
VPN feature parameters on the system are described below.

Parameter	Description	Configuration Method
<b>VPN-&gt;Active</b>	Enables or disables VPN feature on the system. <b>Default:</b> Disabled <b>Note:</b> You need to upload the compressed package of VPN-related	Remote Control Web User Interface

Parameter	Description	Configuration Method
	files to the system first before enabling the VPN feature. If you change this parameter, the system will reboot to make the change take effect.	
<b>Upload VPN Config</b>	Uploads the compressed package of VPN-related files (*.tar) to the system.	Web User Interface

**To configure VPN via web user interface:**

1. Click on **Network->Advanced**.
2. In the **VPN** block, click **Browse** to locate the VPN file (\*.tar) from your local system.
3. Click **Upload** to upload the file to the system.
4. Select the desired value from the pull-down list of **Active**.



5. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
6. Click **Confirm** to reboot the system immediately.

**To configure VPN via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) -> **Advanced Network**.
2. Check the **VPN** checkbox.
3. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
4. Select **OK** to reboot the system immediately.

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## Configuring Call Preferences

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This chapter provides information on how to configure system's call preferences (e.g., call protocol and network bandwidth).

This chapter provides the following sections:

- [Configuring Cloud Settings](#)
- [Configuring SIP Settings](#)
- [Configuring H.323 Settings](#)
- [Account Polling](#)
- [DTMF](#)
- [Codecs](#)
- [Call Protocol](#)
- [Do Not Disturb](#)
- [Auto Answer](#)
- [Auto Dialout Mute](#)
- [Call Match](#)
- [History Record](#)
- [Bandwidth](#)
- [Ringback Timeout](#)
- [Auto Refuse Timeout](#)
- [SIP IP Call by Proxy](#)

## Configuring Cloud Settings

Yealink video conferencing system is compatible with StarLeaf/Zoom/BlueJeans/Pexip/Mind virtual meeting service.

Users can access Virtual Meeting Rooms(VMR) using Yealink video conferencing system, whilst benefiting from both the features provided by Yealink, such as 1080p HD video and audio, and features provided by StarLeaf/Zoom/BlueJeans/Pexip/Mind, including high end customization & interoperability.

You can obtain the account information from your enterprise administrator.

## Logging into the Yealink Cloud Platform

Yealink VC400/VC120 video conferencing systems support Yealink Cloud account. The Yealink

Cloud enterprise administrator uses the Yealink web management service to assign each user an individual Yealink Cloud account. For more information, refer to [Yealink VC Cloud Management Service Administrator Guide](#).

You can log into the Yealink Cloud platform, and dial other Yealink Cloud numbers to establish a conversation. If you want to place a call to a Yealink Cloud contact who is in the same enterprise directory as you, you can enter Yealink Cloud numbers or the extension (the last four Yealink Cloud numbers) to place a call. If you want to place a call to a Yealink Cloud contact who is in different enterprise directory from you, you can only enter complete Yealink Cloud numbers to place a call.

Yealink Cloud platform parameters on the system are described below:

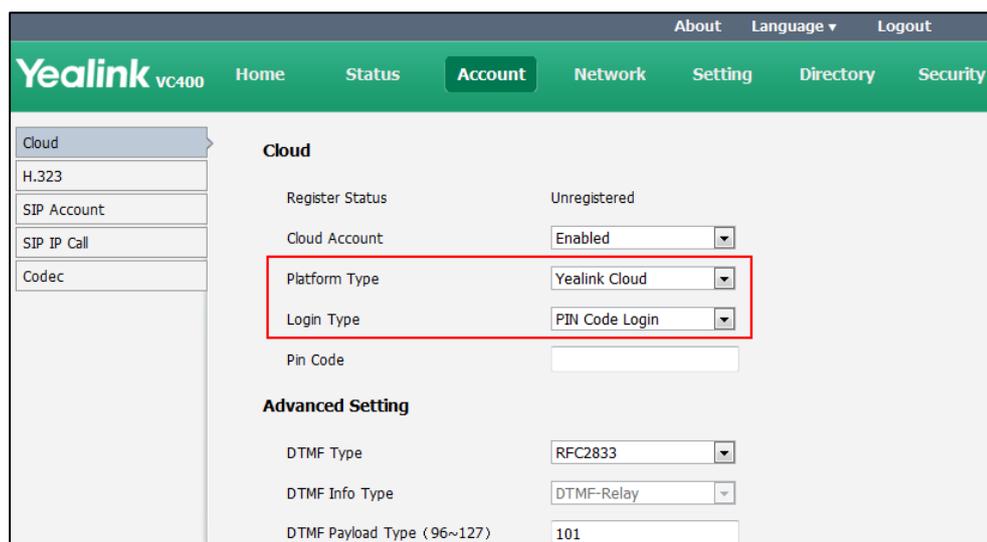
Parameter	Description	Configuration Method
<b>Cloud Account</b>	<p>Enables or disables the Cloud feature.</p> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If it is disabled, the system cannot log into the Yealink Cloud platform.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Platform Type</b>	<p>Configures the platform type.</p> <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <p><b>Default:</b> Yealink Cloud</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Login Type</b>	<p>Specifies the method to log into the Yealink Cloud platform.</p> <ul style="list-style-type: none"> <li>• <b>PIN Code Login:</b> This method uses the user's PIN code to log into the Yealink Cloud platform. The PIN code consists of 9 digits. You can only use the PIN code once and it will expire if unused for 7 days. Contact Cloud enterprise administrator when it expires.</li> <li>• <b>user/password:</b> This method uses the user's Yealink Cloud</li> </ul>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	<p>number and password to log into the Yealink Cloud platform.</p> <ul style="list-style-type: none"> <li>• <b>Build-in Cloud Number:</b> This method uses build-in Cloud number to log into the Yealink Cloud platform. The number consists of 7 digits that are generated according to MAC address, and it never expires.</li> </ul> <p><b>Default:</b> PIN Code Login</p>	
<b>Pincode/Pin Code</b>	<p>Specifies the PIN code to log into the Yealink Cloud platform.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the value of <b>Login Type</b> is set to <b>PIN Code Login</b>.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Username</b>	<p>Specifies the user name to log into the Yealink Cloud platform.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the value of <b>Login Type</b> is set to <b>user/password</b>.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Password</b>	<p>Specifies the password associated with the user name when signing into the Yealink Cloud platform.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the value of <b>Login Type</b> is set to <b>user/password</b>.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Remember Me</b>	<p>Enables or disables the endpoint to remember the registration information.</p> <p><b>Default:</b> ON</p> <p><b>Note:</b> If it is on, user name and password will be filled automatically next time.</p> <p>It only works if the value of <b>Login Type</b> is set to <b>Username/Password</b>.</p>	<p>Remote Control</p>

**To configure Yealink Cloud platform via web user interface:**

1. Click on **Account->Cloud**.

2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **Yealink Cloud** from the pull-down list of **Platform Type**.
4. Select the desired sign-in method from the pull-down list of **Login Type**.
  - Select **Build-in Cloud Number**.
  - If you select **PIN Code Login**, enter your PIN code in the **Pin Code** field.
  - If you select **user/password**, enter your Cloud number and password in the corresponding fields.



5. Click **Confirm** to accept the change.

**To configure Yealink Cloud platform via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**Cloud**.
2. In the **Cloud Account** field, check the **Enabled** checkbox.
3. Select **Yealink Cloud** from the pull-down list of **Platform Type**.
4. Select the desired sign-in method from the pull-down list of **Login Type**.
  - If you select **Build-in Cloud Number**:  
Press ▲ or ▼ to scroll to **Onekey Login**, and then press **OK**.
  - If you select **Pincode Login**:  
Enter your PIN code in the **Pincode** field, press ▲ or ▼ to scroll to **Log In**, and then press **OK**.
  - If you select **Username/Password**:  
Enter your Cloud number and password in the corresponding fields, you can also check the **Remember Me** checkbox to remember your username and password.  
Press ▲ or ▼ to scroll to **Log In**, and then press **OK**.

After successful registration, the display device displays , and the LCD screen of the video conferencing phone displays  .

**Note**

A Yealink Cloud account can be used to log into five Cloud systems at most simultaneously.

If you register a Yealink Cloud account using build-in Cloud number, your directory will not include the Yealink Cloud contacts, but you can dial the Yealink Cloud accounts to establish a conversation.

## Logging into the StarLeaf Cloud Platform

You can log into the StarLeaf Cloud platform.

When you place a call using the StarLeaf Cloud account, you can:

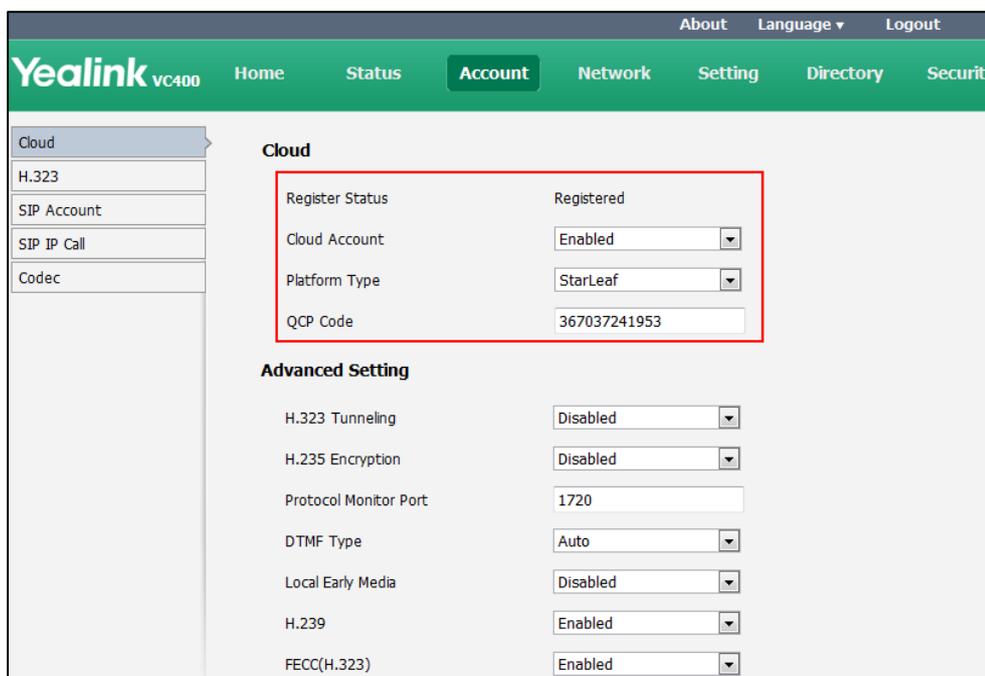
- Call the other StarLeaf Cloud account to establish a point-to-point call.
- Call the Meeting ID to join the Virtual Meeting Rooms.
- Call between StarLeaf Cloud account and Microsoft Skype for Business/Lync account.

StarLeaf platform parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Cloud Account</b>	Enables or disables the Cloud feature. <b>Default:</b> Enabled <b>Note:</b> If it is disabled, the system cannot log into the StarLeaf Cloud platform.	Remote Control Web User Interface
<b>Platform Type</b>	Configures the platform type. <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <b>Default:</b> Yealink Cloud	Remote Control Web User Interface
<b>QCP Code</b>	Specifies the quick access code to log into the StarLeaf Cloud platform. <b>Default:</b> Blank	Remote Control Web User Interface

**To configure StarLeaf Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **StarLeaf** from the pull-down list of **Platform Type**.
4. Configure the StarLeaf Cloud platform.



5. Click **Confirm** to accept the change.

**To configure StarLeaf Cloud platform via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**Cloud**.
2. In the **Cloud Account** field, check the **Enabled** checkbox.
3. Select **StarLeaf** from the pull-down list of **Platform Type**.
4. Enter the 12-digit quick access code in the **Qcp Code** field.
5. Press ▲ or ▼ to scroll to **Log In**, and then press .

After successful registration, the display device displays , and the LCD screen of the video conferencing phone displays .

**Note**

Systems that log into the StarLeaf Cloud platform will upgrade firmware automatically once the current firmware version is different from the one on StarLeaf Server.

## Logging into the Zoom Cloud Platform

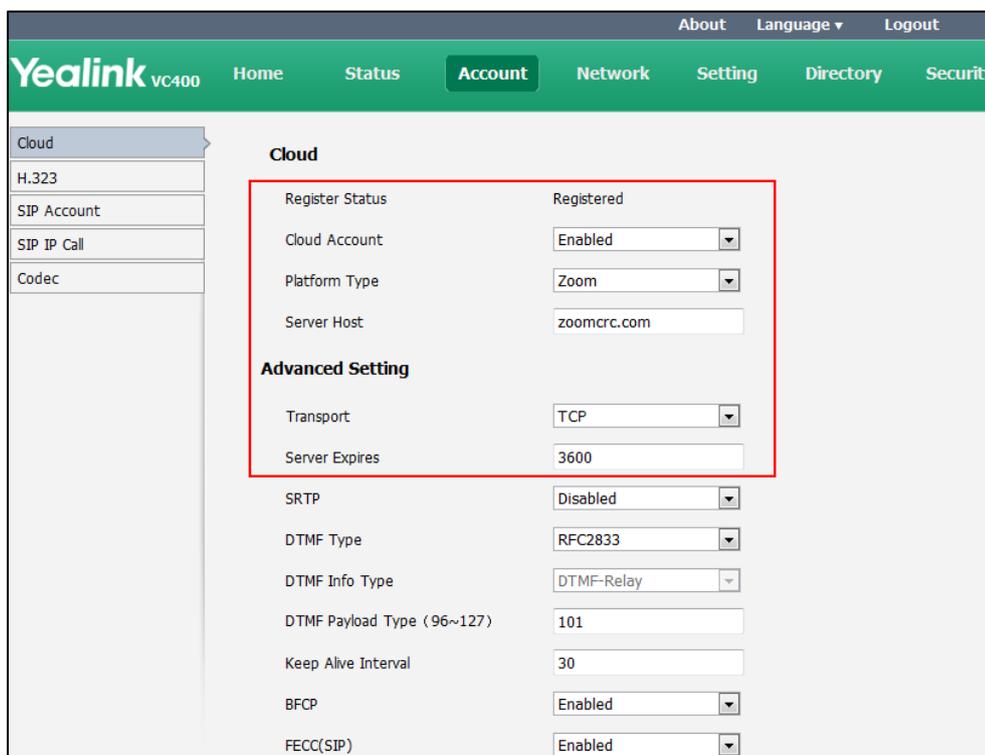
You can log into the Zoom Cloud platform and join the virtual meeting room.

Zoom Cloud platform parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Cloud Account</b>	<p>Enables or disables the Cloud feature.</p> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If it is disabled, the system cannot log into the Zoom Cloud platform.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Platform Type</b>	<p>Configures the platform type.</p> <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <p><b>Default:</b> Yealink Cloud</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Server/Server Host</b>	<p>Configures the IP address or domain name of the Zoom Cloud server.</p> <p><b>Default:</b> zoomcrc.com</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Transport</b>	<p>Configures the type of transport protocol for the Zoom Cloud platform.</p> <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication of SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <p><b>Default:</b> TCP</p>	<p>Web User Interface</p>
<b>Server Expires</b>	<p>Configures the registration expiration time (in seconds) of the Cloud server.</p> <p><b>Default:</b>3600</p>	<p>Web User Interface</p>

**To configure Zoom Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **Zoom** from the pull-down list of **Platform Type**.
4. Configure the Zoom Cloud platform.



5. Click **Confirm** to accept the change.

**To configure Zoom Cloud platform via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**Cloud**.
2. In the **Cloud Account** field, check the **Enabled** checkbox.
3. Select **Zoom** from the pull-down list of **Platform Type**.
4. Enter the domain name or IP address of Zoom server in the **Server** field.  
The default Zoom server is "zoomcrc.com".
5. Press ▲ or ▼ to scroll to **Log In**, and then press  .  
After successful registration, the display device displays  , and the LCD screen of the video conferencing phone displays  .

## Registering a Pexip Account

You can register the Pexip account.

When you place a call using the Pexip account, you can:

- Call the device alias to establish a point to point call.
- Call the aliases to join the Virtual Meeting Rooms, Virtual Auditoriums or Virtual Receptions.
- Call between Pexip account and Microsoft Skype for Business/Lync account.

Pexip platform parameters on the system are described below:

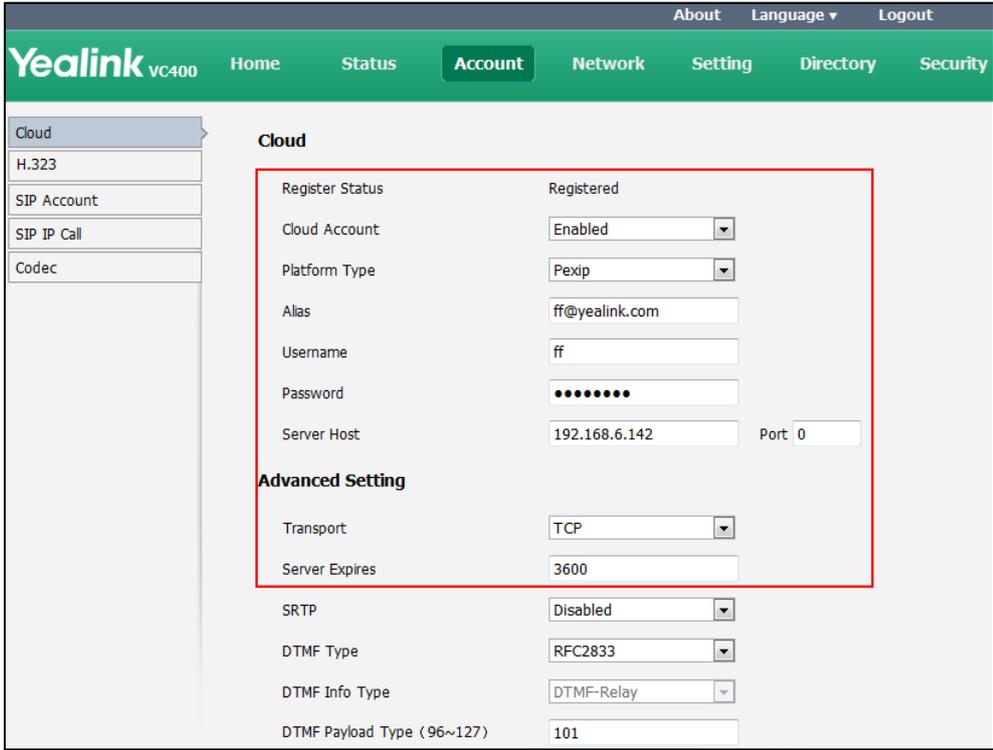
Parameter	Description	Configuration Method
<b>Cloud Account</b>	Enables or disables the Cloud feature. <b>Default:</b> Enabled <b>Note:</b> If it is disabled, the system cannot register the Pexip account.	Remote Control Web User Interface
<b>Platform Type</b>	Configures the platform type. <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <b>Default:</b> Yealink Cloud	Remote Control Web User Interface
<b>Alias</b>	Specifies the alias when registering a Pexip account. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Username</b>	Specifies the user name when registering a Pexip account. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Password</b>	Specifies the password associated with the user name when registering a Pexip account. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Server/Server Host</b>	Configures the IP address or domain name of the Pexip server. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Port</b>	Configures the port of the Pexip server. <b>Default:</b> 0	Web User Interface

Parameter	Description	Configuration Method
<b>Transport</b>	<p>Configures the type of transport protocol for the Pexip platform.</p> <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication of SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <p><b>Default:</b> TCP</p>	Web User Interface
<b>Server Expires</b>	<p>Configures the registration expiration time (in seconds) of the Cloud server.</p> <p><b>Default:</b>3600</p>	Web User Interface
<b>Remember Password</b>	<p>Enables or disables the system to remember the registration information.</p> <p><b>Default:</b> ON</p> <p><b>Note:</b> If it is on, other registration information will be filled automatically when you enter the alias next time.</p>	Remote Control

**To configure Pexip platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **Pexip** from the pull-down list of **Platform Type**.

- Configure the Pexip account settings.



The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' page is active, and the 'Cloud' section is highlighted. The 'Cloud' section contains the following fields:

Register Status	Registered
Cloud Account	Enabled
Platform Type	Pexip
Alias	ff@yealink.com
Username	ff
Password	••••••••
Server Host	192.168.6.142
Port	0

The 'Advanced Setting' section contains the following fields:

Transport	TCP
Server Expires	3600
SRTP	Disabled
DTMF Type	RFC2833
DTMF Info Type	DTMF-Relay
DTMF Payload Type (96~127)	101

- Click **Confirm** to accept the change.

#### To configure Pexip platform via the remote control:

- Select **Menu->Advanced** (default password: 0000)->**Cloud**.
- In the **Cloud Account** field, check the **Enabled** checkbox.
- Select **Pexip** from the pull-down list of **Platform Type**.
- Configure the Pexip account settings.
- Check the **Remember Password** checkbox to remember your registration information.
- Press **▲** or **▼** to scroll to **Log In**, and then press **OK**.

After successful registration, the display device displays , and the LCD screen of the video conferencing phone displays .

#### Note

You can also register the Pexip account using SIP or H.323 protocol. For more information, refer to [Configuring SIP Settings](#) on page 122 and [Configuring H.323 Settings](#) on page 126.

## Logging into the BlueJeans Cloud Platform

You can log into the BlueJeans Cloud platform and join the virtual meeting room.

BlueJeans Cloud platform parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Cloud Account</b>	<p>Enables or disables the Cloud feature.</p> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If it is disabled, the system cannot log into the BlueJeans Cloud platform.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Platform Type</b>	<p>Configures the platform type.</p> <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <p><b>Default:</b> Yealink Cloud</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Server/Server Host</b>	<p>Configures the IP address or domain name of the BlueJeans server.</p> <p><b>Default:</b> bjn.vc</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Transport</b>	<p>Configures the type of transport protocol for the BlueJeans Cloud platform.</p> <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication of SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <p><b>Default:</b> TCP</p>	<p>Web User Interface</p>
<b>Server Expires</b>	<p>Configures the registration expiration time (in seconds) of the Cloud server.</p> <p><b>Default:</b>3600</p>	<p>Web User Interface</p>

**To configure BlueJeans Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **BlueJeans** from the pull-down list of **Platform Type**.
4. Configure the BlueJeans Cloud platform.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' menu is expanded, showing 'Cloud' as the selected option. The 'Cloud' configuration page is displayed, with a red box highlighting the 'Cloud' section. This section includes 'Register Status' (Registered), 'Cloud Account' (Enabled), 'Platform Type' (BlueJeans), and 'Server Host' (bjn.vc). Below this is the 'Advanced Setting' section, which includes 'Transport' (TCP) and 'Server Expires' (3600). Other settings like SRTP, DTMF Type, DTMF Info Type, DTMF Payload Type, Keep Alive Interval, BFCP, and FECC(SIP) are also visible.

5. Click **Confirm** to accept the change.

**To configure BlueJeans Cloud platform via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**Cloud**.
2. In the **Cloud Account** field, check the **Enabled** checkbox.
3. Select **BlueJeans** from the pull-down list of **Platform Type**.
4. Enter the domain name or IP address of BlueJeans server in the **Server** field.  
The default BlueJeans server is "bjn.vc".
5. Press ▲ or ▼ to scroll to **Log In**, and then press .  
After successful registration, the display device displays , and the LCD screen of the video conferencing phone displays .

## Logging into the Mind Platform

You can log into the Mind platform and join the virtual meeting room.

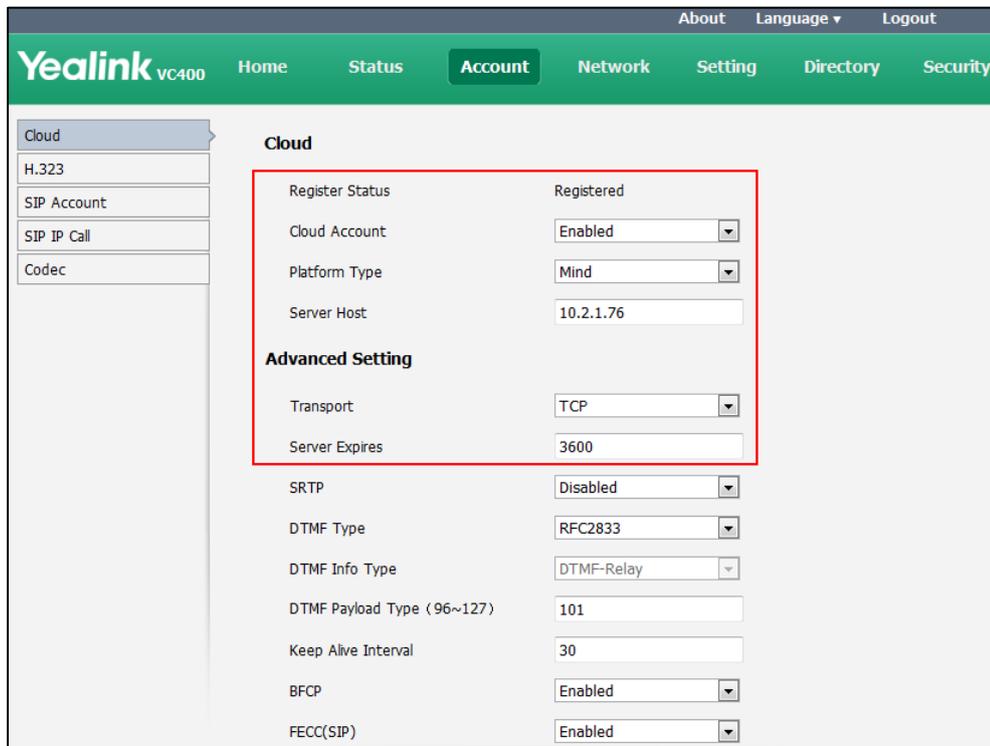
Mind platform parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Cloud Account</b>	Enables or disables the Cloud feature. <b>Default:</b> Enabled <b>Note:</b> If it is disabled, the system cannot log into the Mind platform.	Remote Control Web User Interface
<b>Platform Type</b>	Configures the platform type. <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <b>Default:</b> Yealink Cloud	Remote Control Web User Interface
<b>Server/Server Host</b>	Configures the IP address or domain name of the Mind server. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Transport</b>	Configures the type of transport protocol for the Mind platform. <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication of SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <b>Default:</b> TCP	Web User Interface
<b>Server Expires</b>	Configures the registration expiration time (in seconds) of the Cloud server. <b>Default:</b> 3600	Web User Interface

**To configure Mind platform via web user interface:**

1. Click on **Account->Cloud**.

2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **Mind** from the pull-down list of **Platform Type**.
4. Configure the Mind platform.



5. Click **Confirm** to accept the change.

**To configure Mind platform via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**Cloud**.
2. In the **Cloud Account** field, check the **Enabled** checkbox.
3. Select **Mind** from the pull-down list of **Platform Type**.
4. Enter the domain name or IP address of Mind server in the **Server** field.
5. Press ▲ or ▼ to scroll to **Log In**, and then press .

After successful registration, the display device displays  , and the LCD screen of the video conferencing phone displays  .

## Registering a Custom Account

You can register a custom account.

Custom account parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Cloud Account</b>	Enables or disables the Cloud feature. <b>Default:</b> Enabled <b>Note:</b> If it is disabled, the system	Remote Control Web User Interface

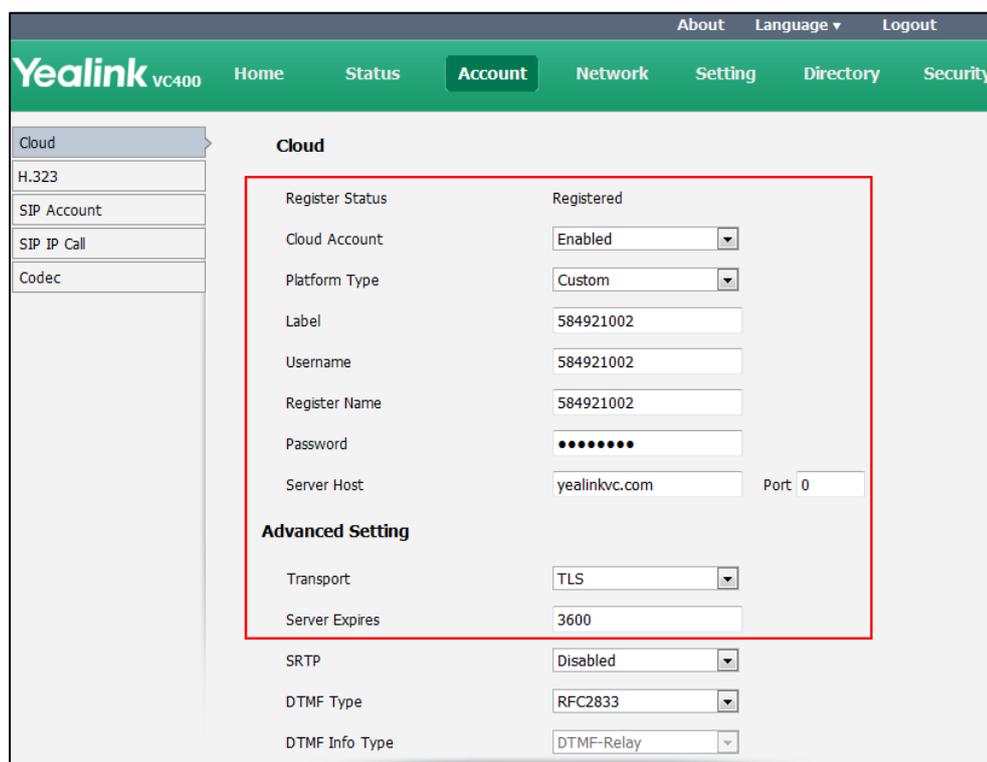
Parameter	Description	Configuration Method
	cannot register the custom account.	
<b>Platform Type</b>	<p>Configures the platform type.</p> <ul style="list-style-type: none"> <li>• Yealink Cloud</li> <li>• StarLeaf</li> <li>• Zoom</li> <li>• Pexip</li> <li>• BlueJeans</li> <li>• Mind</li> <li>• Custom</li> </ul> <p><b>Default:</b> Yealink Cloud</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Label</b>	<p>Configures the account label displayed on the display device when registering a custom account.</p> <p><b>Default:</b> Blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Username</b>	<p>Specifies the user name when registering a custom account.</p> <p><b>Default:</b> Blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Register Name</b>	<p>Configures the register name when registering a custom account.</p> <p><b>Default:</b> Blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Password</b>	<p>Specifies the password associated with the user name when registering a custom account.</p> <p><b>Default:</b> Blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Server/Server Host</b>	<p>Configures the IP address or domain name of the custom server.</p> <p><b>Default:</b> Blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Port</b>	<p>Configures the port of the custom server.</p> <p><b>Default:</b> 0</p>	<p>Web User Interface</p>
<b>Transport</b>	<p>Configures the type of transport protocol for the custom platform.</p> <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> </ul>	<p>Web User Interface</p>

Parameter	Description	Configuration Method
	<ul style="list-style-type: none"> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication of SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <p><b>Default:</b> TCP</p>	
<b>Server Expires</b>	<p>Configures the registration expiration time (in seconds) of the custom server.</p> <p><b>Default:</b>3600</p>	Web User Interface
<b>Remember password</b>	<p>Enables or disables the system to remember the registration information.</p> <p><b>Default:</b> ON</p> <p><b>Note:</b> If it is on, other registration information will be filled automatically when you enter the user name next time.</p>	Remote Control

**To configure custom account via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Enabled** from the pull-down list of **Cloud Account**.
3. Select **Custom** from the pull-down list of **Platform Type**.

4. Configure the custom account settings.



5. Click **Confirm** to accept the change.

**To configure custom account via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**Cloud**.
2. In the **Cloud Account** field, check the **Enabled** checkbox.
3. Select **Custom** from the pull-down list of **Platform Type**.
4. Configure the custom account settings.
5. Check the **Remember Password** checkbox to remember your registration information.
6. Press ▲or ▼to scroll to **Log In**, and then press .

## Configuring the Third-party Virtual Meeting Room

A Virtual Meeting Room (VMR) is an online space, typically hosted by a Cloud-service provider, where multiple participants can join. Participants usually join by dialing a specific number or an address with a simple name like zoomcrc.com.

If you haven't registered a Cloud account, or you have registered a Yealink Cloud account, you can configure a third-party VMR in advance, so that you can quickly join a VMR without registering a third-party Cloud account.

Up to 5 third-party VMRs can be configured. Third-party VMR is configurable via web user interface only.

3rd-VMR parameters on the system are described below:

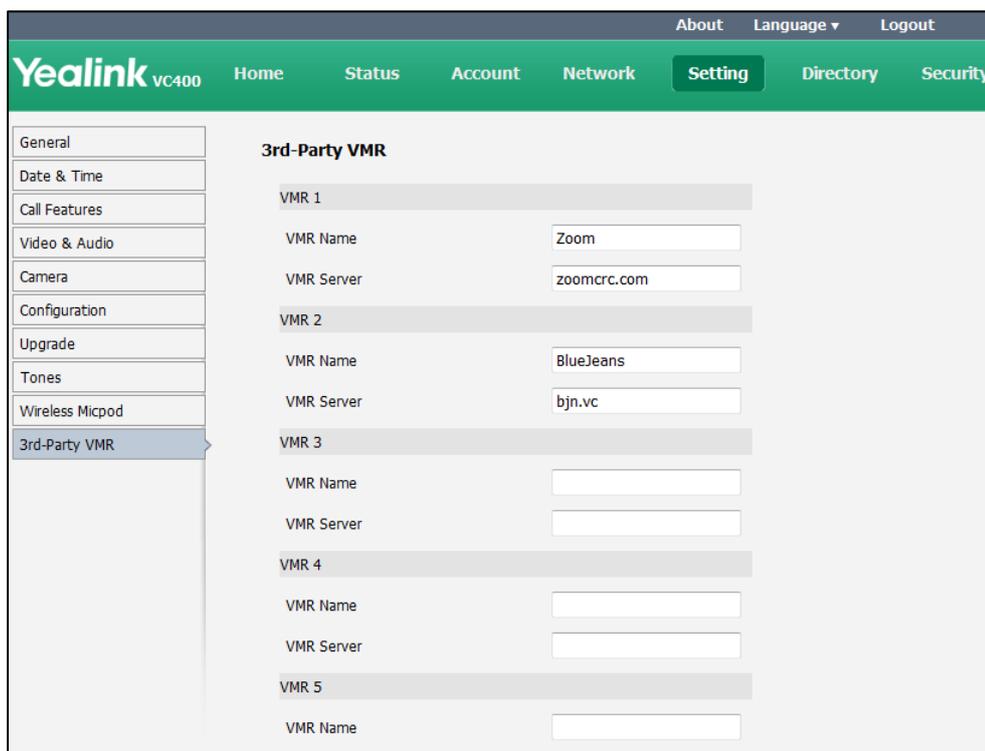
Parameter	Description	Configuration Method
<b>VMR Name 1</b>	Configures the virtual meeting room name. <b>Default:</b> Zoom <b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.	Web User Interface
<b>VMR Server1</b>	Configures the virtual meeting room server address. <b>Default:</b> zoomcrc.com <b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.	Web User Interface
<b>VMR Name 2</b>	Configures the virtual meeting room name. <b>Default:</b> Blue Jeans <b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.	Web User Interface
<b>VMR Server 2</b>	Configures the virtual meeting room server address. <b>Default:</b> bjn.vc <b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.	Web User Interface
<b>VMR Name 3</b>	Configures the virtual meeting room name. <b>Default:</b> Blank <b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.	Web User Interface
<b>VMR Server 3</b>	Configures the virtual meeting room server address.	Web User Interface

Parameter	Description	Configuration Method
	<p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.</p>	
<b>VMR Name 4</b>	<p>Configures the virtual meeting room name.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.</p>	Web User Interface
<b>VMR Server 4</b>	<p>Configures the virtual meeting room server address.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.</p>	Web User Interface
<b>VMR Name 5</b>	<p>Configures the virtual meeting room name.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.</p>	Web User Interface
<b>VMR Server 5</b>	<p>Configures the virtual meeting room server address.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works when you do not log into a Cloud platform, or you only register a Yealink Cloud account.</p>	Web User Interface

**To configure the third-party virtual meeting room via web user interface:**

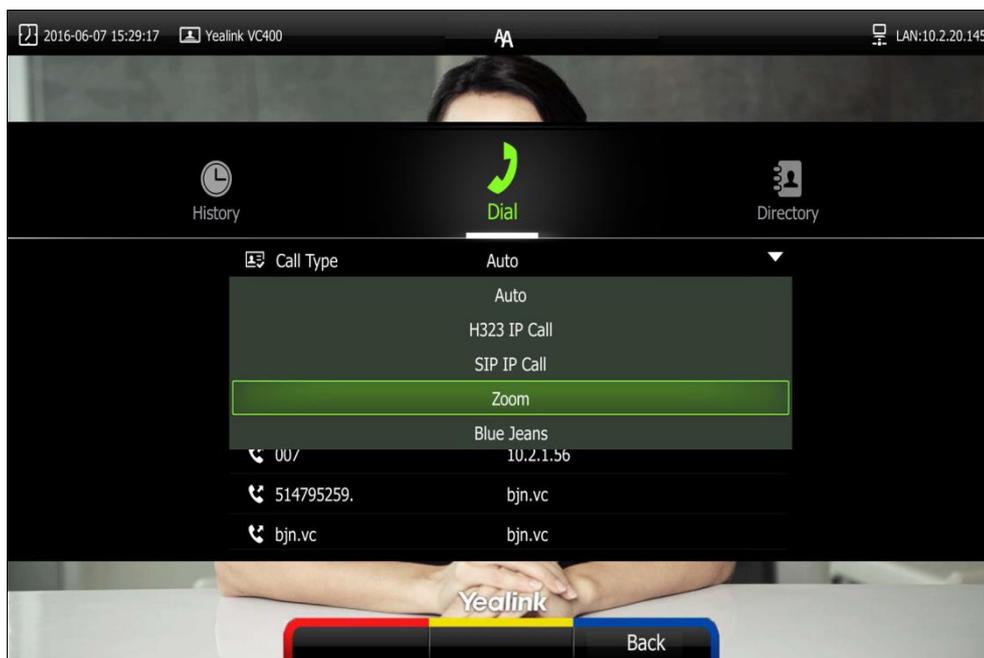
1. Click on **Setting**->**3rd-VMR**.

- Enter virtual meeting room name and server address in the corresponding fields respectively.



- Click **Confirm** to accept the change.

On your display device, the VMRs will appear at the path **Call->Dial->Call Type**. You can select the desired third-party platform to call corresponding VMRs quickly.



For more information on how to use third-party platform, refer to the [User Guide](#).

## Configuring SIP Settings

Yealink VC400/VC120 video conferencing system support Session Initiation Protocol (SIP). If your server supports SIP, you can use SIP to establish calls.

### SIP Account

To establish calls using SIP, you can configure a SIP account for the system.

SIP account parameters on the system are described below:

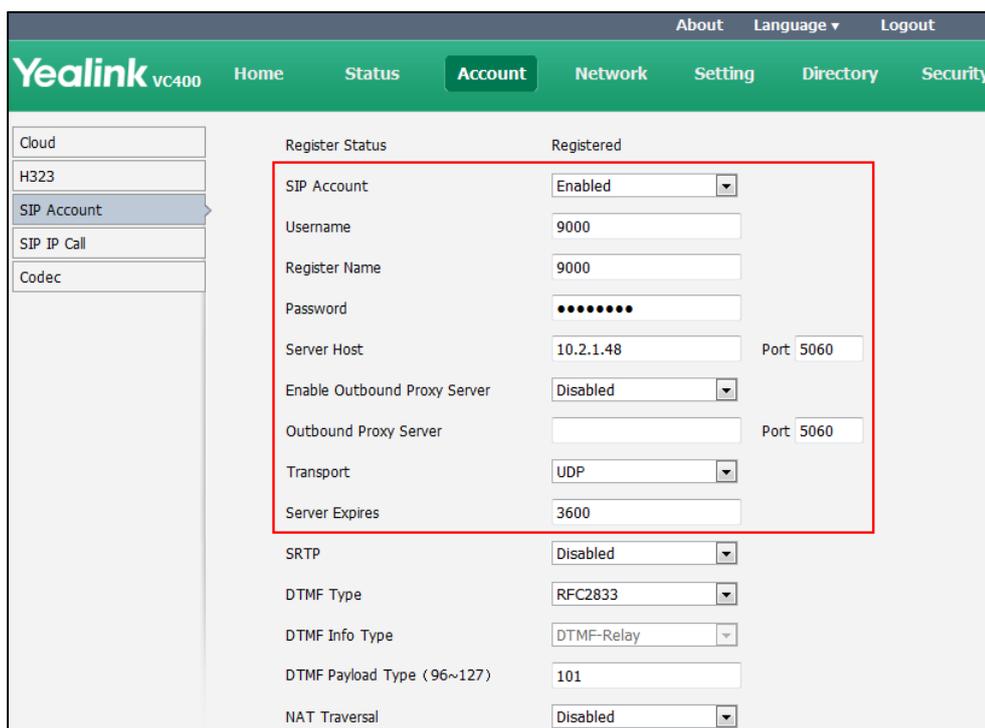
Parameter	Description	Configuration Method
<b>SIP Account</b>	Enables or disables the SIP account. <b>Default:</b> Enabled	Remote Control Web User Interface
<b>Register Name</b>	Configures the user name of the SIP account for register authentication. <b>Default:</b> Blank	Remote Control Web User Interface
<b>User Name</b>	Specifies the user name to use for authentication when registering with a SIP server. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Password</b>	Specifies the password associated with the user name used to authenticate the system to the SIP server. <b>Default:</b> Blank	Remote Control Web User Interface
<b>Server/Server Host</b>	Configures the IP address or domain name of the SIP server for the SIP account. <b>Default:</b> Blank	Remote Control Web User Interface
<b>SIP Server Port/Port</b>	Configures the port of the SIP server. <b>Valid values:</b> Integer from 0 to 65535. <b>Default:</b> 5060	Web User Interface
<b>Outbound/Enable Outbound Proxy Server</b>	Enables or disables the system to send requests of the SIP account to the outbound proxy server. <b>Default:</b> Disabled	Remote Control Web User Interface
<b>Outbound</b>	Configures the IP address or domain	Remote Control

Parameter	Description	Configuration Method
<b>Server/Outbound Proxy Server</b>	name of the outbound proxy server for the SIP account. <b>Default:</b> it is configurable only when the Outbound Proxy Server is enabled.	Web User Interface
<b>Outbound Port/Port</b>	Configures the port of the outbound proxy server. <b>Valid values:</b> Integer from 0 to 65535. <b>Default:</b> 5060	Remote Control Web User Interface
<b>Transport</b>	Configures the type of transport protocol for the SIP account. <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication of SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <b>Default:</b> UDP <b>Note:</b> TLS is available only when the system is registered with a SIP server that supports TLS.	Remote Control Web User Interface
<b>Server Expires</b>	Configures the registration expiration time (in seconds) of the SIP server for SIP account. <b>Default:</b> 3600	Remote Control Web User Interface

**To configure SIP account via web user interface:**

1. Click on **Account->SIP Account**.

2. Configure the SIP account settings.



3. Click **Confirm** to accept the change.

After successful registration, the display device displays **SIP**, and the LCD screen of the video conferencing phone displays **SIP**.

**To configure SIP account via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) ->**SIP Account**.
2. Configure the SIP account settings.
3. Press the **Save** soft key to accept the change.

After successful registration, the display device displays **SIP**, and the LCD screen of the video conferencing phone displays **SIP**.

## SIP IP Call

When making an IP call using the SIP protocol, the system doesn't support the TLS transport protocol. So configuration parameters of SIP IP call are divided from the SIP account. You can configure SIP IP call separately.

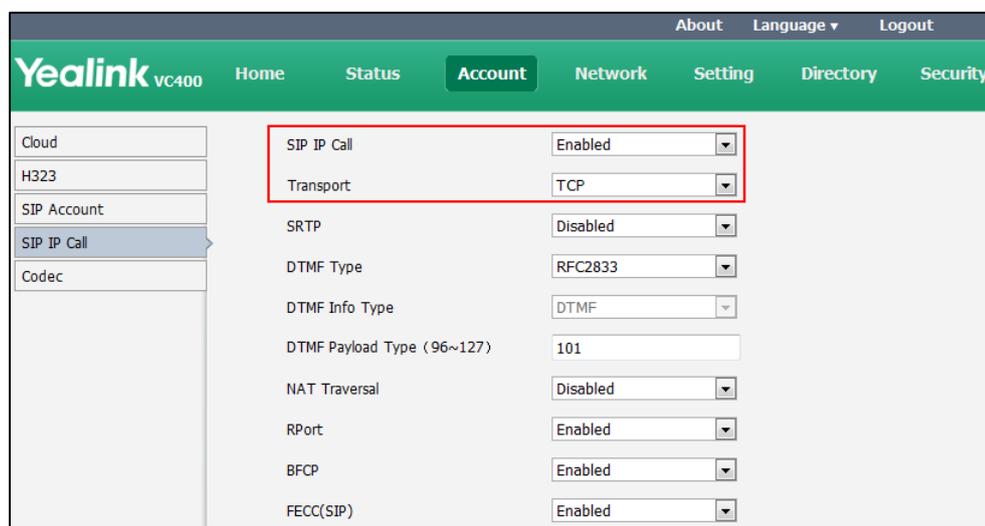
SIP IP call parameters on the system are described below:

Parameter	Description	Configuration Method
<b>SIP IP Call Enable</b>	Enables or disables the SIP IP Call. <b>Default:</b> Enabled. <b>Note:</b> When it is set to Enabled on	Remote Control Web User Interface

Parameter	Description	Configuration Method
	both sites, the VC400/VC120 can call the far site by dialing an IP address directly.	
<b>Transport</b>	<p>Configures the type of transport protocol for the SIP IP call.</p> <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <p><b>Default:</b> TCP</p>	<p>Remote Control</p> <p>Web User Interface</p>

**To configure SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select the desired value from the pull-down list of **SIP IP Call Enable**.
3. Select the desired value from the pull-down list of **Transport**.



4. Click **Confirm** to accept the change.

**To configure SIP IP call via the remote control:**

1. Select **Menu->Advanced** (default password: 0000)->**SIP IP Call**.
2. Select the desired value from the pull-down list of **SIP IP Call Enable**.

3. Select the desired value from the pull-down list of **Transport**.
4. Press the **Save** soft key to accept the change.

## Configuring H.323 Settings

Yealink VC400/VC120 video conferencing systems support H.323 protocol. If your network uses a gatekeeper, you can register an H.323 account for the system, and specify its H.323 name and extension. This allows others to call the system by entering the H.323 name or extension instead of the IP address.

SIP settings parameters on the system are described below:

Parameter	Description	Configuration Method
<b>H.323 Protocol</b>	<p>Enables or disables the H.323 protocol.</p> <p><b>Default:</b> Enabled.</p> <p><b>Note:</b> Only when it is set to Enabled, can H.323 account be registered. When it is set to Enabled on both sites, the VC400/VC120 can call the far site by dialing an IP address directly.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>H.323 Account</b>	<p>Enables or disables the H.323 account.</p> <p><b>Default:</b> Enabled</p> <p>If it is set to disabled, the system cannot place or receive calls with the H.323 protocol.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>H.323 Name</b>	<p>Specifies the name that gatekeepers and gateways use to identify this system. You can make point-to-point calls using H.323 names if both system are registered to a gatekeeper.</p> <p><b>Default:</b> blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>H.323 Extension</b>	<p>Specifies the extension that gatekeepers and gateways use to identify this system.</p> <p><b>Default:</b> blank</p> <p><b>Note:</b> Users can place point-to-point calls using the extension if both</p>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	systems are registered with a gatekeeper.	
<b>Gatekeeper Mode</b>	<p>Configures the gatekeeper mode.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>—the system does not use a gatekeeper.</li> <li>• <b>Auto</b>—the system automatically discovers a gatekeeper.</li> <li>• <b>Manual</b>—specify the IP address and port for the gatekeeper manually.</li> </ul> <p><b>Default:</b> Disabled</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Gatekeeper IP Address 1</b>	Configures the IP address of the primary gatekeeper.	<p>Remote Control</p> <p>Web User Interface</p>
<b>Gatekeeper IP Address 2</b>	Configures the IP address of the secondary gatekeeper.	<p>Remote Control</p> <p>Web User Interface</p>
<b>Gatekeeper Authentication</b>	<p>Enables or disables support for gatekeeper authentication.</p> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> When Gatekeeper Authentication is enabled, the gatekeeper ensures that only trusted H.323 systems are allowed to access the gatekeeper.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Gatekeeper Username</b>	<p>Specifies the user name for authentication with gatekeeper.</p> <p><b>Default:</b> blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Gatekeeper Password</b>	<p>Specifies the password for authentication with gatekeeper.</p> <p><b>Default:</b> blank</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>H.460 Active</b>	<p>Enables or disables H.460 firewall traversal feature on the system.</p> <p><b>Default:</b> Disabled</p> <p>For more information, refer to <a href="#">H.460 Firewall Traversal</a> on page 91.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>H.323 Tunneling</b>	Enables or disables the H.323 tunneling on the system.	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	<p><b>Default:</b> Disabled</p> <p>For more information, refer to <a href="#">H.323 Tunneling</a> on page 73.</p>	
<b>H.235 Encryption</b>	<p>Specifies the H.235 type during an H.323 call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>—do not use H.235 in H.323 calls.</li> <li>• <b>Optional</b>—negotiate with the far site whether to use H.235 for media encryption in H.323 calls.</li> <li>• <b>Compulsory</b>—compulsory use H.235 for media encryption in H.323 calls.</li> </ul> <p><b>Default:</b> Disabled</p> <p>For more information, refer to <a href="#">H.235</a> on page 243.</p>	Web User Interface
<b>Protocol Monitor Port</b>	<p>Specifies the port for the H.323 protocol.</p> <p><b>Valid values:</b> 0-65535</p> <p><b>Default</b> 1720.</p> <p><b>Note:</b> It is only applicable to H.323 IP call.</p>	Web User Interface
<b>Local Early Media</b>	<p>Enables or disables local early media feature on the system.</p> <p><b>Default:</b> Disabled.</p> <p>If it is set to Enabled, the system will send video SDP twice during a call to solve the compatibility between Yealink device and certain devices.</p>	Web User Interface

**To configure H.323 account via web user interface:**

1. Click on **Account**->**H.323**.

2. Configure the H.323 account settings.

Setting	Value
Register Status	Registered
H323 Protocol	Enabled
H.323 Account	Enabled
H.323 Name	9000
H.323 Extension	9000
Gatekeeper Mode	Manual
Gatekeeper IP Address 1	10.2.1.43
Port	1719
Gatekeeper IP Address 2	
Port	1719
Gatekeeper Authentication	Disabled
Gatekeeper Username	
Gatekeeper Password	••••••••
H.460 Active	Disabled
H.323 Tunneling	Disabled
H235 Encryption	Disabled
Protocol Monitor Port	1720

3. Click **Confirm** to accept the change.

After successful registration, the display device displays **H323**, and the LCD screen of the video conferencing phone displays **H323**.

#### To configure H.323 account via the remote control:

1. Select **Menu->Advanced** (default password: 0000) ->**H.323**.
2. Configure the H.323 account settings.
3. Press the **Save** soft key to accept the change.

After successful registration, the display device displays **H323**, and the LCD screen of the video conferencing phone displays **H323**.

## Account Polling

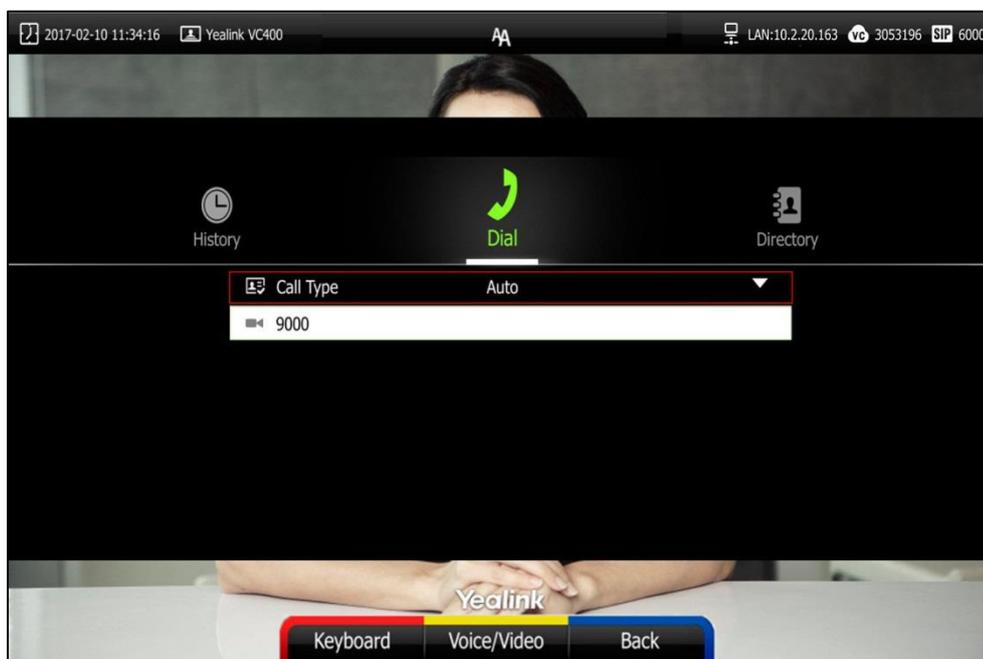
When you dial account numbers of other system, account polling feature enables your system to use different call types according to this priority: Cloud platform>H.323 account>SIP account. If you cannot call other systems using all your registered accounts, then this call fails.

Account polling is disabled by default. When you register multiple accounts (greater than or equal to 2) for your system, you can enable account polling feature.

The following example shows the way calls are placed when account polling is enabled or disabled

**Scenario:**

1. System A is registered with a Yealink Cloud account and a SIP account.
2. On system A, select **Auto** from the pull-down list of **Call Type** before calling.



3. On system A, dial the account numbers of system B.

**Result:**

- If account polling is disabled, system A can only use its Cloud account (highest priority) to call system B.
- If account polling is enabled, system A will use its Cloud account (highest priority) to call system B first. If this call fails, system A continues to use its SIP account (next priority) to call system B.

Account polling parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Account Polling</b>	<p>Enables or disables the account polling feature.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>-If call type is set to Auto, the system can only call other systems using the call type with the highest priority.</li> <li>• <b>Enabled</b>- If call type is set to Auto, the system will attempt to</li> </ul>	<p>Remote Control Web User Interface</p>

Parameter	Description	Configuration Method
	call other system using different call types according the priority. <b>Default:</b> Disabled	

To configure account polling via web user interface:

1. Click on **Setting**->**Call Features**.
2. Select the desired value from the pull-down list of **Account Polling**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting' (highlighted), 'Directory', and 'Security'. On the left, a sidebar lists various settings categories: General, Date & Time, Call Features (highlighted), Video & Audio, Camera, Configuration, Upgrade, Tones, Wireless Micpod, and 3rd-Party VMR. The main content area displays a list of settings with their current values in dropdown menus. The 'Account Polling' setting at the bottom is highlighted with a red rectangular box and is currently set to 'Disabled'.

Parameter	Value
Auto Answer Mute	Enabled
Auto Answer Multiway	Disabled
Auto Dialout Mute	Disabled
Call Match	Enabled
History Record	Enabled
Call Protocol	Auto
Uplink Bandwidth	Auto
Downlink Bandwidth	Auto
Abnormal Call Answering	IP Call Answer
Safe Mode Call	Enabled
Ringback Timeout(30-240)	200
Auto Refuse Timeout(30-240)	120
SIP IP Call by Proxy	Off
Default Layout of Single Screen	Remote Full screen
Network Address Adapter	Enabled
Account Polling	Disabled

3. Click **Confirm** to accept the change.

## DTMF

DTMF (Dual Tone Multi-frequency), better known as touch-tone, is used for telecommunication signaling over analog telephone lines in the voice-frequency band. DTMF is the signal sent from the IP phone to the network, which is generated when pressing the keypad during a call. Each key pressed on the IP phone generates one sinusoidal tone of two frequencies. One is generated from a high frequency group and the other from a low frequency group.

The DTMF keypad is laid out in a 4×4 matrix, with each row representing a low frequency, and each column representing a high frequency. Pressing a digit key (such as '1') will generate a sinusoidal tone for each of two frequencies (697 and 1209 hertz (Hz)).

**DTMF Keypad Frequencies:**

	1209 Hz	1336 Hz	1477 Hz	1633 Hz
697 Hz	1	2	3	A
770 Hz	4	5	6	B
852 Hz	7	8	9	C
941 Hz	*	0	#	D

## Methods of Transmitting DTMF Digit

Three methods of transmitting DTMF digits:

- **RFC2833** -- DTMF digits are transmitted by RTP Events compliant to RFC2833.
- **INBAND** -- DTMF digits are transmitted in the voice band.
- **SIP INFO** -- DTMF digits are transmitted by SIP INFO messages.

### RFC 2833

DTMF digits are transmitted using the RTP Event packets that are sent along with the voice path. These packets use RFC 2833 format and must have a payload type that matches what the other end is listening for. The default payload type for RTP Event packets is 101 and the payload type is configurable. The VCS use the configured value to negotiate with the other end during call establishment.

The RTP Event packet contains 4 bytes. The 4 bytes are distributed over several fields denoted as Event, End bit, R-bit, Volume and Duration. If the End bit is set to 1, the packet contains the end of the DTMF event. You can configure the sending times of the end RTP Event packet.

### INBAND

DTMF digits are transmitted within the audio of the IP phone conversation. It uses the same codec as your voice and is audible to conversation partners.

### SIP INFO

DTMF digits are transmitted by the SIP INFO messages when the voice stream is established after a successful SIP 200 OK-ACK message sequence. The SIP INFO message is sent along the signaling path of the call. The SIP INFO message can transmit DTMF digits in three ways: DTMF, DTMF-Relay and Telephone-Event.

DTMF parameters for SIP protocol on the system are described below:

Parameter	Description	Configuration Method
<b>DTMF Type</b>	Configures the DTMF type. You can configure it for the Cloud platform,	Remote Control

Parameter	Description	Configuration Method
	<p>SIP account or SIP IP call separately.</p> <ul style="list-style-type: none"> <li>• <b>INBAND</b>—DTMF digits are transmitted in the voice band.</li> <li>• <b>RFC2833</b>—DTMF digits are transmitted by RTP Events compliant to RFC2833.</li> <li>• <b>SIP INFO</b>—DTMF digits are transmitted by the SIP INFO messages.</li> <li>• <b>RFC2833+ SIP INFO</b>—DTMF digits are transmitted by RTP Events compliant to RFC 2833 and the SIP INFO messages.</li> </ul> <p><b>Default:</b> RFC2833.</p>	Web User Interface
<b>DTMF Info Type</b>	<p>Configures the DTMF info type when DTMF type is set to SIP INFO or RFC2833+SIP INFO. You can configure it for the Cloud platform, SIP account or SIP IP call separately</p> <ul style="list-style-type: none"> <li>• <b>DTMF-Relay</b></li> <li>• <b>DTMF</b></li> <li>• <b>Telephone-Event</b></li> </ul> <p><b>Default:</b> DTMF-Relay.</p>	Remote Control Web User Interface
<b>DTMF Payload Type (96~127)</b>	<p>Configures the value of DTMF payload. You can configure it for the Cloud platform, SIP account or SIP IP call separately.</p> <p><b>Default:</b> 101</p>	Web User Interface

**To configure DTMF type for Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select the desired value from the pull-down list of **DTMF Type**.
3. If **SIP INFO** or **RFC2833+ SIP INFO** is selected, select the desired value from the pull-down list of **DTMF Info Type**.

4. Enter the desired value in the **DTMF Payload Type(96~127)** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' tab is selected, and the 'Cloud' sub-tab is active. The 'Cloud' section shows the following configuration:

- Register Status: Registered
- Cloud Account: Enabled
- Platform Type: Yealink Cloud
- Username: 584921002
- Password: [Redacted]
- Server Host: yealinkvc.com Port: 0

The 'Advanced Setting' section is highlighted with a red box and contains:

- DTMF Type: SIP INFO
- DTMF Info Type: DTMF-Relay
- DTMF Payload Type (96~127): 101

5. Click **Confirm** to accept the change.

**To configure DTMF type for SIP account via web user interface:**

1. Click on **Account->SIP Account**.
2. Select the desired value from the pull-down list of **DTMF Type**.

If **SIP INFO** or **RFC2833+ SIP INFO** is selected, select the desired value from the pull-down list of **DTMF Info Type**.

3. Enter the desired value in the **DTMF Payload Type(96~127)** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' tab is selected, and the 'SIP Account' sub-tab is active. The 'SIP Account' section shows the following configuration:

- Register Status: Registered
- SIP Account: Enabled
- Username: 9000
- Register Name: 9000
- Password: [Redacted]
- Server Host: 10.2.1.48 Port: 5060
- Enable Outbound Proxy Server: Disabled
- Outbound Proxy Server: [Empty] Port: 5060
- Transport: UDP
- Server Expires: 3600
- SRTP: Disabled

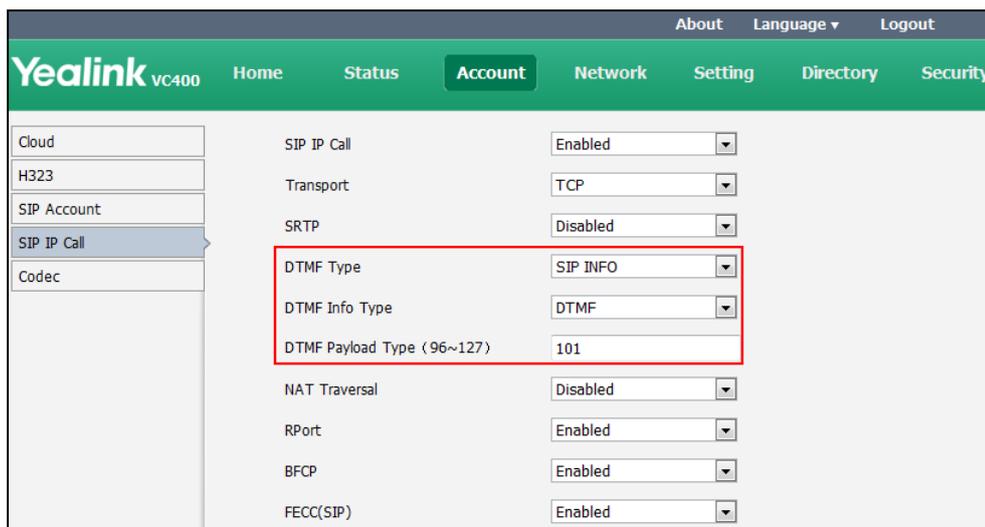
The 'Advanced Setting' section is highlighted with a red box and contains:

- DTMF Type: SIP INFO
- DTMF Info Type: DTMF-Relay
- DTMF Payload Type (96~127): 101

4. Click **Confirm** to accept the change.

**To configure DTMF type for SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select the desired value from the pull-down list of **DTMF Type**.  
If **SIP INFO** or **RFC2833+ SIP INFO** is selected, select the desired value from the pull-down list of **DTMF Info Type**.
3. Enter the desired value in the **DTMF Payload Type(96~127)** field.



4. Click **Confirm** to accept the change.

DTMF parameters for H.323 protocol on the system are described below:

Parameter	Description	Configuration Method
<b>DTMF Type</b>	<p>Configures the DTMF type. You can configure it for the StarLeaf Cloud platform or H.323 call separately.</p> <ul style="list-style-type: none"> <li>• <b>INBAND</b>—DTMF digits are transmitted in the voice band.</li> <li>• <b>Auto</b>—the system automatically negotiates the way (INBAND, RFC2833 or SIP INFO) to transfer DTMF digits.</li> </ul> <p><b>Default:</b> Auto</p>	<p>Remote Control Web User Interface</p>

**To configure DTMF type for StarLeaf Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **StarLeaf** from the pull-down list of **Platform Type**.

3. Select the desired value from the pull-down list of **DTMF Type**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below it, a green menu bar contains 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. On the left, a sidebar menu has 'Cloud' selected. The main content area is titled 'Cloud' and contains the following settings:

Register Status	Registered
Cloud Account	Enabled
Platform Type	StarLeaf
QCP Code	367037241953
<b>Advanced Setting</b>	
H.323 Tunneling	Disabled
H.235 Encryption	Disabled
Protocol Monitor Port	1720
<b>DTMF Type</b>	<b>Auto</b>
Local Early Media	Disabled
H.239	Enabled
FECC(H.323)	Enabled

4. Click **Confirm** to accept the change.

**To configure DTMF type for H.323 via web user interface:**

1. Click on **Account->H.323**.
2. Select the desired value from the pull-down list of **DTMF Type**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below it, a green menu bar contains 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. On the left, a sidebar menu has 'H323' selected. The main content area is titled 'H.323 Account' and contains the following settings:

H.323 Account	Enabled	
H.323 Name	9000	
H.323 Extension	9000	
Gatekeeper Mode	Manual	
Gatekeeper IP Address 1	10.2.1.43	Port 1719
Gatekeeper IP Address 2		Port 1719
Gatekeeper Authentication	Disabled	
Gatekeeper Username		
Gatekeeper Password	••••••••	
H.460 Active	Disabled	
H.323 Tunneling	Disabled	
H235 Encryption	Disabled	
Protocol Monitor Port	1720	
<b>DTMF Type</b>	<b>INBAND</b>	
H.239	Enabled	
FECC(H.323)	Enabled	

3. Click **Confirm** to accept the change.

## Codecs

CODEC is an abbreviation of COMpress-DECompress, and is capable of coding or decoding a digital data stream or signal by implementing an algorithm. The object of the algorithm is to represent the high-fidelity audio/video signal with a minimum number of bits while retaining quality. This can effectively reduce the frame size and the bandwidth required for audio/video transmission.

## Audio Codecs

The audio codec that the system uses to establish a call should be supported by the server. When placing a call, the system will offer the enabled audio codec list to the server and then use the audio codec negotiated with the called party according to the priority.

The following table summarizes the supported audio codecs on the system:

Codec	Algorithm	Bit Rate	Sample Rate	Reference
G.722.1c	G.722.1	48 Kbps	32 Ksps	RFC 5577
G.722.1c		32 Kbps	32 Ksps	RFC 5577
G.722.1c		24 Kbps	32 Ksps	RFC 5577
G.722.1	G.722.1	24 Kbps	16 or 32 Ksps	RFC 5577
G722	G.722	64 Kbps	16 Ksps	RFC 3551
PCMU	G.711	64 Kbps	8 Ksps	RFC 3551
PCMA	G.711	64 Kbps	8 Ksps	RFC 3551

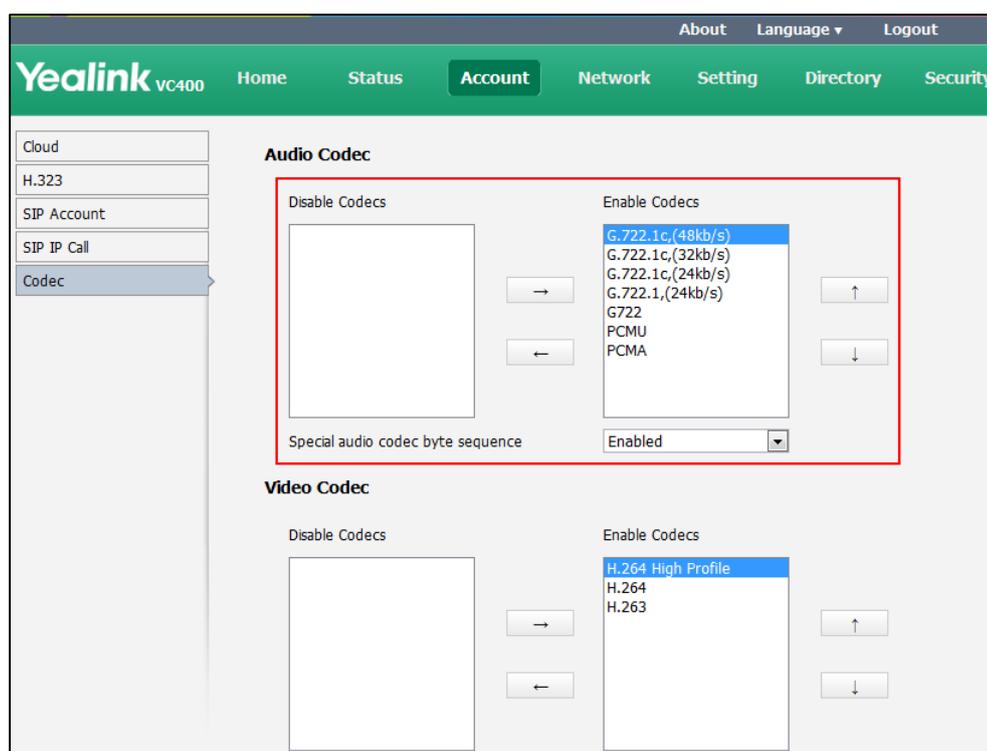
Audio codecs parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Enable Codecs</b>	Specifies the enabled audio codecs for the system to use. <b>Note:</b> All support audio codecs are enabled on the system by default.	Web User Interface
<b>Disable Codecs</b>	Specifies the disabled audio codecs for the system not to use.	Web User Interface
<b>Special audio codec byte sequence</b>	Enables or disables the special audio codec byte sequence. <b>Note:</b> Different devices have different definition about how some Codecs are stored (Big-endian or little-endian), which may lead to the audio incompatibility problems	Web User Interface

Parameter	Description	Configuration Method
	between Yealink and certain devices. You can enable the special audio codec byte sequence feature to solve these incompatibility problems.	

**To configure audio codecs via web user interface:**

1. Click on **Account->Codec**.
2. Select the desired codec from the **Disable Codecs** or the **Enable Codecs** column.
3. Click  or  to disable or enable the selected codec.
4. Select the desired audio codec from the **Enable Codecs** column, and click  or  to adjust the priority of the selected audio codecs.
5. (Optional) If Yealink device has audio problems with certain device, select **Enabled** from the pull-down list of **Special audio codec byte sequence**.



6. Click **Confirm** to accept the change.

## Video Codecs

The video codec that the system uses to establish a call should be supported by the server. When placing a call, the system will offer the enabled video codec list to the server and then use the video codec negotiated with the called party according to the priority.

The following table summarizes the supported video codecs on the system:

Name	MIME Type	Bit Rate	Frame Rate	Frame Size
H.264 High Profile	H264/90000	90 kbps to 2048 kbps	5 fps to 30 fps	Tx: WQVGA,360P, 448P, 540P, 720P, 1080P
H.264	H264/90000			Rx: Conventional Size Below 1080P
H.263	H263/90000			Tx: CIF, 4CIF RX: QCIF, CIF, 4CIF

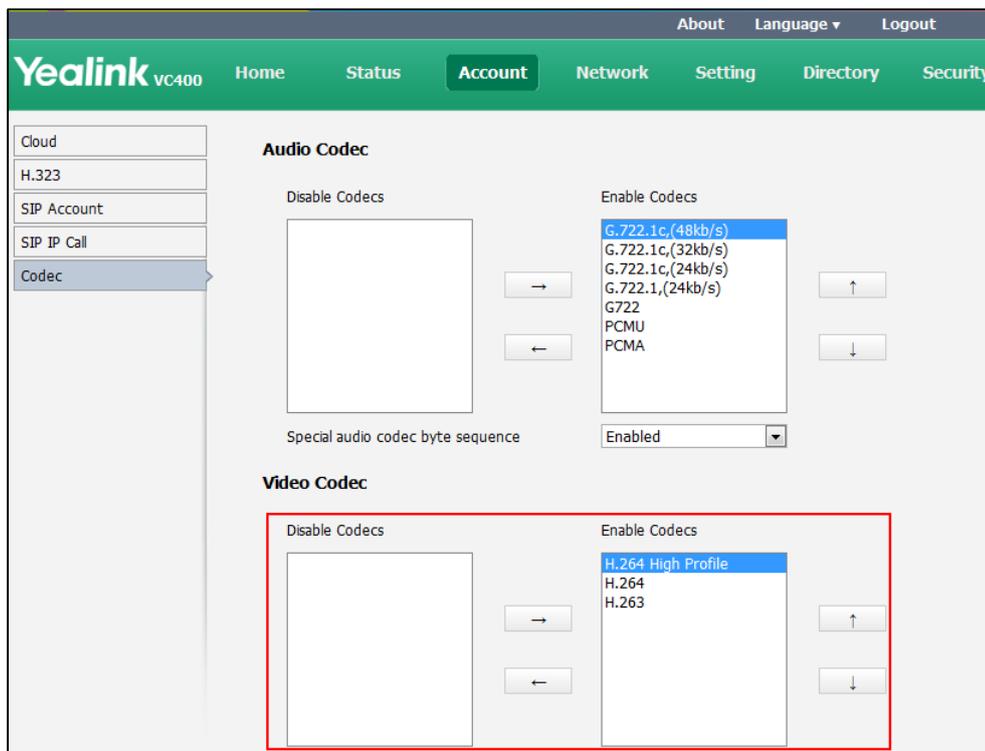
Video codecs parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Enable Codecs</b>	Specifies the enabled video codecs for the system to use. <b>Note:</b> All support video codecs are enabled on the system by default.	Web User Interface
<b>Disable Codecs</b>	Specifies the disabled video codecs for the system not to use.	Web User Interface

**To configure video codecs via web user interface:**

1. Click on **Account->Codec**.
2. Select the desired video codec from the **Disable Codecs** or the **Enable Codecs** column.
3. Click  or  to disable or enable the selected video codec.

- Select the desired video codec from the **Enable Codecs** column, and click  or  to adjust the priority of the selected video codecs.



- Click **Confirm** to accept the change.

## Call Protocol

The system supports SIP and H.323 protocols for incoming and outgoing calls. H.323 is commonly used to communicate to other video conferencing system. SIP is commonly used to communicate with other VoIP devices. The default call protocol on the system is Auto. The system preferentially uses the H.323 protocol to place calls. If there is no available H.323 account on the system, the system will switch to the SIP protocol for placing calls. You can specify the desired protocol for the system to place calls. Ensure the remote system supports the same protocol.

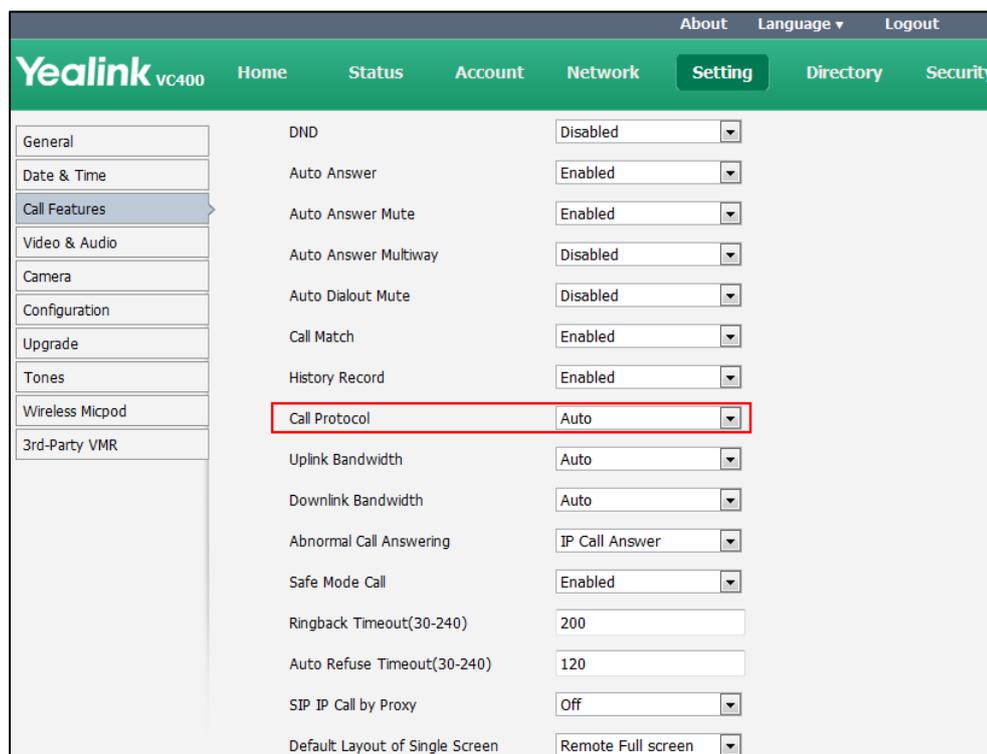
The call protocol parameter on the system is described below:

Parameter	Description	Configuration Method
<b>Call Protocol</b>	<p>Specifies the desired call protocol for placing calls.</p> <ul style="list-style-type: none"> <li><b>Auto</b>—the system automatically uses the available call protocol.</li> <li><b>SIP</b>—the system uses the SIP</li> </ul>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	protocol for placing calls. <ul style="list-style-type: none"> <li>• <b>H.323</b>—the system uses H.323 protocol for placing calls.</li> </ul> <b>Default:</b> Auto	

**To configure call protocol via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Call Protocol**.



3. Click **Confirm** to accept the change.

**To configure call protocol via the remote control:**

1. Select **Menu->Call Features ->Call Protocol**.
2. Select the desired value from the pull-down list of **Call Protocol**.
3. Press the **Save** soft key to accept the change.

## Do Not Disturb

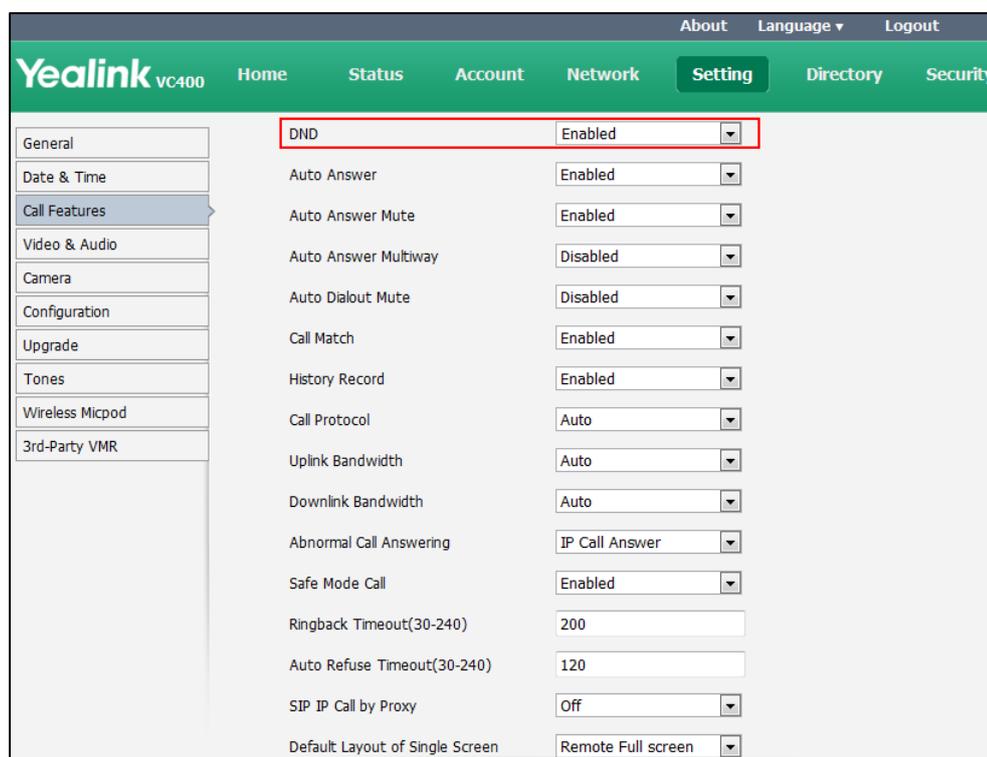
Do not Disturb allows the system to reject all incoming calls automatically. You can activate the DND mode for the system when it is idle, and the DND mode will be deactivated after the system places a call. You can also activate the DND mode for the system during a call, and the DND mode will be deactivated after the system ends the call.

The DND parameter on the system is described below:

Parameter	Description	Configuration Method
<b>DND</b>	Enables or disables DND mode on the system. <b>Default:</b> Disabled	Remote Control Web User Interface

**To configure DND via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **DND**.



3. Click **Confirm** to accept the change.  
If **Enabled** is selected, the display device will display , and the LCD screen of the video conferencing phone will display **DND**.

**To configure DND via the remote control:**

1. Select **Menu->Call Features**.
2. Check the **DND** checkbox.
3. Press the **Save** soft key to accept the change.  
The display device will display , and the LCD screen of the video conferencing phone will display **DND**.

**To configure DND during a call via web user interface:**

1. Click **Home**.

2. Check the **DND** checkbox.

The display device will display , and the LCD screen of the video conferencing phone will display **DND**.

**To configure DND during a call via the remote control:**

1. Press the **More** soft key.
2. Check the **DND** checkbox.
3. Press the **Back** soft key to exit the **More** window.

The display device will display , and the LCD screen of the video conferencing phone will display **DND**.

## Auto Answer

The auto answer feature allows the system to answer incoming calls automatically. The auto answer mute feature allows the system to turn off the microphone when an incoming call is answered automatically. The auto answer mute feature is available only when the auto answer feature is enabled. The auto answer multiway feature allows the system to answer new incoming calls automatically during an active call.

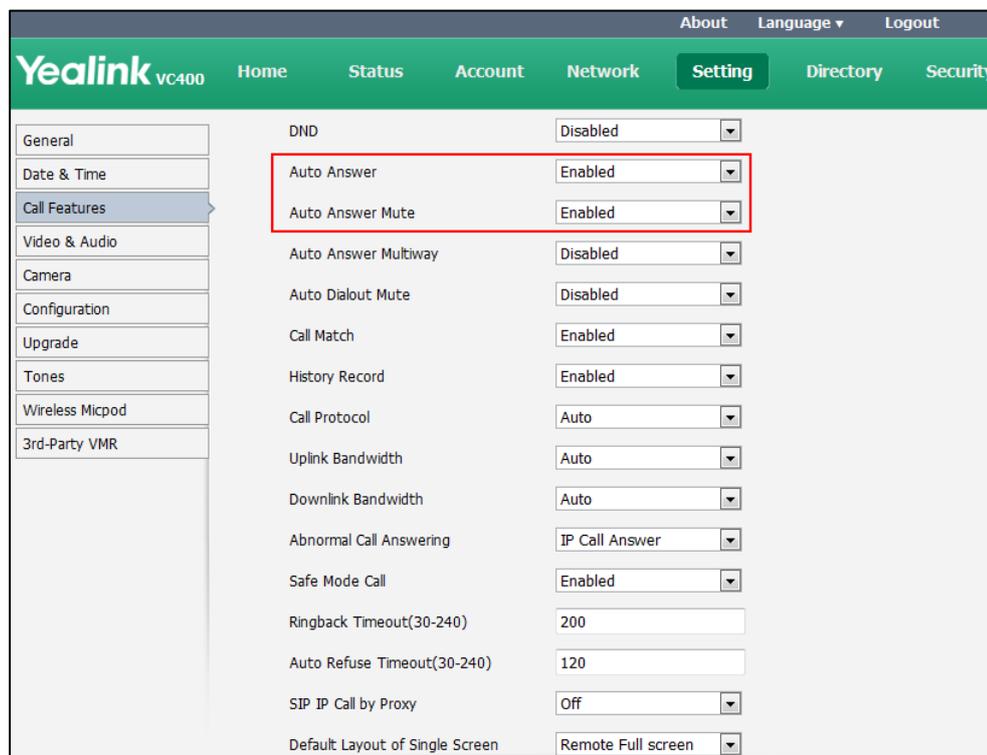
Auto answer parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Auto Answer</b>	Enables or disables the auto answer feature on the system. <b>Default:</b> Enabled	Remote Control Web User Interface
<b>Auto Answer Mute</b>	Enables or disables the auto answer mute feature on the system. <b>Default:</b> Enabled Auto answer mute feature is configurable only when the auto answer is enabled.	Remote Control Web User Interface
<b>Auto Answer Multiway</b>	Enables or disables the auto answer multiday feature on the system. <b>Default:</b> Disabled The auto answer multiway feature is available only when the auto answer is enabled.	Remote Control Web User Interface

**To configure auto answer via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Auto Answer**.

3. Select the desired value from the pull-down list of **Auto Answer Mute**.
4. Select the desired value from the pull-down list of **Auto Answer Multiway**.



5. Click **Confirm** to accept the change.

If **Enabled** is selected, the display device will display **AA**, and the LCD screen of the video conferencing phone will display **AA**.

**To configure auto answer via the remote control:**

1. Select **Menu->Call Features**.
2. Check the **Auto Answer** checkbox.
3. Check the **Auto Answer Mute** checkbox.
4. Check the **Auto Answer Multiway** checkbox.
5. Press the **Save** soft key to accept the change.

The display device will display **AA**, and the LCD screen of the video conferencing phone will display **AA**.

## Auto Dialout Mute

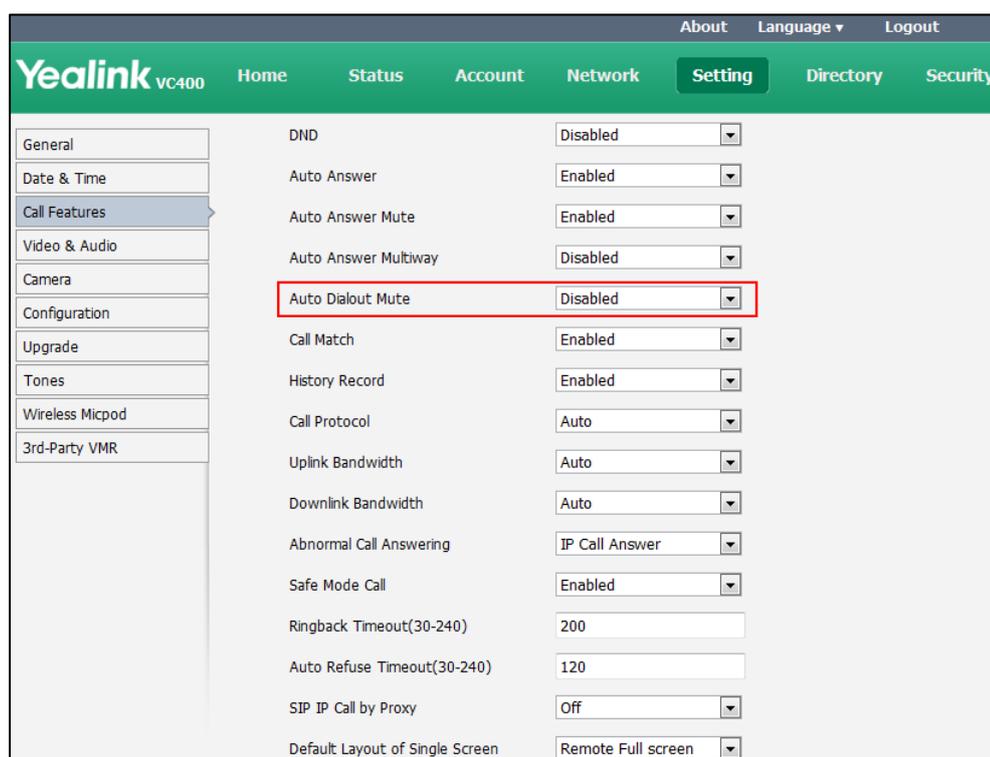
The auto dialout mute feature allows the system to turn off the microphone when placing a call, so that the other party cannot hear you.

Auto dialout mute parameter on the system is described below:

Parameter	Description	Configuration Method
<b>Auto Dialout Mute</b>	Enables or disables the auto dialout mute feature on the system. <b>Default:</b> Disabled	Web User Interface

**To configure auto dialout mute feature via web user interface:**

1. Click on **Setting**->**Call Features**.
2. Select the desired value from the pull-down list of **Auto Dialout Mute**.



3. Click **Confirm** to accept the change.

If **Enabled** is selected, your video image will display mute icon (  ) when you place a call.

## Call Match

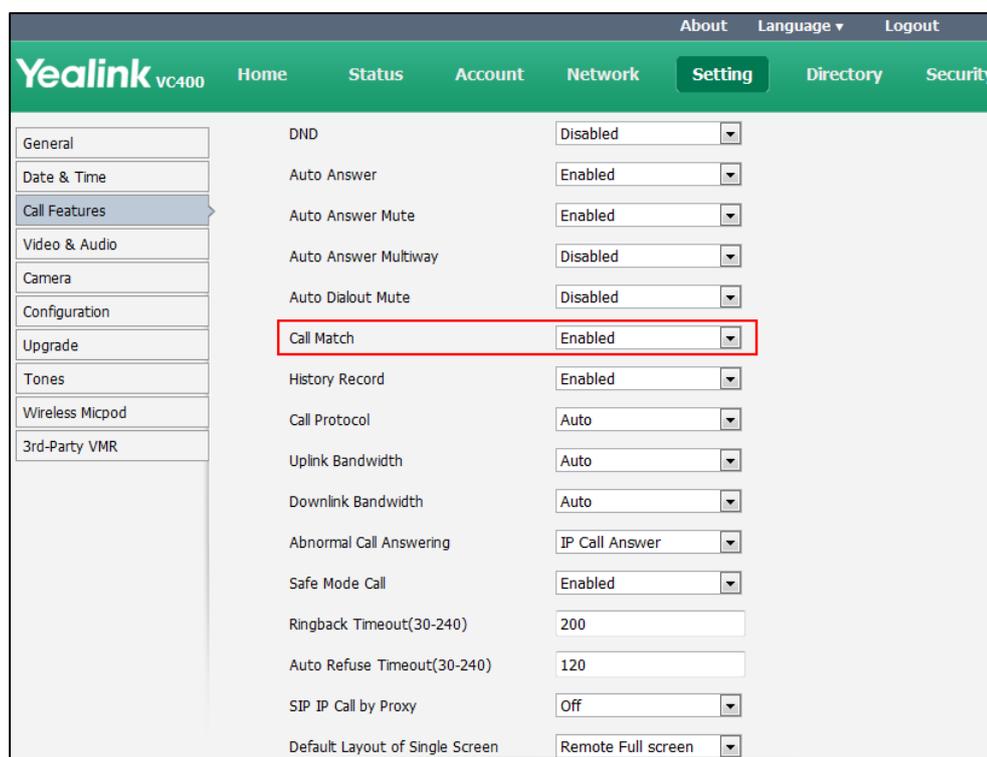
The call match feature allows the system to search entries automatically from the search source list based on the entered string. Once matched, the results will be displayed on the screen. If no list is added to the search source list, the system will not perform a search even if call match is enabled. For more information on how to search source list in dialing, refer to [Search Source List in Dialing](#) on page 221 .

Parameter of call match on the system is described below:

Parameter	Description	Configuration Method
<b>Call Match</b>	Enables or disables the call match feature on the system. <b>Default:</b> Enabled	Remote Control Web User Interface

**To configure call match via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Call Match**.



3. Click **Confirm** to accept the change.

**To configure call match via the remote control:**

1. Select **Menu->Call Features**.
2. Check the **Call Match** checkbox.
3. Press the **Save** soft key to accept the change.

## History Record

The system maintains a local call history, which contains call information such as remote party identification, time and date, and call duration. Users can manage call history list via the remote control, web user interface and video conferencing phone. To save call history, you must enable the history record feature on the system in advance. If history record feature is disabled, the

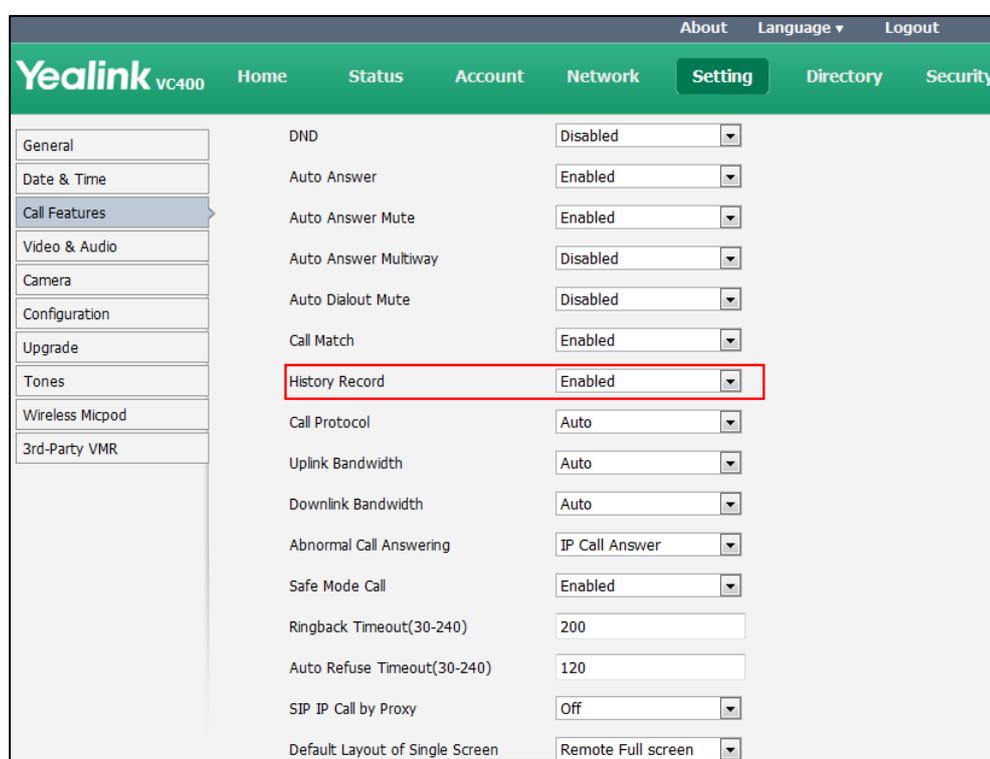
system will not save call log and prompt the missed call.

The history record parameter on the system is described below:

Parameter	Description	Configuration Method
<b>History Record</b>	Enables or disables the history record feature on the system. <b>Default:</b> Enabled	Remote Control Web User Interface

**To configure history record via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **History Record**.



3. Click **Confirm** to accept the change.

**To configure history record via the remote control:**

1. Select **Menu->Call Features**.
2. Check the **History Record** checkbox.
3. Press the **Save** soft key to accept the change.

## Bandwidth

The system automatically detects the available bandwidth for call connection by default. The VC400/VC120 supports connecting to other devices with different bandwidth. If a device with

lower bandwidth joins a call, the video quality will stay the same or will not reduce a lot. You can specify the uplink and downlink bandwidths for the system to achieve the best result. Uplink bandwidth is the max bandwidth of outgoing calls, and downlink bandwidth is the max bandwidth of incoming calls. The configurable bandwidths on the system are: 256 kb/s, 384 kb/s, 512 kb/s, 640 kb/s, 768 kb/s, 1024 kb/s, 1280 kb/s, 1500 kb/s, 2000 kb/s, 3000 kb/s, 4000 kb/s, 5000 kb/s, 6000 kb/s. You can configure which bandwidth is to be used when in the dialing screen. The optional maximum bandwidth in dialing screen is the uplink bandwidth.

**Note**

The actual bandwidth depends on the performance of the remote system, and is affected by the quality of the communication channel.

Bandwidth settings parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Uplink Bandwidth</b>	Specifies the maximum transmitting bandwidth for the system. <b>Default:</b> Auto If <b>Auto</b> is selected, the system will select the appropriate uplink bandwidth automatically.	Remote Control Web User Interface
<b>Downlink Bandwidth</b>	Specifies the maximum receiving bandwidth for the system. <b>Default:</b> Auto If <b>Auto</b> is selected, the system will select the appropriate downlink bandwidth automatically.	Remote Control Web User Interface

**To configure bandwidth settings via web user interface:**

1. Click on **Setting**->**Call Features**.
2. Select the desired value from the pull-down list of **Uplink Bandwidth**.

3. Select the desired value from the pull-down list of **Downlink Bandwidth**.

Setting	Value
DND	Disabled
Auto Answer	Enabled
Auto Answer Mute	Enabled
Auto Answer Multiway	Disabled
Auto Dialout Mute	Disabled
Call Match	Enabled
History Record	Enabled
Call Protocol	Auto
Uplink Bandwidth	Auto
Downlink Bandwidth	Auto
Abnormal Call Answering	IP Call Answer
Safe Mode Call	Enabled
Ringback Timeout(30-240)	200
Auto Refuse Timeout(30-240)	120
SIP IP Call by Proxy	Off
Default Layout of Single Screen	Remote Full screen

4. Click **Confirm** to accept the change.

#### To configure bandwidth settings via the remote control:

1. Select **Menu->Call Features->Bandwidth Settings**.
2. Select the desired value from the pull-down list of **Uplink Bandwidth**.
3. Select the desired value from the pull-down list of **Downlink Bandwidth**.
4. Press the **Save** soft key to accept the change.

#### Note

The priority of bandwidth is as follows: System bandwidth>Contact bandwidth (refer to [add local contacts](#)).

For example: the system bandwidth is 512kbps, if contact bandwidth is set to a value greater than 512bps, then the actual contact bandwidth will be 512bps. If contact bandwidth is set to a value less than 512bps, then the actual contact bandwidth will be the value set by user.

## Ringback Timeout

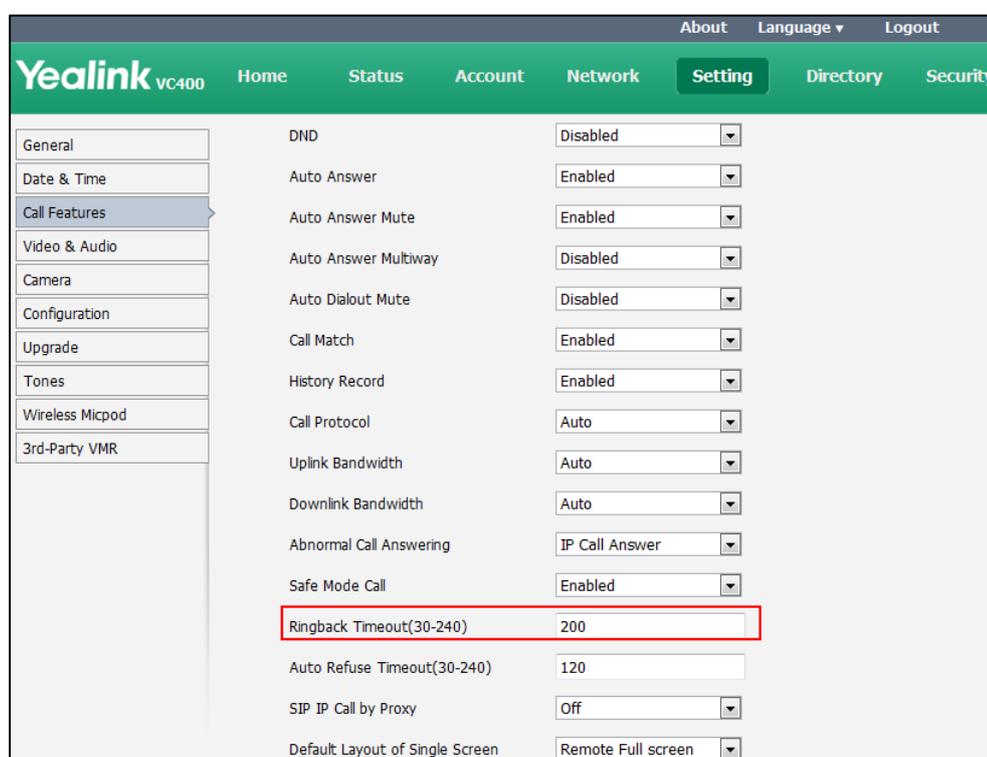
Ringback timeout defines a specific period of time within which the video conferencing system will cancel the dialing if the call is not answered.

The ringback timeout parameter on the system is described below:

Parameter	Description	Configuration Method
<b>Ringback Timeout (30-240)</b>	Configures the duration time (in seconds) in the ringback state. <b>Default:</b> 200 If it is set to 200, the system will cancel the dialing if the call is not answered within 200s.	Web User Interface

**To configure ringback timeout via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Ringback Timeout(30-240)**.



3. Click **Confirm** to accept the change.

## Auto Refuse Timeout

Auto refuse timeout defines a specific period of time within which the video conferencing system will stop ringing if the call is not answered.

The auto refuse timeout parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Auto Refuse Timeout (30-240)</b>	Configures the duration time (in seconds) in the ringing state. <b>Default: 120</b> If it is set to 120, the system will stop ringing if the call is not answered within 120s.	Web User Interface

**To configure auto refuse timeout via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Auto Refuse Timeout (30-240)**.

The screenshot shows the Yealink VC400 web user interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting' (highlighted), 'Directory', and 'Security'. On the left, a sidebar lists various settings categories: General, Date & Time, Call Features (highlighted), Video & Audio, Camera, Configuration, Upgrade, Tones, Wireless Micpod, and 3rd-Party VMR. The main content area displays various settings with their current values in dropdown menus or text boxes. The 'Auto Refuse Timeout(30-240)' setting is highlighted with a red box and is set to 120. Other settings include DND (Disabled), Auto Answer (Enabled), Auto Answer Mute (Enabled), Auto Answer Multiway (Disabled), Auto Dialout Mute (Disabled), Call Match (Enabled), History Record (Enabled), Call Protocol (Auto), Uplink Bandwidth (Auto), Downlink Bandwidth (Auto), Abnormal Call Answering (IP Call Answer), Safe Mode Call (Enabled), Ringback Timeout(30-240) (200), SIP IP Call by Proxy (Off), and Default Layout of Single Screen (Remote Full screen).

3. Click **Confirm** to accept the change.

## SIP IP Call by Proxy

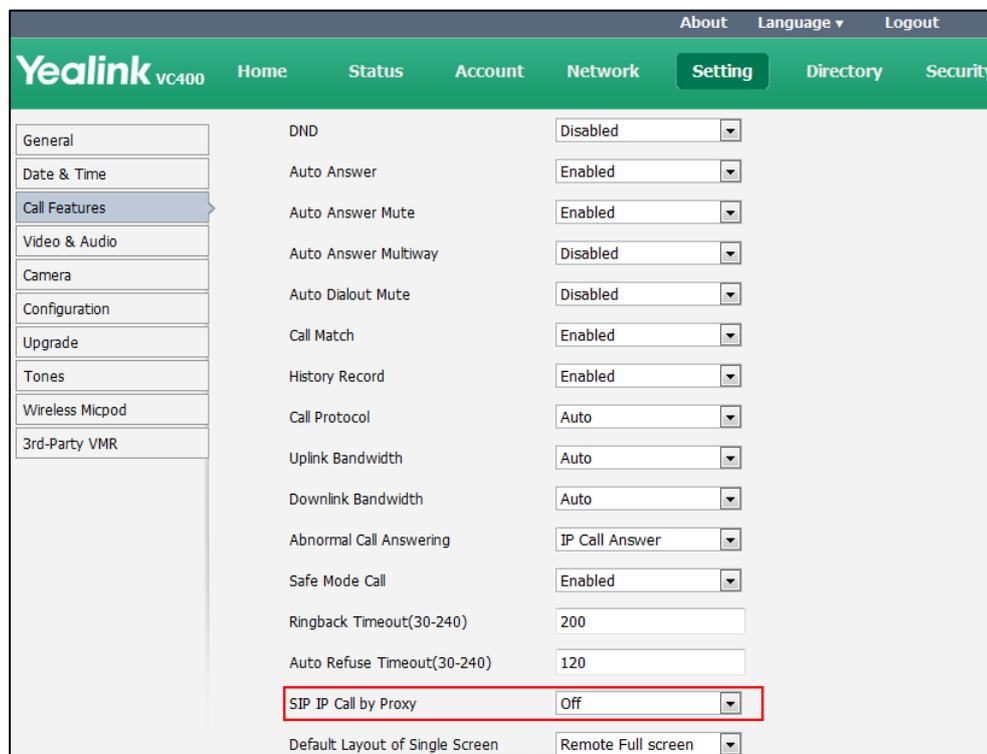
If the account of far site is an URI address (Username@Server), near site can use SIP IP call or SIP account to connect to the far site.

The SIP IP call by proxy parameters on the system are described below:

Parameter	Description	Configuration Method
<b>SIP IP Call by Proxy</b>	<p>Configures the SIP IP call by proxy.</p> <ul style="list-style-type: none"> <li><b>Off</b>—when dialing the URI of the far site, the system actually uses SIP IP address to establish a connection.</li> <li><b>On</b>—when dialing the URI of the far site, the system uses SIP account to establish a connection. The outbound proxy server should be configured to resolve hostname before dialing.</li> </ul> <p><b>Default:</b> Off</p>	Web User Interface

**To configure the SIP IP call by proxy via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **SIP IP Call by Proxy**.



3. Click **Confirm** to accept the change.

## Default Layout of Single Screen

When only one display device is connected to the VC400/VC120 Codec (single screen), you can configure the default screen layout when a call is established.

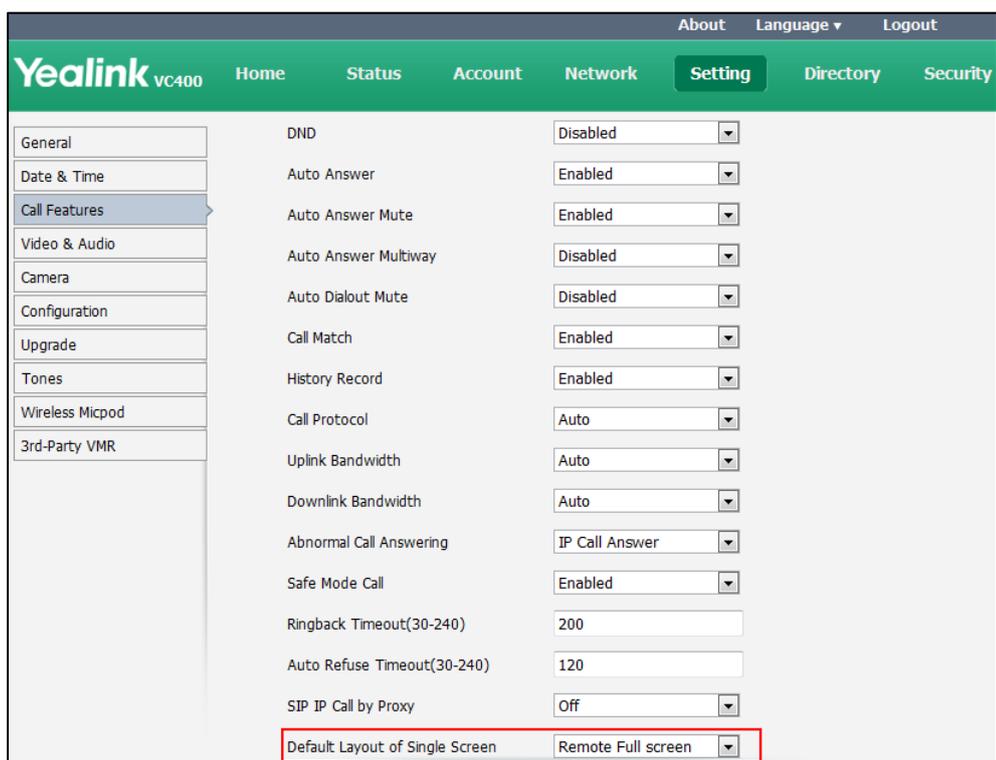
The parameters of default layout of single screen are described below:

Parameter	Description	Configuration Method
<p><b>Default Layout of Single Screen</b></p>	<p>Configures the default layout of single screen when a call is established.</p> <ul style="list-style-type: none"> <li>• <b>Remote big Local small</b></li> <li>• <b>Remote Full screen</b></li> <li>• <b>Equal</b></li> </ul> <p><b>Default:</b> Remote Full screen</p> <p>If it is set to Remote big Local small, the remote video image is shown in big size, and the local video image along the right side of the screen is shown in small size when a call is established.</p> <p>If it is set to Remote Full screen, the remote video image is shown in full size when a call is established.</p> <p>If it is set to Equal, the remote and local video images are shown in the same size when a call is established.</p>	<p>Web User Interface</p>

**To configure default layout of single screen via web user interface:**

1. Click on **Setting->Call Features**.

2. Select the desired value from the pull-down list of **Default Layout of Single Screen**.



3. Click **Confirm** to accept the change.

## Configuring System Settings

This chapter provides information for making configuration changes for the system, such as language, time and date, backlight of the video conferencing phone, video & audio setting and camera setting:

Topics include:

- [General Setting](#)
- [Audio Setting](#)
- [Adjusting MTU of Video Packets](#)
- [Dual-Stream Protocol](#)
- [Mix Sending](#)
- [Configuring Camera Settings](#)
- [Far-end Camera Control](#)
- [Camera Control Protocol](#)
- [Output Resolution](#)
- [USB Configuration](#)
- [Video Recording](#)
- [Screenshot](#)
- [Tones](#)

## General Setting

### Site Name

When the system is idle, the site name is displayed on the status bar of display device and video conferencing phone. You can make an IP address call to the far site, the site name will be displayed on the display device of the far site. Site name can consist of letters, numbers or special characters. You can configure the site name of the system via the remote control or web user interface.

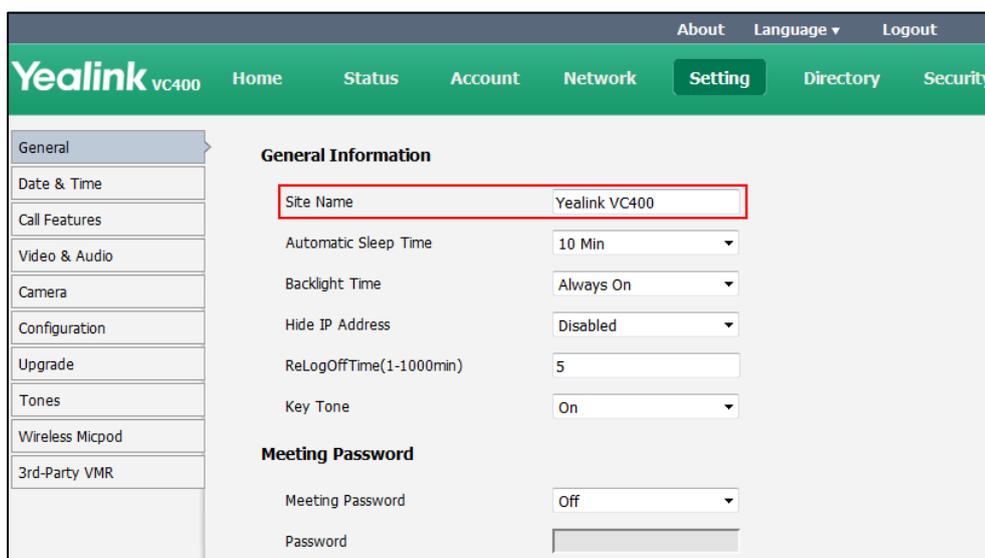
The site name parameter is described below:

Parameter	Description	Configuration Method
<b>Site Name</b>	Configures the site name of the system. <b>Valid values:</b> String within 64	Remote Control Web User Interface

Parameter	Description	Configuration Method
	characters <b>Default:</b> For VC400: Yealink VC400 For VC120: Yealink VC120	

**To configure the site name via web user interface:**

1. Click on **Setting->General**.
2. Edit the site name in the **Site Name** field.



3. Click **Confirm** to accept the change.  
 The LCD screen of the display device and video conferencing phone will display the changed site name.

**To configure the site name via the remote control:**

1. Select **Menu->Basic**.
2. Edit the site name in the **Site Name** field.
3. Press the **Save** soft key to accept the change.

The LCD screen of the display device and video conferencing phone will display the changed site name.

## Backlight of the Video Conferencing Phone

Backlight determines the brightness of the LCD screen display, allowing users to read easily in dark environments. Backlight time specifies the delay time to turn off the backlight when the phone is inactive.

You can configure the backlight time in the following formats:

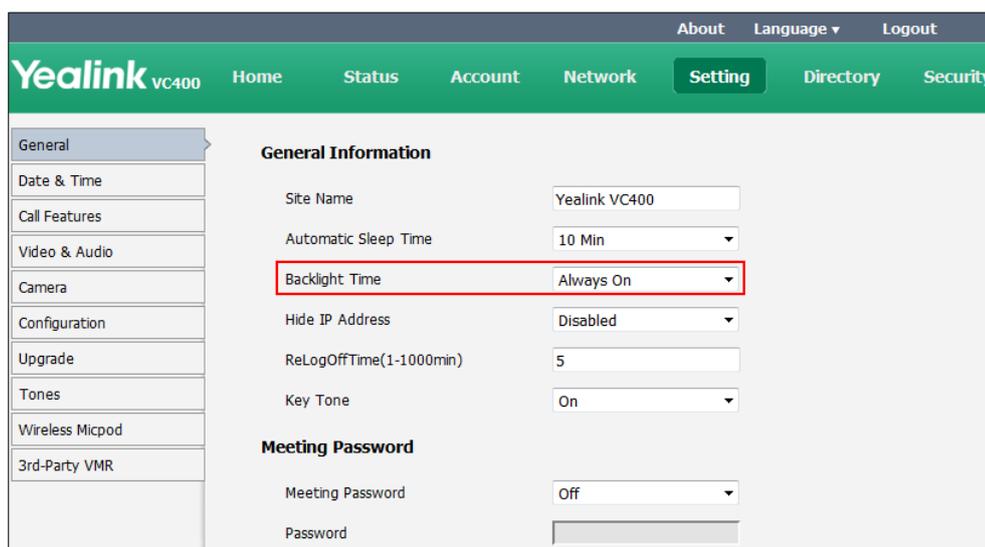
- **Always On:** Backlight is turned on permanently.
- **15 s, 30 s, 1 Min, 2 Min, 5 Min, 10 Min, 30 Min:** Backlight is turned off when the phone is inactive after a preset period of time. It is automatically turned on if the status of the phone changes or any key is pressed.

The backlight parameter on video conferencing phone is described below:

Parameter	Description	Configuration Method
<b>Backlight Time</b>	Configure the backlight time of the video conferencing phone. <b>Default:</b> Always On	Web User Interface

**To configure the backlight time of the video conferencing phone via web user interface:**

1. Click on **Setting**->**General**.
2. Select the desired value from the pull-down list of **Backlight Time**.



3. Click **Confirm** to accept the change.

## Language

The default language of the LCD screen of the display device and the video conferencing phone is English, and you can change it via the remote control. The video conferencing phone will detect and use the same language as the display device.

The default language of the web user interface is English. You can change the web user interface language for web user interface.

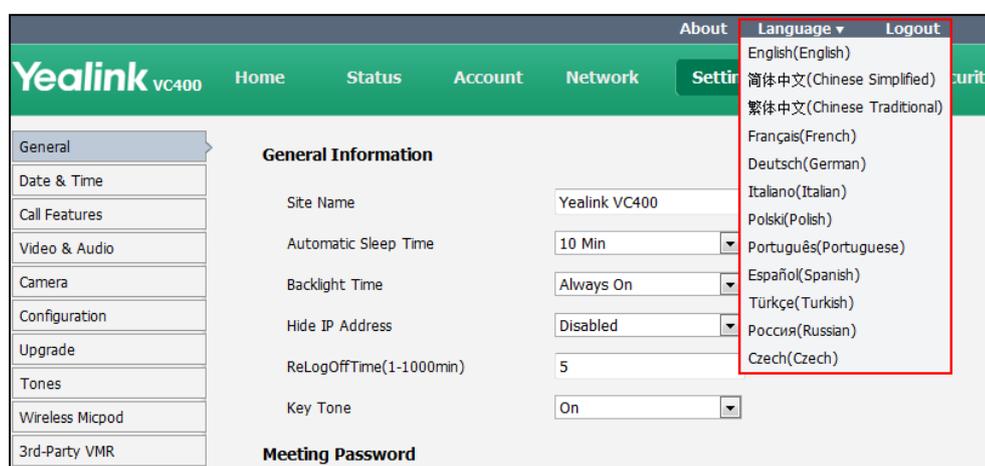
The available languages for system are English, Chinese Simplified, Chinese Traditional, French, German, Italian, Polish, Portuguese, Spanish, Turkish, Russian and Czech.

The language parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Language</b>	Specifies the language for the web user interface	Web User Interface
<b>Language</b>	Specifies the language for the LCD screen of the display device and the video conferencing phone. <b>Default:</b> English	Remote Control

**To specify the language for the web user interface via web user interface:**

1. Click **Language** at the top of the web page.
2. Select the desired language from the pull-down list of **Language**.



**To specify the language for the display device and the video conferencing phone via the remote control:**

1. Select **Menu->Basic**.
2. Select the desired language from the pull-down list of **Language**.
3. Press the **Save** soft key to accept the change.

## Date & Time

Time and date are displayed on the idle screen of the display device and the video conferencing phone. Time and date are synced automatically from the NTP server by default. The default NTP server is cn.pool.ntp.org. The NTP server is configurable manually or obtained by DHCP via DHCP Option 42. The phone will use the NTP server obtained by DHCP preferentially. If the system cannot obtain the time and date from the NTP server, you need to manually configure them. The time and date can use one of several different formats.

## Time Zone

A time zone is a region on Earth that has a uniform standard time. It is convenient for areas in close commercial or other communication to keep the same time. When configuring the system to obtain the time and date from the NTP server, you must set the time zone.

## Daylight Saving Time

Daylight Saving Time (DST) is the practice of temporary advancing clocks during the summertime so that evenings have more daylight and mornings have less. Typically, clocks are adjusted forward one hour at the start of spring and backward in autumn. Many countries have used DST at various times, details vary by location. DST can be adjusted automatically from the time zone configuration. Typically, there is no need to change this setting.

DST parameters are described below:

Parameter	Description	Configuration Method
<b>DHCP Time</b>	Enables or disables the system to update time with the offset time obtained from the DHCP server. <b>Default:</b> Disabled <b>Note:</b> it is only available to GMT 0.	Web User Interface
<b>Time Zone</b>	Configures the time zone. <b>Default:</b> +8 China (Beijing)	Remote Control Web User Interface
<b>Primary Server/NTP Primary Server</b>	Configures the primary NTP server. <b>Default:</b> cn.pool.ntp.org	Remote Control Web User Interface
<b>Secondary Server/NTP Secondary Server</b>	Configures the secondary NTP server. <b>Default:</b> cn.pool.ntp.org	Remote Control Web User Interface
<b>Synchronism (15~86400s)</b>	Configures the interval (in minutes) for the system to synchronize time and date with NTP server. <b>Default:</b> 1000.	Web User Interface
<b>Daylight Saving Time</b>	Configures the Daylight Saving Time (DST) type. The available types for the system are: <ul style="list-style-type: none"><li>• <b>Disabled</b>-not use DST.</li></ul>	Remote Control Web User Interface

Parameter	Description	Configuration Method
	<ul style="list-style-type: none"> <li>• <b>Enabled</b>-use DST. You can manually configure the start time, end time and offset according to your needs.</li> <li>• <b>Automatic</b>-use DST. DST will be configured automatically. You do not need to manually configure the start time, end time and offset.</li> </ul> <p><b>Default:</b> Automatic</p>	
<b>Fixed Type</b>	<p>Configures the DST calculation methods.</p> <ul style="list-style-type: none"> <li>• <b>By Date</b>- specifies the month, day and hour to be the DST start /end date.</li> <li>• <b>By Week</b>- specifies the month, week, day and hour the DST start /end date.</li> </ul> <p><b>Note:</b> It only works if the value of Daylight Saving Time is set to Enabled.</p>	Web User Interface
<b>Start Date</b>	<p>When the DST calculation method is set to <b>By Date</b>. Configures the time to start DST.</p> <p><b>Note:</b> It only works if the value of the Daylight Saving Time is set to Enabled.</p>	Web User Interface
<b>End Date</b>	<p>When the DST calculation method is set to <b>By Date</b>. Configures the time to end DST.</p> <p><b>Note:</b> It only works if the value of the Daylight Saving Time is set to Enabled.</p>	Web User Interface
<b>DST Start Month</b>	When the DST calculation	Web User Interface

Parameter	Description	Configuration Method
<b>DST Start Day of Week</b>	method is set to <b>By Week</b> . Configures the time to start DST. <b>Note:</b> It only works if the value of the Daylight Saving Time is set to Enabled.	
<b>DST Start Day of Week Last in Month</b>		
<b>Start Hour of Day</b>		
<b>DST Stop Month</b>	When the DST calculation method is set to <b>By Week</b> , Configures the time to end DST. <b>Note:</b> It only works if the value of the Daylight Saving Time is set to Enabled.	Web User Interface
<b>DST Stop Day of Week</b>		
<b>DST Stop Day of Week Last in Month</b>		
<b>End Hour of Day</b>		
<b>Offset(minutes)</b>	Configures the DST offset time (in minutes). <b>Valid values:</b> -300 to +300. <b>Note:</b> It only works if the value of the Daylight Saving Time is set to Enabled.	Web User Interface
<b>Time Type</b>	Configures the DST time type. <ul style="list-style-type: none"> <li>• <b>SNTP:</b> obtain the time and date from the NTP server automatically.</li> <li>• <b>Manual Time:</b> configure the time and date manually.</li> </ul> <b>Default:</b> SNTP	Remote Control Web User Interface
<b>Time Format/ Time</b>	Configures the time format. <ul style="list-style-type: none"> <li>• Hour12</li> <li>• Hour24</li> </ul> <b>Default:</b> Hour 24	Remote Control Web User Interface
<b>Date Format/Date</b>	Configures the date format. <ul style="list-style-type: none"> <li>• WWW MMM DD</li> <li>• DD-MMM-YY</li> <li>• YYYY-MM-DD</li> <li>• DD/MM/YYYY</li> </ul>	Remote Control Web User Interface

Parameter	Description	Configuration Method
	<ul style="list-style-type: none"> <li>• MM/DD/YY</li> <li>• DD MMM YYYY</li> <li>• WWW DD MMM</li> </ul> <p><b>Default:</b> YYYY-MM-DD</p>	

**To configure the NTP server, time zone and DST via web user interface:**

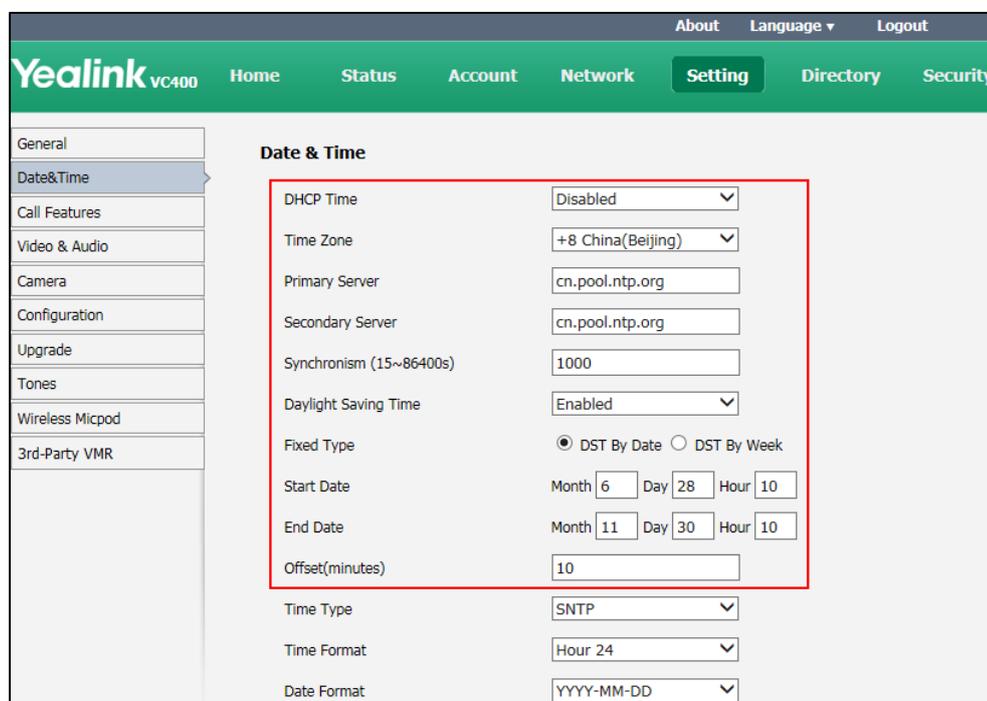
1. Click on **Setting**->**Date & Time**.
2. Select **Disabled** from the pull-down list of **Manual Time**.
3. Select the desired time zone from the pull-down list of **Time Zone**.
4. Enter the domain names or IP addresses in the **Primary Server** and **Secondary Server** fields respectively.
5. Enter the desired time interval in the **Synchronism (15~86400s)** field.
6. Select the desired value from the pull-down list of **Daylight Saving Time**.

If you select **Enabled**, do one of the following:

- Mark the **DST By Date** radio box in the **Fixed Type** field.

Enter the start time in the **Start Date** field.

Enter the end time in the **End Date** field.



- Mark the **DST By Week** radio box in the **Fixed Type** field.

Select the desired values from the pull-down lists of **DST Start Month**, **DST Start Day**

**of Week, DST Start Day of Week Last in Month, DST Stop Month, DST Stop Day of Week of Week** and **DST Stop Day of Week Last in Month**.

Enter the desired time in the **Start Hour of Day** field.

Enter the desired time in the **End Hour of Day** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting' (highlighted), 'Directory', and 'Security'. On the left, a sidebar lists various settings categories: General, Date & Time (selected), Call Features, Video & Audio, Camera, Configuration, Upgrade, Tones, Wireless Micpod, and 3rd-Party VMR. The main content area displays the 'Date & Time' settings. A red box highlights the 'Fixed Type' section, which includes the following fields:

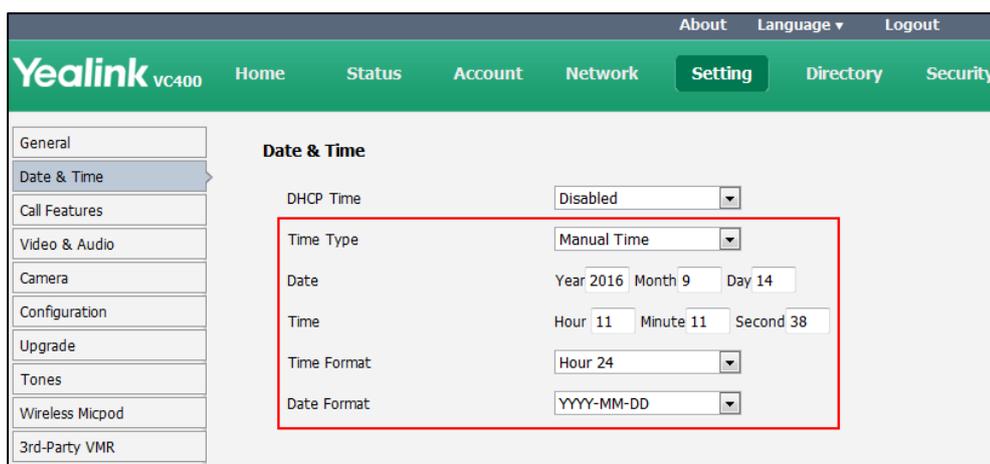
- Fixed Type:  DST By Date  DST By Week
- DST Start Month:
- DST Start Day of Week:
- DST Start Day of Week Last in Month:
- Start Hour of Day:
- DST Stop Month:
- DST Stop Day of Week:
- DST Stop Day of Week Last in Month:
- End Hour of Day:
- Offset(minutes):

7. Enter the desired offset time in the **Offset (minutes)** field.
8. Click **Confirm** to accept the change.

**To configure the time and date manually via web user interface:**

1. Click on **Setting->Date& Time**.
2. Select **Manual Time** from the pull-down list of **Time Type**.
3. Enter the current date in the **Date** field.
4. Enter the current time in the **Time** field.
5. Select the desired value from the pull-down list of **Time Format**.

6. Select the desired value from the pull-down list of **Date Format**.



7. Click **Confirm** to accept the change.

**To configure the time and date format via the remote control:**

1. Select **Menu->Basic->Date & Time**.
2. Configure the desired values.
3. Press the **Save** soft key to accept the change.

The time and date displayed on the LCD screen of the display device and video conferencing phone will change accordingly.

## Automatic Sleep Time

The system will enter the sleep mode automatically when it has been inactive for a period of time (the default time is 10 minutes). When the system is in sleep mode, it can still accept incoming calls. The display device will prompt "No Signal", and the LCD screen of the video conferencing phone prompts "Sleeping Press any key to resume". You can press any key on the remote control or the video conferencing phone to wake the system up. When receiving a call, the system will be woken up automatically.

You can change the automatic sleep time via the remote control or web user interface. You can also press the sleep key on the remote control to make the system sleep immediately.

The automatic sleep time is described below:

Parameter	Description	Configuration Method
<b>Automatic Sleep Time</b>	Configures the inactive time (in minutes) before the system enters sleep mode. <b>Default:</b> 10 Min <b>Note:</b> During setup wizard, the automatic sleep time feature is	Remote Control Web User Interface

Parameter	Description	Configuration Method
	disabled automatically. To protect the display device, you should configure the automatic sleep time immediately.	

**To configure the automatic sleep time via web user interface:**

1. Click on **Setting->General**.
2. Select desired value from the pull-down list of **Automatic Sleep Time**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below it, the main menu has 'Home', 'Status', 'Account', 'Network', 'Setting' (highlighted), 'Directory', and 'Security'. On the left, a sidebar lists various settings categories like 'General', 'Date & Time', 'Call Features', etc. The main content area is titled 'General Information' and contains several configuration fields: 'Site Name' (Yealink VC400), 'Automatic Sleep Time' (10 Min, highlighted with a red box), 'Backlight Time' (Always On), 'Hide IP Address' (Disabled), 'ReLogOffTime(1-1000min)' (5), 'Key Tone' (On), 'Meeting Password' (Off), and 'Password'.

3. Click **Confirm** to accept the change.

**To configure the automatic sleep time via the remote control:**

1. Select **Menu->Basic**.
2. Select desired value from the pull-down list of **Automatic Sleep Time**.
3. Press the **Save** soft key to accept the change.

## Hide IP Address

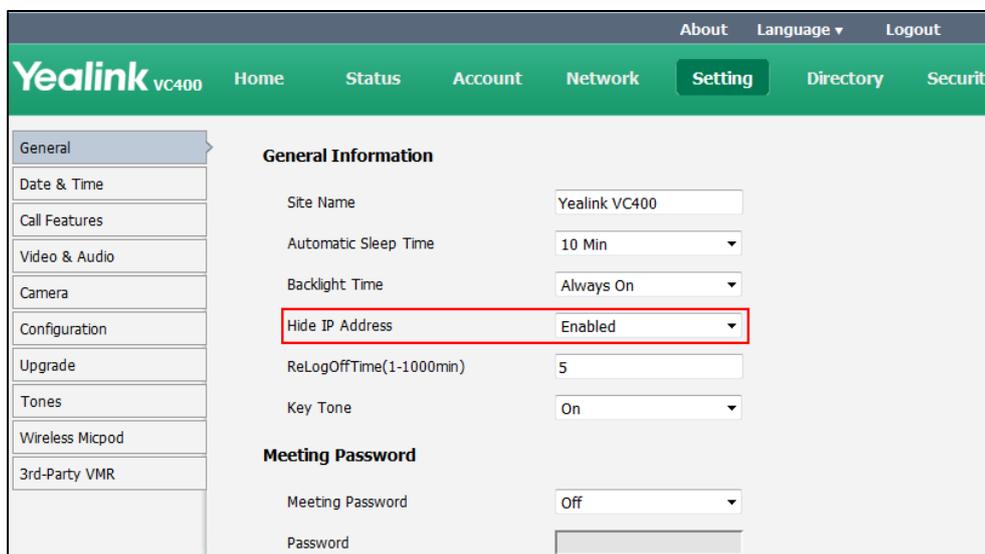
When the system is idle, the display device displays shortcut keys and status bar. The status bar displays time and date, site name, IP address, SIP, H.323 or Cloud account (when SIP, H.323 or Cloud account are registered). You can hide the system IP address.

The hide IP address parameter is described below:

Parameter	Description	Configuration Method
<b>Hide IP Address</b>	Enables or disables the system to hide IP address. <b>Default:</b> Disabled	Web User Interface

**To enable the hide IP address feature via web user interface:**

1. Click on **Setting->General**.
2. Select **Enabled** from the pull-down list of **Hide IP Address**.



3. Click **Confirm** to accept the change.  
The IP address is hidden from the status bar of the display device.

## Relog Offtime

The system will log out of the web user interface automatically after being inactive for a period of time (default: 5 minutes). You need to re-enter the user name and password to login. You can only configure the relog offtime via web user interface.

The relog offtime parameter is described below:

Parameter	Description	Configuration Method
<b>ReLogOffTime (1-1000min)</b>	Configures the inactive time (in minutes) before the system logs out of the web user interface automatically. <b>Default: 5</b>	Web User Interface

**To configure the relog offtime via web user interface:**

1. Click on **Setting->General**.

- Enter the desired time in the **ReLogOffTime (1-1000min)** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting' (highlighted), 'Directory', and 'Security'. On the left, a sidebar lists various settings categories: General, Date & Time, Call Features, Video & Audio, Camera, Configuration, Upgrade, Tones, Wireless Micpod, and 3rd-Party VMR. The main content area is titled 'General Information' and contains several settings:

- Site Name: Yealink VC400
- Automatic Sleep Time: 10 Min
- Backlight Time: Always On
- Hide IP Address: Disabled
- ReLogOffTime(1-1000min): 5** (highlighted with a red box)
- Key Tone: On

Below the 'General Information' section is the 'Meeting Password' section, which includes a 'Meeting Password' dropdown set to 'Off' and a 'Password' input field.

- Click **Confirm** to accept the change.

## Key Tone

You can enable the key tone feature for the system to make a keyboard click sound effect (key tone) when pressing any key on the remote control. If you disable this feature or system ringer volume is adjusted to 0, the system will not play a key tone when you press any key on the remote control.

Key tone is configurable via the remote control or web user interface.

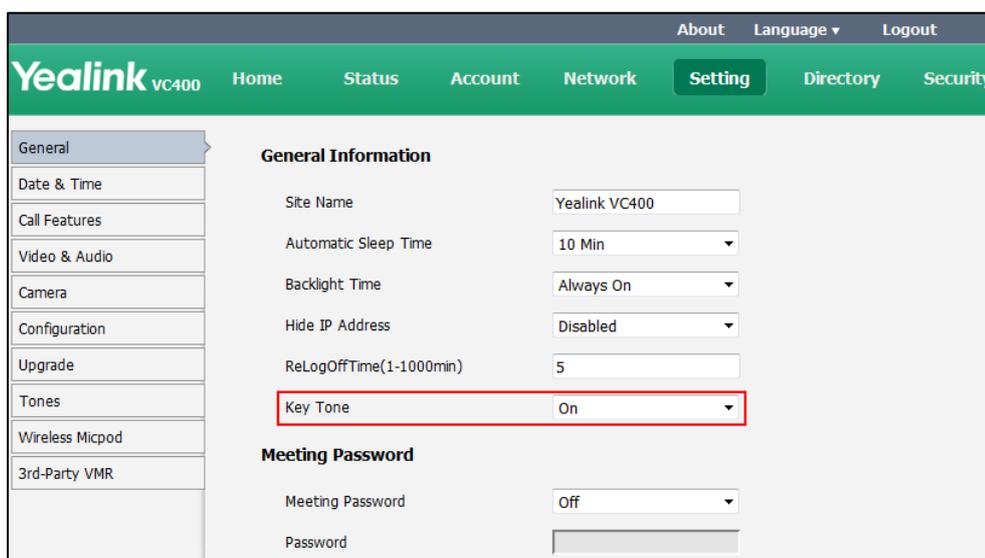
The key tone parameter is described below:

Parameter	Description	Configuration Method
<b>Key Tone</b>	Enables or disables the key tone. <b>Default:</b> On	Remote Control Web User Interface

**To configure the key tone via web user interface:**

- Click on **Setting->General**.

2. Select the desired value from the pull-down list of **Key Tone**.



3. Click **Confirm** to accept the change.

**To configure the key tone via the remote control:**

1. Select **Menu->Basic**.
2. Mark the radio box in the **Key Tone** field.
3. Press the **Save** soft key to accept the change.

## Meeting Password

VC400 supports meeting password feature. If an 8-way conference license is imported to your VC120, your VC120 will support meeting password feature.

Meeting password is used to manage the incoming calls. If you enable this feature, only the people who know the meeting password can dial your system. If your system is idle, meeting password can prevent people from dialing your system. If your system is during a call or conducting a conference call, meeting password can prevent unauthorized people from joining.

Meeting password is configurable via the remote control or web user interface.

**Note**

You can add specified users to the meeting whitelist. Users in the whitelist can dial your system without meeting password. For more information on meeting whitelist, refer to [Meeting Whitelist](#) on page 169.

The meeting password parameters are described below:

Parameter	Description	Configuration Method
<b>Meeting Password</b>	Enable or disable the meeting password feature.	Remote Control Web User Interface

Parameter	Description	Configuration Method
	<b>Default:</b> Off	
<b>Password</b>	Configures the meeting password. <b>Default:</b> blank	Remote Control Web User Interface

**To configure the meeting password via web user interface:**

1. Click on **Setting->General**.
2. Select the desired value from the **Meeting Password** pull-down list.
3. Enter the desired value in the **Password** field.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Setting' page is open, showing a sidebar with 'General' selected. The 'General Information' section includes fields for Site Name (Yealink VC400), Automatic Sleep Time (10 Min), Backlight Time (Always On), Hide IP Address (Enabled), ReLogOffTime(1-1000min) (5), and Key Tone (On). The 'Meeting Password' section is highlighted with a red box, showing 'Meeting Password' set to 'On' and 'Password' set to '123'.

4. Click **Confirm** to accept the change.

**To configure the meeting password via the remote control:**

1. Select **Menu->Basic->Meeting Password**.
2. Check the **Meeting Password** checkbox.
3. Enter the meeting password in the **Password** field.
4. Press the **Save** soft key to accept the change.

People can press **IP##meeting password** or **meeting password@IP** to dial your system or join your conference call. For example: your IP address is 10.3.6.201 and you set 123 as your meeting password. People should press **10.3.6.201##123** or **123@10.3.6.201** to dial your system or join your conference call. If people call you without a meeting password or with a wrong meeting password, the call will fail.

## Meeting Whitelist

VC400 supports meeting whitelist feature. If an 8-way conference license is imported to your VC120, your VC120 will support meeting whitelist feature.

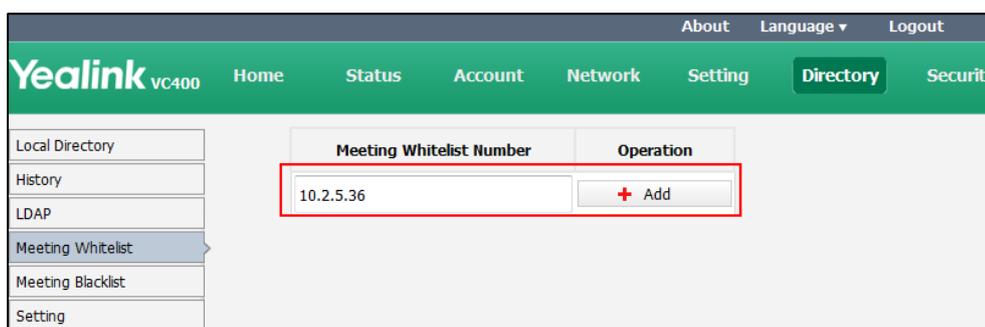
You can add the IP address, account or domain name of the remote system to the meeting whitelist. Users in the whitelist can dial your VC400/VC120 or join your conference call directly without meeting password even if you have enabled the meeting password feature. VC400 /VC120 supports up to 100 whitelist records. Meeting whitelist is configurable via web user interface only.

The meeting whitelist parameter is described below:

Parameter	Description	Configuration Method
<b>Meeting Whitelist Number</b>	Add the IP address, account or domain name of the remote system to the meeting whitelist. <b>Default:</b> blank	Remote Control Web User Interface

**To add the meeting whitelist numbers via web user interface:**

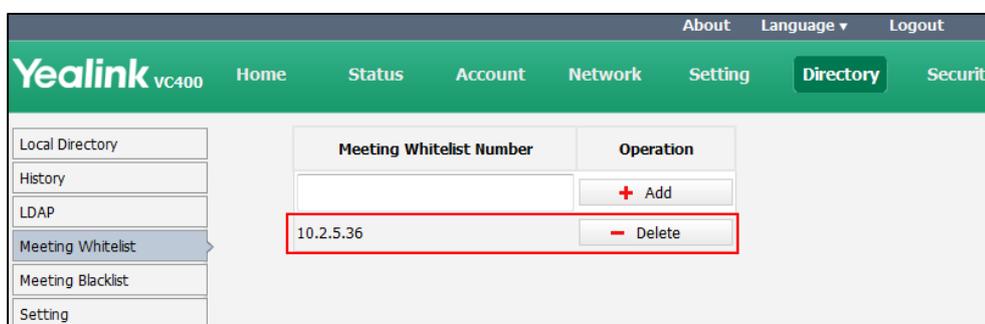
1. Click on **Directory->Meeting Whitelist**.
2. Enter the user's IP, account or domain name in the **Meeting Whitelist Number** field.



3. Click **Add**.
4. Repeat step 2-3 to add more numbers to the whitelist.

**To delete the meeting whitelist numbers via web user interface:**

1. Click on **Directory->Meeting Whitelist**.
2. Click **Delete** beside the numbers that you want to delete.



The web user interface prompts the message "Warning: Are you sure delete the white number?".

3. Click **Confirm**.

## Meeting Blacklist

You can add the IP address, account or domain name of the remote system to the meeting blacklist. VC400 /VC120 will refuse incoming calls from the blacklist automatically. If the user is in both meeting whitelist and meeting blacklist, the blacklist has higher priority. VC400 /VC120 will still refuse incoming calls from this user. VC400 /VC120 will not remind incoming calls and save call history from blacklist.

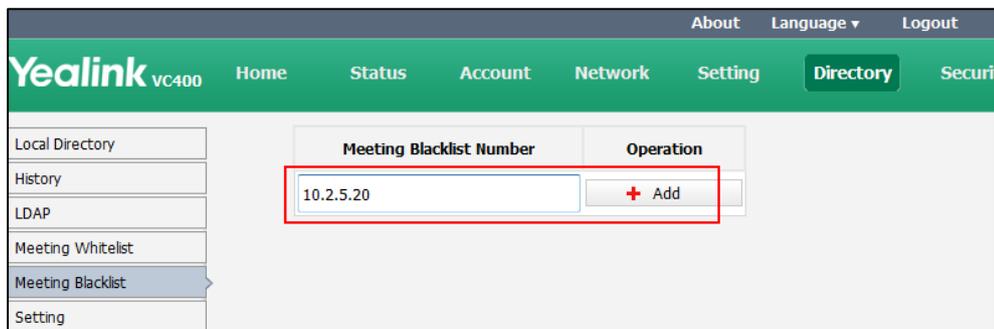
VC400 /VC120 supports up to 100 blacklist records. Blacklist is configurable via web user interface only.

The blacklist parameter is described below:

Parameter	Description	Configuration Method
<b>Meeting Blacklist Number</b>	Add the IP address, account or domain name of the remote system to the meeting blacklist. <b>Default:</b> blank	Web User Interface

**To add the blacklist numbers via web user interface:**

1. Click on **Directory**->**Meeting Blacklist**.
2. Enter the user's IP address, account or domain name in the **Meeting Blacklist Number** field.
3. Click **Add**.

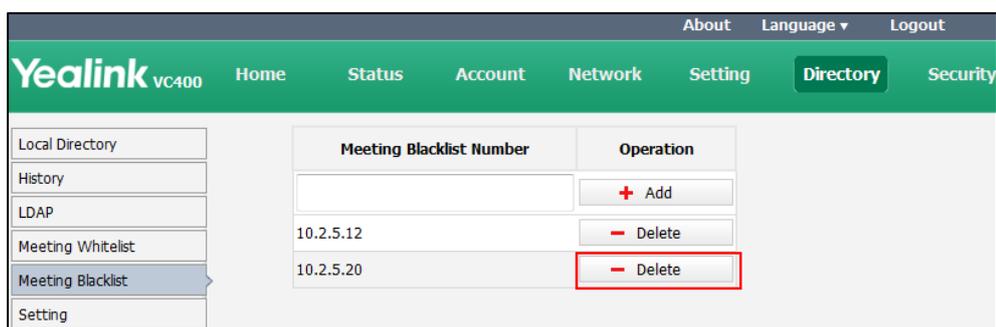


4. Repeat step 2-3 to add more numbers to the meeting blacklist.

**To delete the blacklist numbers via web user interface:**

1. Click on **Directory**->**Meeting Blacklist**.

- Click **Delete** beside the numbers that you want to delete.



The web user interface prompts the message “Warning: Are you sure delete the black number?”.

- Click **Confirm**.

## Hiding Icons in a Call

During a call, the system will display some information and icons (such as call time, mute icon and recording icon) by default, you can know the call status from these information and icons. You can also hide these icons as needed to achieve the best video effects.

Parameters of hiding icons in a call feature on the system are described below:

Parameter	Description	Configuration Method
<b>Time Icon</b>	<p>Enables or disables the system to hide call time during a call.</p> <ul style="list-style-type: none"> <li><b>Disabled</b>- the system does not display call time during a call.</li> <li><b>Hide with UI</b>- the system displays call time during a call, but the call time will hide with UI.</li> <li><b>Enabled</b>- the system displays call time during a call.</li> </ul> <p><b>Default:</b> Hide with UI</p>	Web User Interface
<b>Mute Icon</b>	<p>Enables or disables the system to hide mute icon (  ) during a call.</p> <ul style="list-style-type: none"> <li><b>Disabled</b>- the system does not display mute icon during a call.</li> <li><b>Hide with UI</b>- the system displays mute icon during a</li> </ul>	Web User Interface

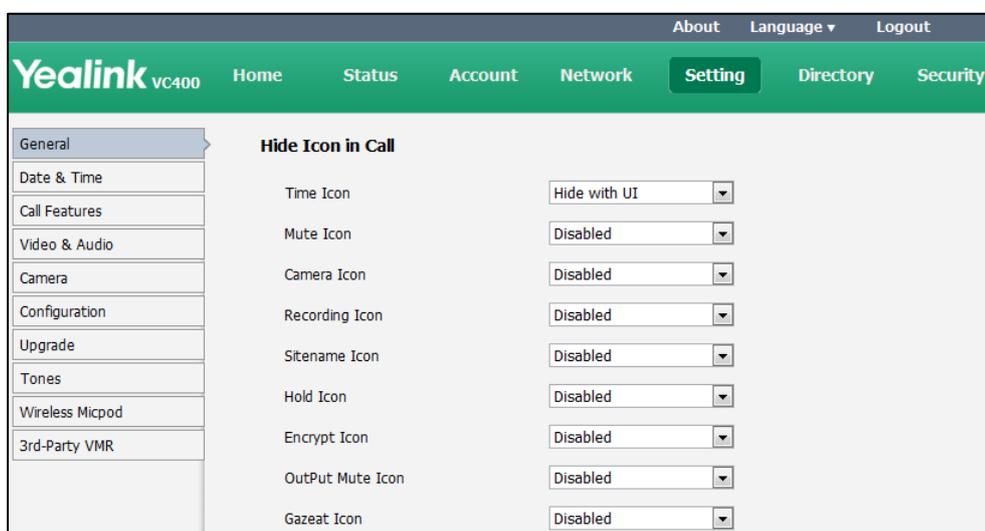
Parameter	Description	Configuration Method
	<p>call, but the mute icon will hide with UI.</p> <ul style="list-style-type: none"> <li>• <b>Enabled</b>- the system displays mute icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	
<b>Camera Icon</b>	<p>Enables or disables the system to hide camera icon (  ) during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display camera icon during a call.</li> <li>• <b>Hide with UI</b>- the system displays camera icon during a call, but the camera icon will hide with UI.</li> <li>• <b>Enabled</b>- the system displays camera icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	Web User Interface
<b>Recording Icon</b>	<p>Enables or disables the system to hide recording icon (  ) during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display recording icon during a call.</li> <li>• <b>Hide with UI</b>- the system displays recording icon during a call, but the recording icon will hide with UI.</li> <li>• <b>Enabled</b>- the system displays recording icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	Web User Interface
<b>Sitename Icon</b>	<p>Enables or disables the system to hide site name icon during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display site name icon during a call.</li> <li>• <b>Hide with UI</b>- the system</li> </ul>	Web User Interface

Parameter	Description	Configuration Method
	<p>displays site name icon during a call, but the site name icon will hide with UI.</p> <ul style="list-style-type: none"> <li>• <b>Enabled</b>- the system displays site name icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	
<b>Hold Icon</b>	<p>Enables or disables the system to hide hold icon (  ) during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display hold icon during a call.</li> <li>• <b>Hide with UI</b>- the system displays hold icon during a call, but the hold icon will hide with UI.</li> <li>• <b>Enabled</b>- the system displays hold icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	Web User Interface
<b>Encrypt Icon</b>	<p>Enables or disables the system to hide encrypt icon (  ) during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display encrypt icon during a call.</li> <li>• <b>Hide with UI</b>- the system displays encrypt icon during a call, but the encrypt icon will hide with UI.</li> <li>• <b>Enabled</b>- the system displays encrypt icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	Web User Interface
<b>OutPut Mute Icon</b>	<p>Enables or disables the system to hide output mute icon (output volume is set to 0:  ) during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display output mute icon during a call.</li> </ul>	Web User Interface

Parameter	Description	Configuration Method
	<ul style="list-style-type: none"> <li>• <b>Hide with UI</b>- the system displays output mute icon during a call, but the output mute icon will hide with UI.</li> <li>• <b>Enabled</b>- the system displays output mute icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	
<b>Gazeat Icon</b>	<p>Enables or disables the system to hide gazeat icon (  ) during a call.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>- the system does not display gazeat icon during a call.</li> <li>• <b>Hide with UI</b>- the system displays gazeat icon during a call, but the gazeat icon will hide with UI.</li> <li>• <b>Enabled</b>- the system displays gazeat icon during a call.</li> </ul> <p><b>Default:</b> Disabled</p>	Web User Interface

**To enable the hiding icons in a call feature via web user interface:**

1. Click on **Setting->General**.
2. Select the desired values from the pull-down lists of **Time Icon**, **Mute Icon**, **Camera Icon**, **Recording Icon**, **Sitename Icon**, **Hold Icon**, **Encrypt Icon**, **OutPut Mute Icon**, and **Gazeat Icon**.



3. Click **Confirm** to accept the change.

## Keyboard Input Method

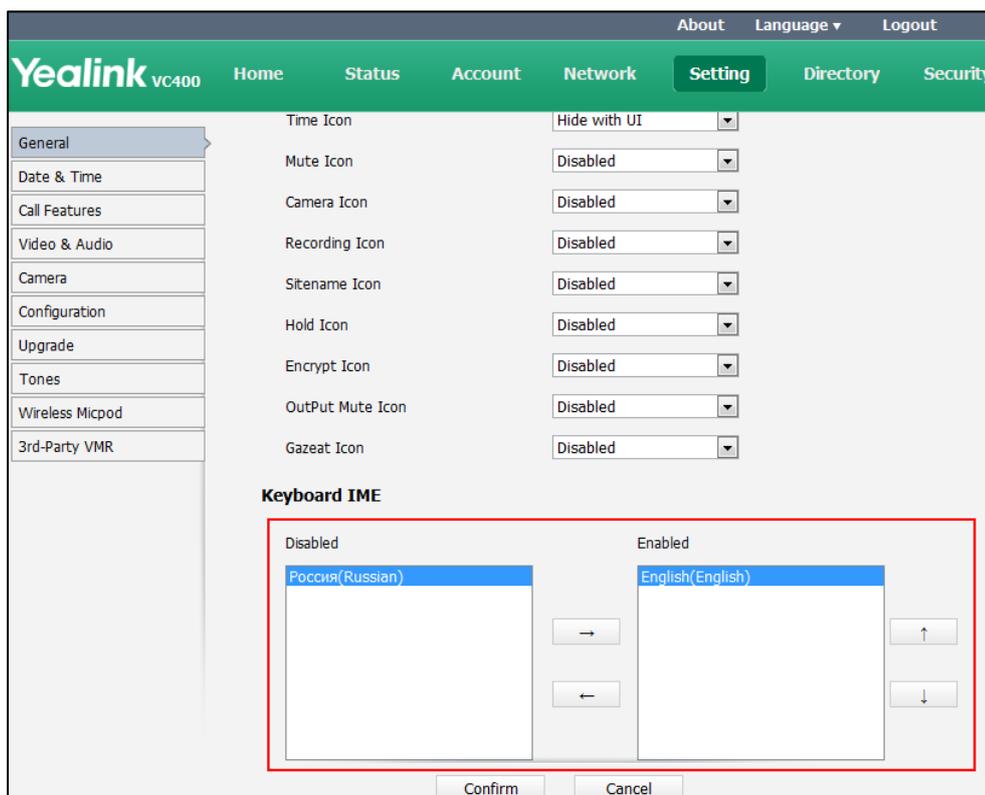
The on-screen keyboard supports English and Russian input methods.

You can enter characters using the input method only when the input method is enabled.

Changing keyboard input method is configurable via web user interface only.

### To configure keyboard input method via web user interface:

1. Click on **Setting ->General**.
2. In the **Keyboard IME** block, select the desired list from the **Disabled** column and click  .  
The selected input method appears in the **Enabled** column.
3. Repeat step 2 to add more input methods to the **Enabled** column.
4. (Optional.) To remove a list from the **Enabled** column, select the desired list and then click  .
5. To adjust the display order of the enabled input methods, select the desired list, and click  or  .



6. Click **Confirm** to accept the change.

### To change keyboard input method via the remote control:

1. Press  (**Keyboard** soft key) or  (**Keyboard** soft key).

The display device appears the on-screen keyboard.

2. Press  (**abc** soft key) to change the input method.

## Audio Setting

### Audio Output Device

The system supports the following audio output devices:

- **Auto**
- **VCS Phone**
- **HDMI**
- **Line Output**

By default, the system automatically selects the audio output devices with highest priority. The priority is: VCS Phone>HDMI>Line Output. If the audio output device with highest priority is removed from the codec, the system will select the next highest priority device.

You can also specify the desired audio output device via the remote control or the web user interface.

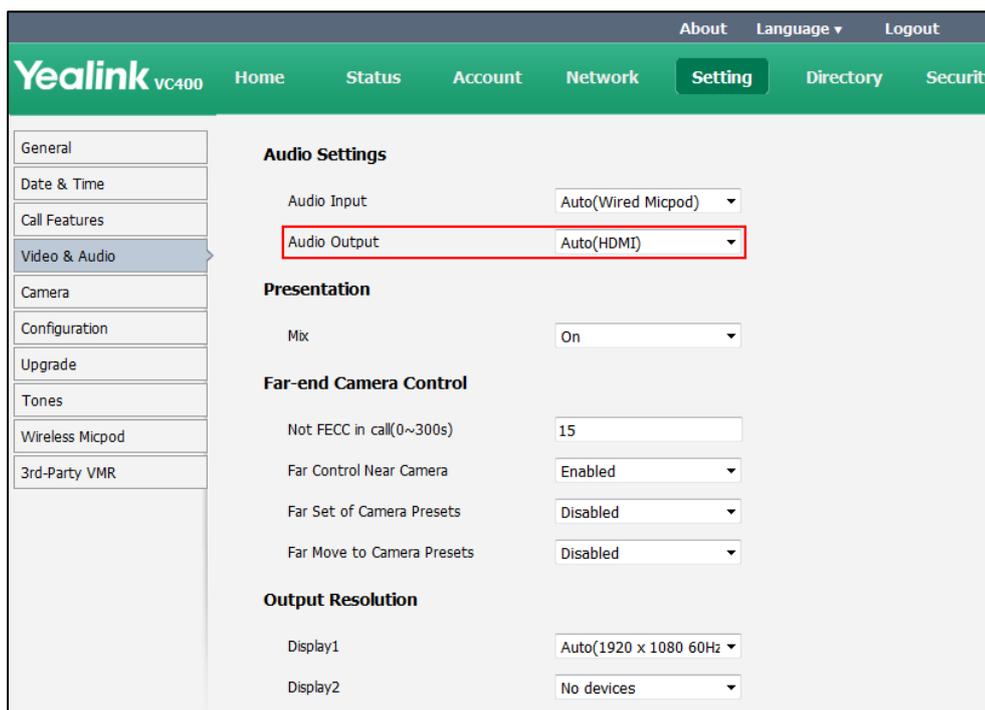
The audio output device parameter is described below:

Parameter	Description	Configuration Method
<b>Audio Output</b>	<p>Specifies the audio output device for the system.</p> <p><b>Valid values:</b></p> <ul style="list-style-type: none"> <li>• <b>Auto</b> - selects the audio output device with highest priority.</li> <li>• <b>VCS Phone</b> - selects the video conferencing phone.</li> <li>• <b>HDMI</b> - selects the built-in speakerphone of the display device.</li> <li>• <b>Line Output</b> - selects the speakerphone connected to the Line Out port on the VC400/VC120 codec.</li> </ul> <p><b>Default:</b> Auto</p> <p>If <b>VCS Phone</b> is selected as the audio output device manually or</p>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	automatically, the audio input device must be <b>VCS Phone</b> or <b>Line In+VCS Phone</b> .	

To configure the audio output device feature via web user interface:

1. Click on **Setting->Video & Audio**.
2. Select the desired value from the pull-down list of **Audio Output**.



3. Click **Confirm** to accept the change.

To configure the automatic sleep time via the remote control:

1. Select **Menu->Video & Audio->Audio Settings**.
2. Select the desired value from the pull-down list of **Audio Output**.
3. Press the **Save** soft key to accept the change.

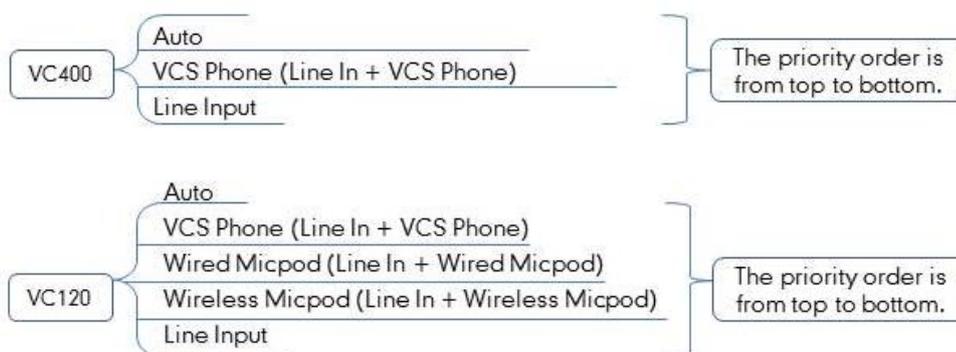
## Audio Input Device

The system supports the following audio input devices:

- **Auto** (select the audio input device with highest priority)
- **VCS Phone** (video conferencing phone)
- **Wired Micpod** (VCM30)
- **Line Input** (microphone connected to the Line In port on the VC400/VC120 codec)

- **Line In + VCS Phone**
- **Line In + Wired Micpod**
- **Line In + Wireless Micpod**

The priority of audio input device is:



**Note**

For more information on the wireless micpod, please contact Yealink agents.

By default, the VC400/VC120 automatically selects the audio input devices with the highest priority. If you select "Line In + device" option, the VC400/VC120 will use microphone connected to the Line In port and the device to pick up audio at the same time.

You can also specify the desired audio input device via the remote control or the web user interface.

The audio output device parameter is described below:

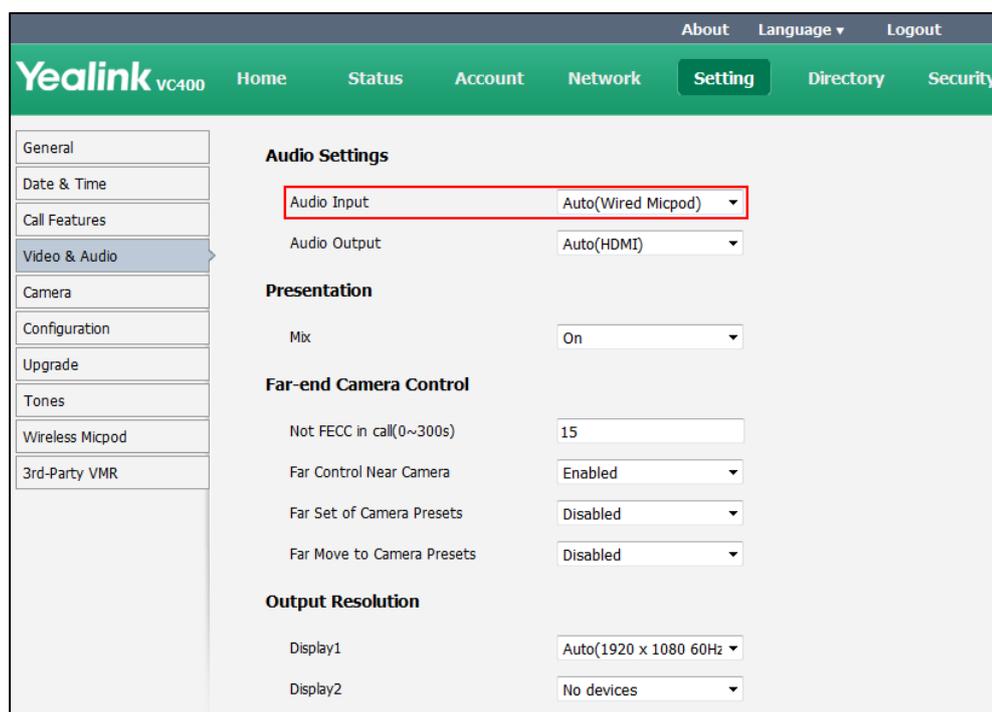
Parameter	Description	Configuration Method
<b>Audio Input</b>	<p>Specifies the audio input device for the VC400/VC120.</p> <p><b>Valid values:</b></p> <ul style="list-style-type: none"> <li>• <b>Auto</b>- selects the audio input device with highest priority.</li> <li>• <b>VCS Phone</b>- selects the video conferencing phone.</li> <li>• <b>Wired Micpod</b>- selects the VCM30 video conferencing microphone array</li> <li>• <b>Line Input</b>- selects the microphone connected to the Line In port on the VC400/VC120 codec.</li> <li>• <b>Line In +VCS Phone</b>- selects microphone connected to the</li> </ul>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	<p>Line In port on the codec and video conferencing phone.</p> <ul style="list-style-type: none"> <li> <b>Line In + Wired Micpod</b> - selects microphone connected to the Line In port on the codec and VCM30 video conferencing microphone array.                     </li> </ul> <p><b>Default:</b> Auto.</p> <ul style="list-style-type: none"> <li>                         If <b>Line Input</b> is selected as the audio input device, the near-end audio output device will not play sound from the Line Input device.                     </li> <li>                         If "Line In + device" is selected as the audio input device, the near-end audio output device will play sound from the Line Input device.                     </li> </ul> <p>During a video training for main office and branch office, both offices need to hear the video sound, you can select this option.</p>	

**To configure the audio input device via web user interface:**

1. Click on **Setting->Video & Audio**.

- Select the desired value from the pull-down list of **Audio Input**.



- Click **Confirm** to accept the change.

#### To configure the audio input device via the remote control:

- Select **Menu->Video & Audio->Audio Settings**.
- Select the desired value from the pull-down list of **Audio Input**.
- Press the **Save** soft key to accept the change.

## Adjusting MTU of Video Packets

Video packets that exceed the maximum transmission unit (MTU) size for any router or segment along the network path may be fragmented or dropped. This results in poor quality video at the receiving device. You can set the maximum MTU size of the video packets sent by the system. The default value is 1500 bytes. Specify the MTU size used in calls based on the network bandwidth settings. If the video becomes blocky or network errors occur, packets may be too large; decrease the MTU. If the network is burdened with unnecessary overhead; packets may be too small, increase the MTU.

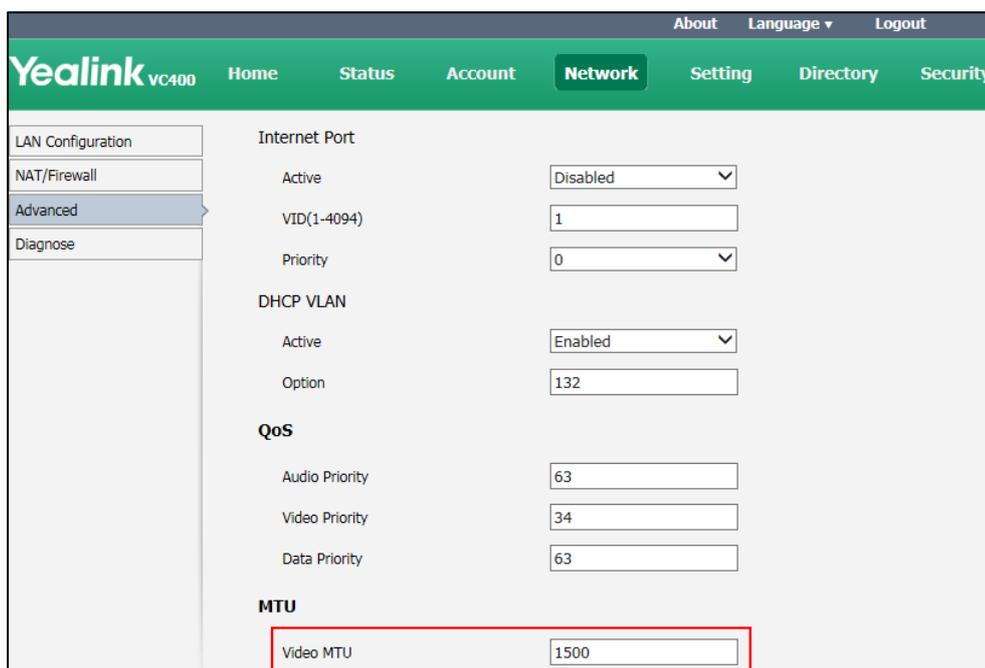
The MTU parameter on the system is described below.

Parameter	Description	Configuration Method
<b>Video MTU</b>	Specifies the maximum MTU size (in bytes) of video packets sent by the system. <b>Valid Values:</b> Integer from 1000 to	Remote Control Web User Interface

Parameter	Description	Configuration Method
	1500 <b>Default:</b> 1500 <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	

**To configure MTU via web user interface:**

1. Click on **Network->Advanced**.
2. In the **MTU** block, enter the desired value in the **Video MTU** field.



3. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
4. Click **Confirm** to reboot the system immediately.

**To configure MTU via the remote control:**

1. Select **Menu->Advanced** (default password: 0000) ->**Advanced Network**.
2. Enter the desired value in the **Video MTU(1000-1500)** field.
3. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
4. Select **OK** to reboot the system immediately.

## Dual-Stream Protocol

To enhance the process of communicating with others over video, the dual-stream protocol provides the ability to share content from a computer, such as video clips or documentation. Both the video and the documentation can be transmitted to the far site simultaneously, thus meeting the requirements of different conference scenarios, such as training or medical consultation.

The Yealink video conferencing system supports the standard H.239 protocol and BFCP (Binary Floor Control Protocol). H.239 protocol is used when sharing content with the far site in H.323 calls. BFCP protocol is used when sharing content with the far site in SIP calls. Before enabling the desired protocol, ensure that the protocol is supported and enabled by the far site you wish to call. If the far site does not support the protocol for sharing content, MCU will automatically mix the content and camera video, and send them in one channel. For more information on mix sending, refer to [Mix Sending](#) on page 187.

Dual-stream protocol parameters on the system are described below.

Parameter	Description	Configuration Method
<b>H.239</b>	Enables or disables the H.239 protocol for sharing content. You can configure it for the StarLeaf Cloud platform or H.323 call separately. <b>Default:</b> Enabled	Web User Interface
<b>BFCP</b>	Enables or disables the BFCP protocol for sharing content. You can configure it for Zoom/Pexip/BlueJeans/Mind/Custom platform, SIP account or SIP IP call separately. <b>Default:</b> For Zoom/Pexip/BlueJeans/Mind/Custom platform and SIP IP call, the default value is Enabled. For SIP account, the default value is Disabled. <b>Note:</b> You cannot configure it for the Yealink/StarLeaf Cloud platform.	Web User Interface

**To configure H.239 dual-stream protocol for StarLeaf Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **StarLeaf** from the pull-down list of **Platform Type**.

3. Select the desired value from the pull-down list of **H.239**.

The screenshot shows the 'Account' settings page in the Yealink VC400 web interface. The 'Cloud' section is active, and the 'H.239' dropdown menu is highlighted with a red box. The 'H.239' dropdown is currently set to 'Enabled'.

Setting	Value
Register Status	Registered
Cloud Account	Enabled
Platform Type	StarLeaf
QCP Code	367037241953
<b>Advanced Setting</b>	
H.323 Tunneling	Disabled
H.235 Encryption	Disabled
Protocol Monitor Port	1720
DTMF Type	Auto
Local Early Media	Disabled
<b>H.239</b>	Enabled
FECC(H.323)	Enabled

4. Click **Confirm** to accept the change.

**To configure H.239 dual-stream protocol for H.323 call via web user interface:**

1. Click on **Account**->**H.323**.
2. Select the desired value from the pull-down list of **H.239**.

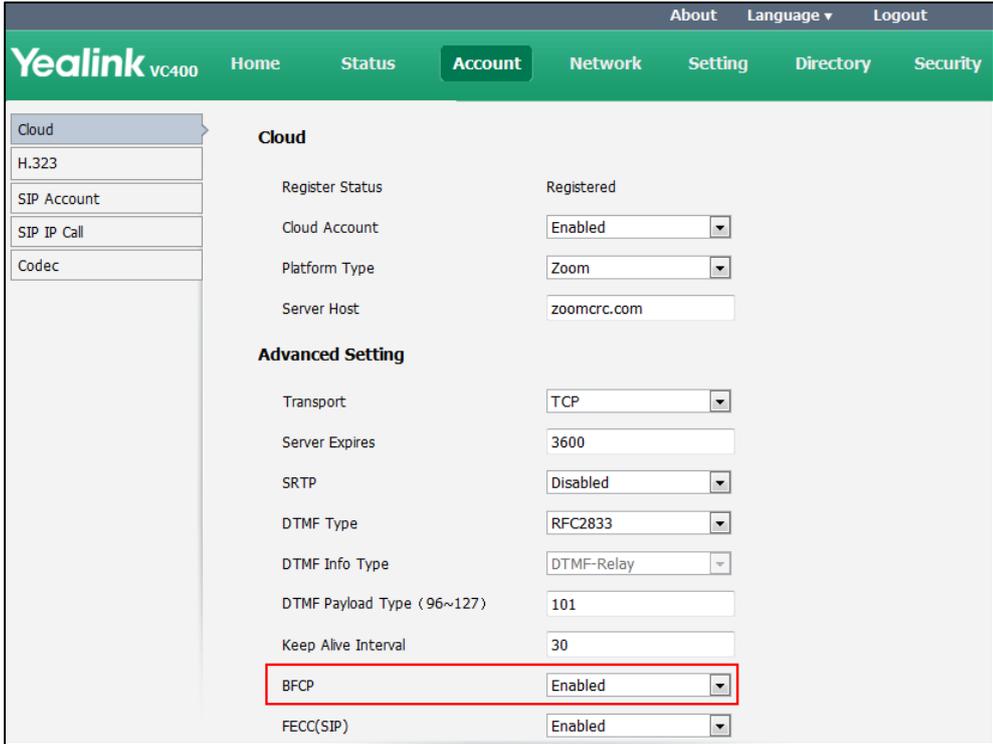
The screenshot shows the 'H.323' settings page in the Yealink VC400 web interface. The 'H.239' dropdown menu is highlighted with a red box. The 'H.239' dropdown is currently set to 'Enabled'.

H.323 Account	Enabled	
H.323 Name	9000	
H.323 Extension	9000	
Gatekeeper Mode	Manual	
Gatekeeper IP Address 1	10.2.1.43	Port 1719
Gatekeeper IP Address 2		Port 1719
Gatekeeper Authentication	Disabled	
Gatekeeper Username		
Gatekeeper Password	••••••••	
H.460 Active	Disabled	
H.323 Tunneling	Disabled	
H235 Encryption	Disabled	
Protocol Monitor Port	1720	
DTMF Type	Auto	
<b>H.239</b>	Enabled	
FECC(H.323)	Enabled	

3. Click **Confirm** to accept the change.

**To configure BFCP dual-stream protocol for Zoom/Pexip/BlueJeans/Mind/Custom platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Zoom/Pexip/BlueJeans/Mind/Custom** from the pull-down list of **Platform Type**.
3. Select the desired value from the pull-down list of **BFCP**.



The screenshot displays the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' menu is expanded, showing 'Cloud', 'H.323', 'SIP Account', 'SIP IP Call', and 'Codec'. The 'Cloud' configuration page is active, showing the following settings:

Setting	Value
Register Status	Registered
Cloud Account	Enabled
Platform Type	Zoom
Server Host	zoomcrc.com
<b>Advanced Setting</b>	
Transport	TCP
Server Expires	3600
S RTP	Disabled
DTMF Type	RFC2833
DTMF Info Type	DTMF-Relay
DTMF Payload Type (96~127)	101
Keep Alive Interval	30
<b>BFCP</b>	<b>Enabled</b>
FECC(SIP)	Enabled

4. Click **Confirm** to accept the change.

**To configure BFCP dual-stream protocol for SIP call via web user interface:**

1. Click on **Account->SIP Account**.

2. Select the desired value from the pull-down list of **BFCP**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below it, the main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' tab is active. On the left, a sidebar menu lists 'Cloud', 'H323', 'SIP Account', 'SIP IP Call', and 'Codec'. The main content area displays various configuration fields for the SIP account. The 'BFCP' field is highlighted with a red rectangular box and is currently set to 'Enabled'.

Register Name	9000	
Password	••••••••	
Server Host	10.2.1.48	Port: 5060
Enable Outbound Proxy Server	Disabled	
Outbound Proxy Server		Port: 5060
Transport	UDP	
Server Expires	3600	
SRTP	Disabled	
DTMF Type	RFC2833	
DTMF Info Type	DTMF-Relay	
DTMF Payload Type (96~127)	101	
NAT Traversal	Disabled	
Keep Alive Interval	30	
RPort	Enabled	
<b>BFCP</b>	<b>Enabled</b>	
FECC(SIP)	Disabled	

3. Click **Confirm** to accept the change.

**To configure BFCP dual-stream protocol for SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select the desired value from the pull-down list of **BFCP**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. Below it, the main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' tab is active. On the left, a sidebar menu lists 'Cloud', 'H323', 'SIP Account', 'SIP IP Call', and 'Codec'. The 'SIP IP Call' tab is selected. The main content area displays various configuration fields for the SIP IP call. The 'BFCP' field is highlighted with a red rectangular box and is currently set to 'Enabled'.

SIP IP Call	Enabled
Transport	TCP
SRTP	Disabled
DTMF Type	SIP INFO
DTMF Info Type	DTMF
DTMF Payload Type (96~127)	101
NAT Traversal	Disabled
RPort	Enabled
<b>BFCP</b>	<b>Enabled</b>
FECC(SIP)	Enabled

3. Click **Confirm** to accept the change.

## Mix Sending

Content sharing allows users to share content with other conference participants during a call. When a PC is connected to the PC port on the VC400/VC120 codec, the display device can display both the camera video and the shared content. The content sharing feature is very useful in the conference scenario in which content sharing is needed (e.g., a slide or a flash).

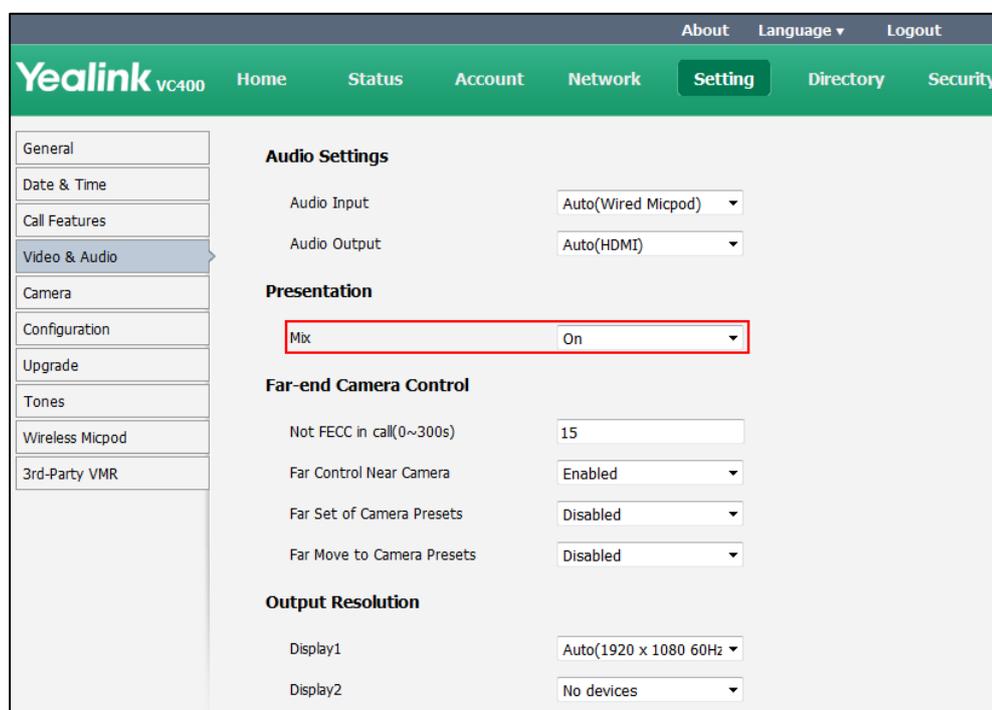
During a conference call, the far site may not support receiving shared content. In this case, you can enable mix sending feature on the system. Mix sending feature allows the sender to compound multiple video streams (local image+shared content) to one video stream, and then send it to the far site.

The mix sending parameter on the system is described below.

Parameter	Description	Configuration Method
<b>Mix</b>	Enables or disables the mix sending feature on the system. <b>Default:</b> Enabled	Web User Interface

**To configure mix sending via web user interface:**

1. Click on **Setting->Video & Audio**.
2. In the **Presentation** block, select the desired value from the pull-down list of **Mix**.



3. Click **Confirm** to accept the change.

## Configuring Camera Settings

To display high quality video image, you can configure camera settings as required, such as white balance, exposure and sharpness.

Camera settings parameters are described below.

Parameter	Description	Configuration Method
<b>Exposure Compensation</b>	<p>Configures the value of camera exposure compensation.</p> <ul style="list-style-type: none"> <li>• Off</li> <li>• 1</li> <li>• 2</li> <li>• 3</li> </ul> <p>Exposure compensation is used to compensate the camera effectively when the camera is shooting in a backlight environment. If the environment light is dark, you can increase the compensation value.</p> <p><b>Default:</b> Off</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Flicker</b>	<p>Disables or configures the value of camera flicker frequency.</p> <ul style="list-style-type: none"> <li>• 50Hz</li> <li>• 60Hz</li> </ul> <p><b>Default:</b> 50Hz</p> <p><b>Note:</b> Indoor lights powered by a 50Hz or 60Hz power source can produce a flicker. You can adjust the camera flicker frequency according to the power source the light is powered by.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>White Balance Mode</b>	<p>Configures the white balance mode of the VCC18 camera.</p> <ul style="list-style-type: none"> <li>• <b>Auto</b>—Yealink recommends this setting for most situations. It calculates the best white balance setting based on lighting conditions in the room.</li> </ul>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	<ul style="list-style-type: none"> <li>• <b>One push</b>—Use the predefined color temperature settings to provide acceptable color reproduction.</li> <li>• <b>ATW</b>—Automatically adjust the white balance based on the video image shoot by the camera.</li> <li>• <b>Manual</b>—Manually set red and blue gain.</li> </ul> <p><b>Default:</b> Auto</p> <hr/> <p>Configures the white balance mode of the VCC20 camera.</p> <ul style="list-style-type: none"> <li>• <b>Auto</b>—Yealink recommends this setting for most situations. It calculates the best white balance setting based on lighting conditions in the room.</li> <li>• <b>One push</b>—Use the predefined color temperature settings to provide acceptable color reproduction.</li> <li>• <b>ATW</b>—Automatically adjust the white balance based on the video image shoot by the camera.</li> <li>• <b>Tungsten Bulb</b> (2700K)</li> <li>• <b>Fluorescent</b> (4000K)</li> <li>• <b>Cool Daylight</b> (6500K)</li> <li>• <b>Manual</b>—Manually set red and blue gain.</li> </ul> <p><b>Default:</b> ATW</p>	
<b>Red Gain</b>	<p>Configures the red gain of the camera.</p> <p><b>Valid Values:</b> 0-100</p> <p><b>Default:</b> 83</p> <p><b>Note:</b> You can set this parameter</p>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
	only when the white balance mode is configured to Manual.	
<b>Blue Gain</b>	<p>Configures the blue gain of the camera.</p> <p><b>Valid Values:</b> 0-100</p> <p><b>Default:</b> 62</p> <p><b>Note:</b> You can set this parameter only when the white balance mode is configured to Manual.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Saturation</b>	<p>Configures the saturation of the camera.</p> <p><b>Valid Values:</b> 0-14</p> <p><b>Default:</b></p> <p>For VCC18 camera, the default value is 3.</p> <p>For VCC20 camera, the default value is 10.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Sharpness</b>	<p>Configures the sharpness of the camera.</p> <p><b>Valid Values:</b> 0-14</p> <p><b>Default:</b></p> <p>For VCC18 camera, the default value is 1.</p> <p>For VCC20 camera, the default value is 8.</p> <p><b>Note:</b> The picture will be sharp and clear, but moderate to heavy motion at low call rates can cause some frames to be dropped.</p>	<p>Remote Control</p> <p>Web User Interface</p>
<b>Brightness</b>	<p>Configures the brightness of the camera.</p> <p><b>Valid Values:</b> 0-100</p> <p><b>Default:</b></p> <p>For VCC18 camera, the default value is 8.</p> <p>For VCC20 camera, the default value is 1.</p>	<p>Remote Control</p> <p>Web User Interface</p>

Parameter	Description	Configuration Method
<b>Contrast</b>	Configures the contrast of the camera. <b>Valid Values:</b> 0-100 <b>Default:</b> For VCC18 camera, the default value is 45. For VCC20 camera, the default value is 7.	Remote Control Web User Interface
<b>Noise Reduction (2D)</b>	Specifies the noise reduction (2D) mode. <ul style="list-style-type: none"> <li>• Off</li> <li>• Low</li> <li>• Middle</li> <li>• High</li> </ul> <b>Default:</b> Middle	Remote Control Web User Interface
<b>Noise Reduction (3D)</b>	Specifies the noise reduction (3D) mode of VCC18 camera. <ul style="list-style-type: none"> <li>• Off</li> <li>• Low</li> <li>• Middle</li> <li>• High</li> </ul> <b>Default:</b> Off <b>Note:</b> It is not applicable to VCC20 camera.	Remote Control Web User Interface
<b>Hangup Mode</b>	Enables or disables the camera to flip the image view when camera is handed at up-side-down position <b>Default:</b> Off	Remote Control Web User Interface
<b>Camera Pan Direction</b>	Configures the pan direction of the camera. <ul style="list-style-type: none"> <li>• Normal</li> <li>• Reversed</li> </ul> <b>Default:</b> Normal If the camera reversed mode is enabled, the camera pan direction	Remote Control Web User Interface

Parameter	Description	Configuration Method
	will be reversed when pressing the left and right navigation keys on the remote control. In this case, you can set the camera pan direction to Reversed.	
<b>Camera Map</b>	Enables or disables the preview of camera presets. <b>Default:</b> On <b>Note:</b> If it is set to on, you can view the pre-saved camera presets.	Remote Control Web User Interface
<b>Clear Preset</b>	Clears all camera presets.	Remote Control Web User Interface
<b>Reset Camera</b>	Resets the camera settings to factory defaults. <b>Note:</b> The camera presets will also be cleared.	Remote Control Web User Interface

**To configure camera settings via web user interface:**

1. Click on **Setting->Camera**.

2. Configure the camera settings.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Setting' menu is expanded to show 'Camera'. The 'Camera' settings page includes a sidebar with options like General, Date & Time, Call Features, Video & Audio, Camera, Configuration, Upgrade, Tones, Wireless Micpod, and 3rd-Party VMR. The main content area is titled 'Camera' and contains sections for White Balance, Sharpness, Brightness, Contrast, Noise Reduction(2D), and Other Settings. Each section has various adjustable parameters such as White Balance Mode, Red Gain, Blue Gain, Saturation, Sharpness, Brightness, Contrast, and Noise Reduction, along with buttons for Clear Preset and Reset Camera.

3. Click **Confirm** to accept the change.

#### To configure camera settings via the remote control:

1. Select **Menu->Video & Audio->Camera General Settings**.
2. Configure the camera settings.
3. Press the **Save** soft key to accept the change.

## Far-end Camera Control

Local video is displayed on the display device of the far site during a call. For the best view, you can enable the Far Control Near Camera feature to allow the far site to control the focus and angle of the local camera. You can also specify whether the far site is allowed to store and use the local camera presets.

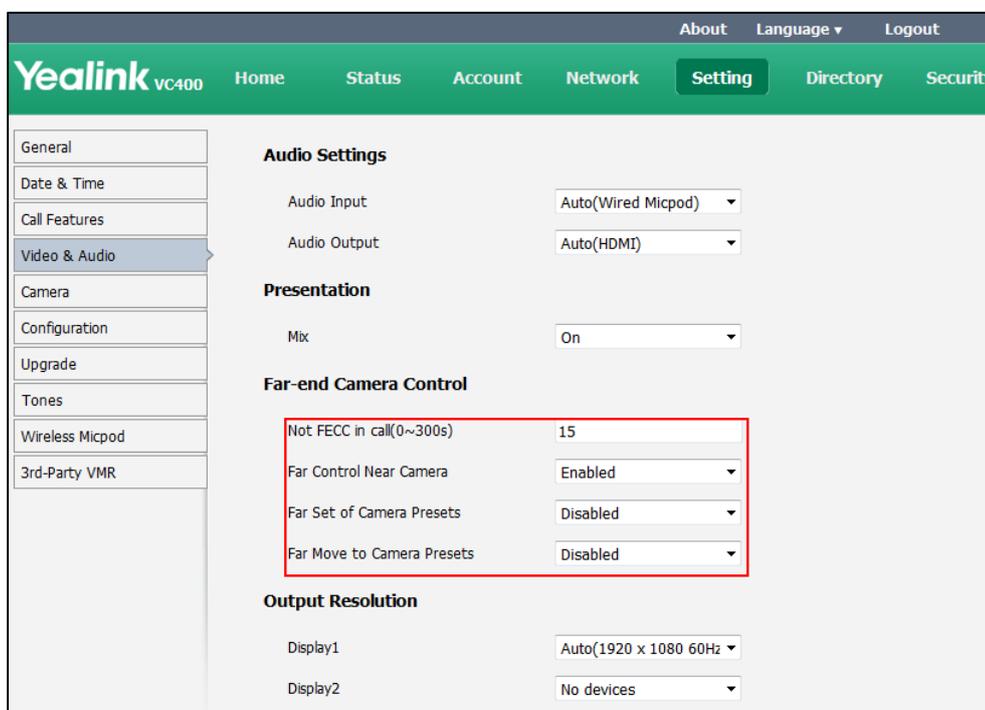
Far-end camera control parameters are described below.

Parameter	Description	Configuration Method
<b>Not FECC in call(0~300s)</b>	Configures the duration time (in seconds) when far site cannot control the local camera during a call. <b>Default: 15</b>	Web User Interface

Parameter	Description	Configuration Method
	If it is set to 15, the far site is not allowed to control the local camera in the first 15 seconds of the call.	
<b>Far Control Near Camera</b>	Enables or disables the far site to control the near site camera. <b>Default:</b> Enabled	Remote Control Web User Interface
<b>Far Set of Camera Presets</b>	Enables or disables the far site to store the camera presets. <b>Default:</b> Disabled	Remote Control Web User Interface
<b>Far Move to Camera Presets</b>	Enables or disables the far site to use the camera presets. <b>Default:</b> Disabled	Remote Control Web User Interface

**To configure far-end camera control via web user interface:**

1. Click on **Setting->Video & Audio**.
2. Enter the desired time in the **Not FECC in call(0~300s)** field.
3. Select the desired values from the pull-down lists of **Far Control Near Camera**.
4. Select the desired values from the pull-down lists of **Far Set of Camera Presets**.
5. Select the desired values from the pull-down lists of **Far Move to Camera Presets**.



6. Click **Confirm** to accept the change.

**To configure far-end camera control feature via the remote control:**

1. Select **Menu->Video & Audio->Far-end Camera Control**.
2. Make the desired changes.
3. Press the **Save** soft key to accept the change.

## Camera Control Protocol

VC400/VC120 video conferencing systems support camera control protocols: FECC (Far End Camera Control). You can enable the FECC protocol for SIP call or H.323 call.

If far site wants to control the local camera, both the far site and near site should enable the camera control protocol simultaneously. If the FECC protocol is not enabled on either site, far-end camera control cannot be performed. For example, a SIP call is established between two sites, the two sites must enable FECC (SIP) protocol simultaneously to perform far-end camera control. If FECC (SIP) protocol and FECC (H.323) protocol are both enabled, the system will select the appropriate camera control protocol according to the protocol (SIP or H.323) the call uses.

Camera control protocol parameters are described below:

Parameter	Description	Configuration Method
<b>FECC(H.323)</b>	Enables or disables the FECC (H.323) protocol for far site to control near camera. You can configure it for the StarLeaf Cloud platform or H.323 call separately. <b>Default:</b> Enabled	Web User Interface
<b>FECC(SIP)</b>	Enables or disables the FECC (SIP) protocol for far site to control near camera. You can configure it for the Zoom/Pexip/BlueJeans/Mind/Custom platform, SIP account or SIP IP call separately. <b>Default:</b> For Zoom/Pexip/BlueJeans/Mind/Custom platform and SIP IP call, the default value is Enabled. For SIP account, the default value is Disabled. <b>Note:</b> You cannot configure it for the Yealink/StarLeaf Cloud platform.	Web User Interface

**To configure FECC(H.323) camera control protocol for StarLeaf Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **StarLeaf** from the pull-down list of **Platform Type**.

3. Select the desired value from the pull-down list of **FECC(H.323)**.

The screenshot shows the 'Account' settings page in the Yealink VC400 web interface. The left sidebar has 'Cloud' selected, with sub-items for 'H.323', 'SIP Account', 'SIP IP Call', and 'Codec'. The main content area is divided into 'Cloud' and 'Advanced Setting' sections. The 'FECC(H.323)' option at the bottom of the 'Advanced Setting' section is highlighted with a red rectangular box.

Section	Parameter	Value
Cloud	Register Status	Registered
	Cloud Account	Enabled
	Platform Type	StarLeaf
	QCP Code	367037241953
Advanced Setting	H.323 Tunneling	Disabled
	H.235 Encryption	Disabled
	Protocol Monitor Port	1720
	DTMF Type	Auto
	Local Early Media	Disabled
	H.239	Enabled
	<b>FECC(H.323)</b>	<b>Enabled</b>

4. Click **Confirm** to accept the change.

**To configure FECC(H.323) camera control protocol for H.323 calls via web user interface:**

1. Click on **Account**->**H.323**.
2. Select the desired value from the pull-down list of **FECC(H.323)**.

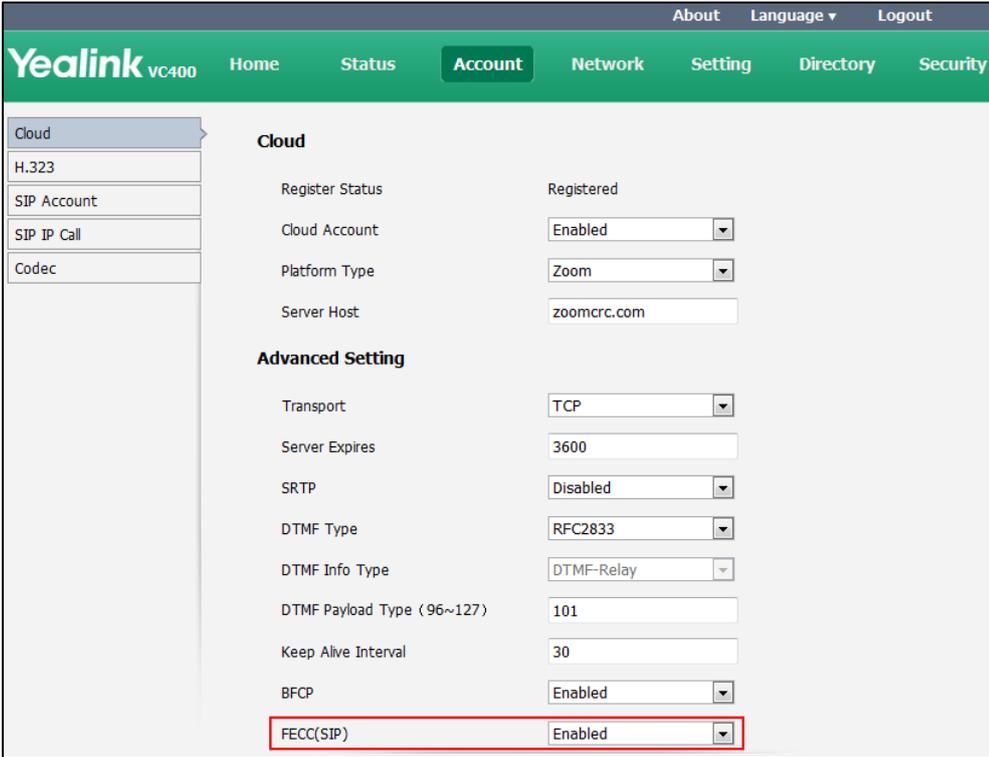
The screenshot shows the 'H.323' settings page in the Yealink VC400 web interface. The left sidebar has 'H.323' selected. The main content area contains various configuration fields for H.323, with the 'FECC(H.323)' option at the bottom highlighted by a red rectangular box.

Parameter	Value
H.323 Account	Enabled
H.323 Name	9000
H.323 Extension	9000
Gatekeeper Mode	Manual
Gatekeeper IP Address 1	10.2.1.43
Gatekeeper IP Address 2	
Gatekeeper Authentication	Disabled
Gatekeeper Username	
Gatekeeper Password	••••••••
H.460 Active	Disabled
H.323 Tunneling	Disabled
H235 Encryption	Disabled
Protocol Monitor Port	1720
DTMF Type	INBAND
H.239	Enabled
<b>FECC(H.323)</b>	<b>Enabled</b>

3. Click **Confirm** to accept the change.

**To configure FECC(SIP) camera control protocol for Zoom/Pexip/BlueJeans/Mind/Custom platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Zoom/Pexip/BlueJeans/Mind/Custom** from the pull-down list of **Platform Type**.
3. Select the desired value from the pull-down list of **FECC(SIP)**.



The screenshot displays the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' menu is expanded, showing 'Cloud', 'H.323', 'SIP Account', 'SIP IP Call', and 'Codec'. The 'Cloud' configuration page is active, showing the following settings:

Cloud	
Register Status	Registered
Cloud Account	Enabled
Platform Type	Zoom
Server Host	zoomcrc.com
Advanced Setting	
Transport	TCP
Server Expires	3600
S RTP	Disabled
DTMF Type	RFC2833
DTMF Info Type	DTMF-Relay
DTMF Payload Type (96~127)	101
Keep Alive Interval	30
BFCP	Enabled
<b>FECC(SIP)</b>	<b>Enabled</b>

4. Click **Confirm** to accept the change.

**To configure FECC(SIP) camera control protocol for SIP calls via web user interface:**

1. Click on **Account->SIP Account**.

2. Select the desired value from the pull-down list of **FECC(SIP)**.

The screenshot shows the Yealink VC400 web interface with the 'Account' tab selected. The 'SIP Account' sub-tab is active. The configuration table is as follows:

Parameter	Value	Port
Register Name	9000	
Password	••••••••	
Server Host	10.2.1.48	5060
Enable Outbound Proxy Server	Disabled	
Outbound Proxy Server		5060
Transport	UDP	
Server Expires	3600	
S RTP	Disabled	
DTMF Type	RFC2833	
DTMF Info Type	DTMF-Relay	
DTMF Payload Type (96~127)	101	
NAT Traversal	Disabled	
Keep Alive Interval	30	
RPort	Enabled	
BFCP	Disabled	
<b>FECC(SIP)</b>	<b>Disabled</b>	

3. Click **Confirm** to accept the change.

**To configure FECC(SIP) camera control protocol for SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select the desired value from the pull-down list of **FECC(SIP)**.

The screenshot shows the Yealink VC400 web interface with the 'Account' tab selected. The 'SIP IP Call' sub-tab is active. The configuration table is as follows:

Parameter	Value
SIP IP Call	Enabled
Transport	TCP
S RTP	Disabled
DTMF Type	RFC2833
DTMF Info Type	DTMF
DTMF Payload Type (96~127)	101
NAT Traversal	STUN
RPort	Enabled
BFCP	Enabled
<b>FECC(SIP)</b>	<b>Enabled</b>

3. Click **Confirm** to accept the change.

## Output Resolution

VC400/VC120 supports output resolution adjustment. You can adjust output resolution of primary/secondary display device respectively.

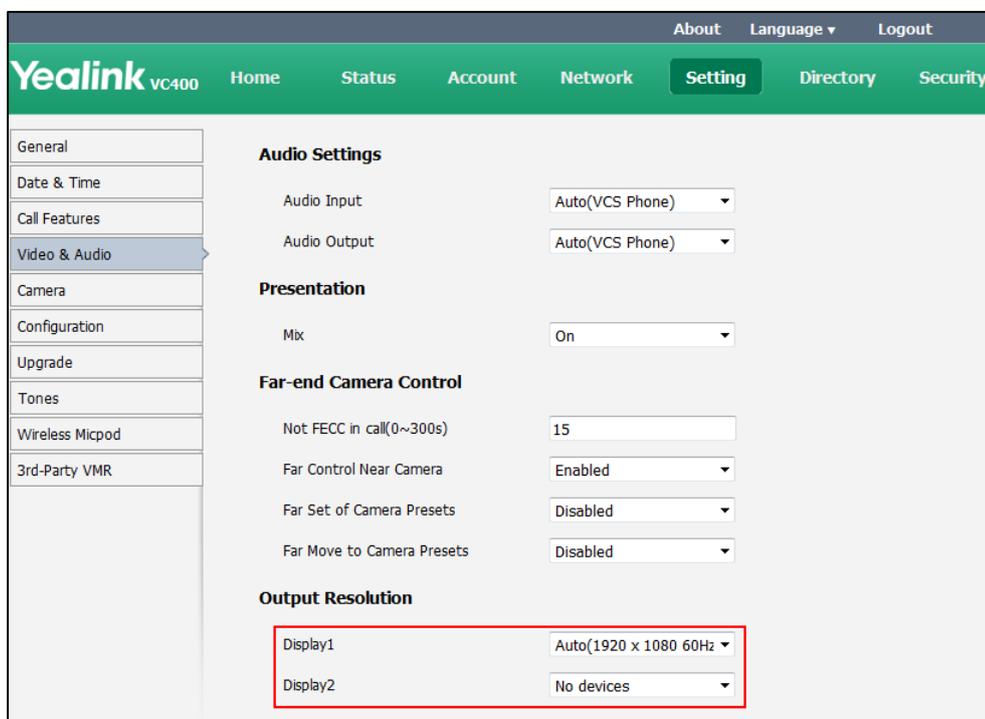
Make sure the display device has connected to the VC400/VC120 Codec before configuration.

The output resolution parameters on the systems are described below.

Parameter	Description	Configuration Method
<b>Display1</b>	<p>Configures the output resolution of primary display device.</p> <ul style="list-style-type: none"> <li>• <b>Auto</b>—Automatically select the highest resolution supported by the display device.</li> <li>• <b>1920×1080 60Hz</b></li> <li>• <b>1360×768 60 Hz</b></li> <li>• <b>1280×720 60 Hz</b></li> <li>• <b>720×480 60 Hz</b></li> <li>• <b>640×480 60 Hz</b></li> </ul> <p><b>Default:</b> Auto.</p> <p><b>Note:</b> The available output resolutions depend on the display device.</p>	Web User Interface
<b>Display2</b>	<p>Configures the output resolution of secondary display device.</p> <ul style="list-style-type: none"> <li>• <b>Auto</b>—Automatically select the highest resolution supported by the display device.</li> <li>• <b>1920×1080 60Hz</b></li> <li>• <b>1360×768 60 Hz</b></li> <li>• <b>1280×720 60 Hz</b></li> <li>• <b>720×480 60 Hz</b></li> <li>• <b>640×480 60 Hz</b></li> </ul> <p><b>Default:</b> Auto</p> <p><b>Note:</b> The available output resolutions depend on the display device.</p>	Web User Interface

**To configure output resolution via web user interface:**

1. Click on **Setting->Video & Audio**.
2. Select the desired value from the pull-down list of **Display1**.
3. Select the desired value from the pull-down list of **Display2**.



4. Click **Confirm** to accept the change.

## USB Configuration

If you have high requirement for data security, you can disable the USB feature. If you disable the USB feature, you cannot view the videos and screenshots stored in the USB flash driver via the remote control, and cannot record video or capture screenshots too.

The USB configuration parameter on the system is described below.

Parameter	Description	Configuration Method
<b>USB Enable</b>	Enables or disables the USB feature. <b>Default:</b> Enabled	Web User Interface

**To configure USB configuration via web user interface:**

1. Click on **Setting->Video & Audio**.

- Select the desired value from the pull-down list of **USB Enable**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting' (highlighted), 'Directory', and 'Security'. The left sidebar lists various settings categories, with 'Video & Audio' selected. The main content area shows the 'Setting' page for 'Video & Audio'. The 'Mix' setting is set to 'On'. Under 'Far-end Camera Control', 'Not FECC in call(0~300s)' is set to '15', 'Far Control Near Camera' is 'Enabled', 'Far Set of Camera Presets' is 'Disabled', and 'Far Move to Camera Presets' is 'Disabled'. Under 'Output Resolution', 'Display1' and 'Display2' are both set to 'No devices'. Under 'Record', 'Recording' is 'Enabled', 'Auto Recording' is 'Disabled', and 'Screenshot' is 'Enabled'. Under 'USB Config', 'USB Enable' is set to 'Enabled' and is highlighted with a red box.

- Click **Confirm** to accept the change.

## Video Recording

When the system is idle, you can record local video via the remote control. During a call, the video and presentation which are shown on the display device can be recorded via the remote control and video conferencing phone.

Before recording video, you need to insert a USB flash drive to the USB port on the VC400/VC120 Codec to store recorded video. Make sure the USB feature is enabled.

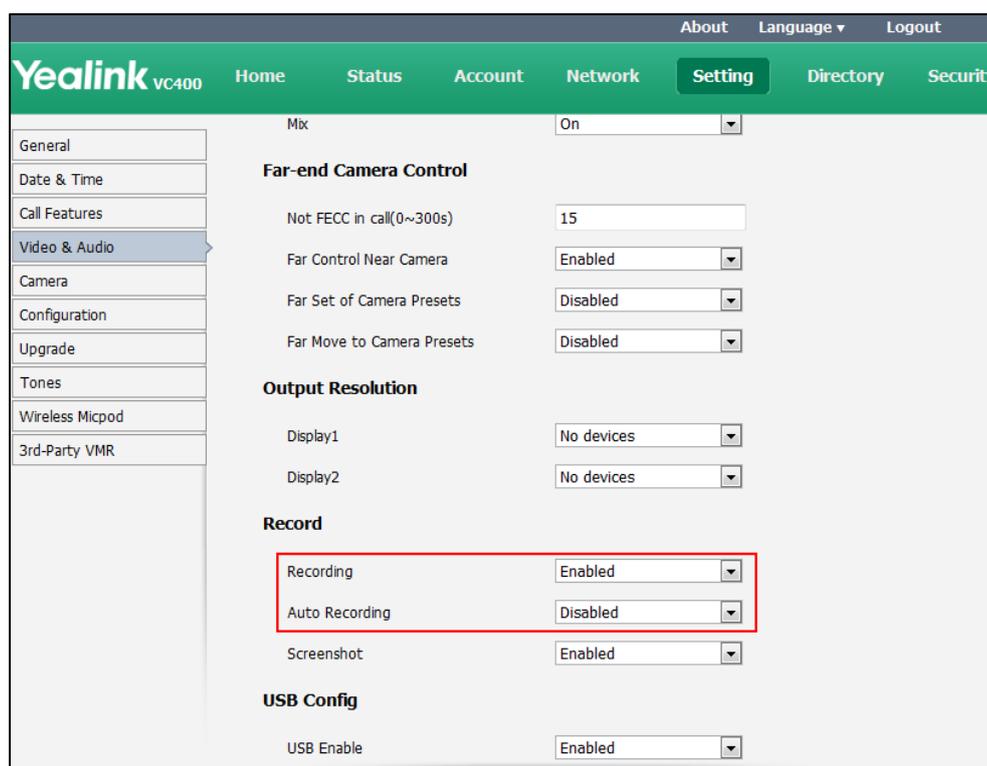
The video recording parameters on the system are described below.

Parameter	Description	Configuration Method
<b>Recording</b>	Enables or disables the video recording feature on the system. <b>Default:</b> Enabled If it is set to Disabled, you cannot record video.	Web User Interface
<b>Auto Recording</b>	Enables or disables the system to start recording automatically once a call is established. <b>Default:</b> Disabled.	Web User Interface

Parameter	Description	Configuration Method
	<b>Note:</b> The auto recording feature is available only when the recording feature is enabled.	

**To configure video recording via web user interface:**

1. Click on **Setting->Video & Audio**.
2. Select the desired value from the pull-down list of **Recording**.
3. Select the desired value from the pull-down list of **Auto Recording**.



4. Click **Confirm** to accept the change.

**To record video when the system is idle via the remote control:**

1. Press to start recording and press again to stop recording.

**To record video during a call via the remote control:**

1. Do one of the following:
  - Long press to start recording and long press again to stop recording.
  - Press **More** soft key to open **More** screen.  
Press or to scroll to **USB Recording**, and then press to start recording.  
Open the **More** screen, scroll to **USB Recording** again, and then press to stop recording.

**To record video during a call via the video conferencing phone:**

1. Press the **Start REC** soft key to start recording and press the **Stop REC** soft key again to stop recording.

When you start recording, the display device will show  and the recording time. When you stop recording, the recording icon disappears from the screen. The display device prompts "Successfully video recording!"

**Note**

If you start recording during a call, both your display device and remote display devices will show the  icon on your video image.

## Screenshot

You can capture the screenshot from the camera via the remote control or web user interface. Before capturing the screenshot, you need to insert a USB flash drive to the USB port on the VC400/VC120 Codec to store screenshots. Make sure the USB feature is enabled.

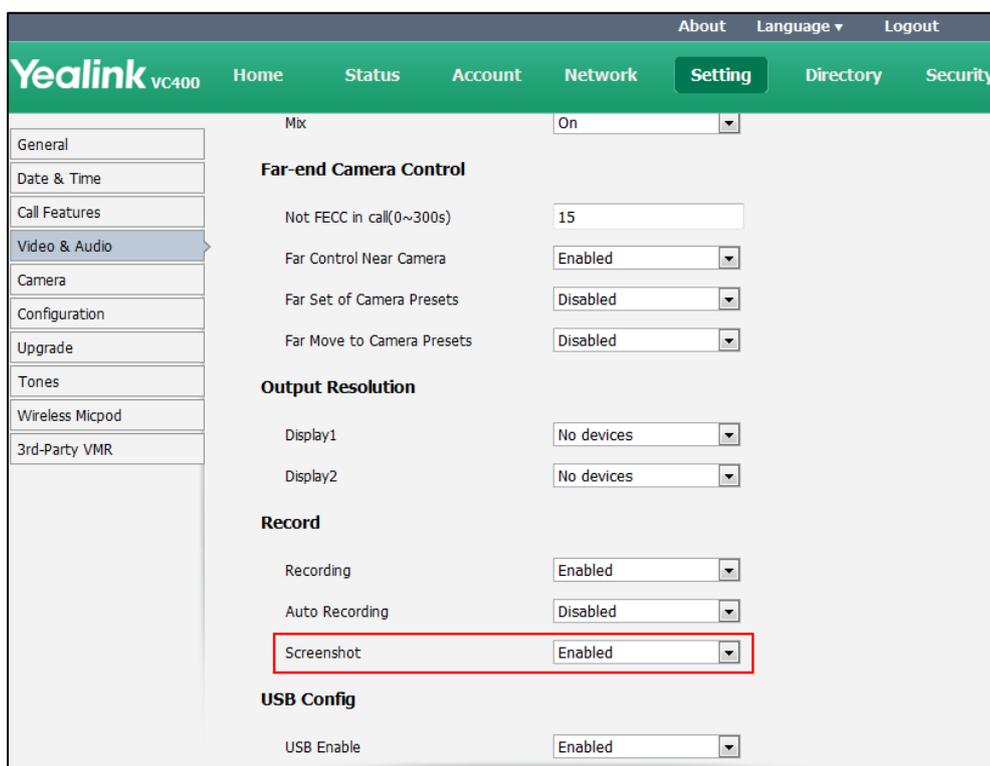
The screenshot parameter on the system is described below.

Parameter	Description	Configuration Method
<b>Screenshot</b>	Enables or disables the screenshot feature on the system. <b>Default:</b> Enabled If it is set to Disabled, you cannot capture screenshot.	Web User Interface

**To configure screenshot via web user interface:**

1. Click on **Setting->Video & Audio**.

2. Select the desired value from the pull-down list of **Screenshot**.



3. Click **Confirm** to accept the change.

**To capture screenshots via web user interface:**

1. Click **Home**->**Screenshot** when the system is idle or during a call.

**To capture screenshots when the system is idle via the remote control:**

1. Press .

**To capture screenshots during a call via the remote control:**

1. Do one of the following:
  - Long press .
  - Press **More** soft key to open **More** screen.  
Press  or  to scroll to **Screenshot**, and then press  to capture screenshot.

## Tones

When automatically answering an incoming call, the system will play a warning tone. You can customize tones or select specialized tone sets (vary from country to country) to indicate different conditions of the system. The default tones used on the system are the US tone sets. Available tone sets for the system:

- Australia

- Austria
- Brazil
- Belgium
- China
- Chile
- Czech
- Czech ETSI
- Denmark
- Finland
- France
- Germany
- Great Britain
- Greece
- Hungary
- Lithuania
- India
- Italy
- Japan
- Mexico
- New Zealand
- Netherlands
- Norway
- Portugal
- Spain
- Switzerland
- Sweden
- Russia
- United States

Configured tones can be heard on the system for the following conditions:

Condition	Description
Ring Back	Ring-back tone
Busy	When the callee is busy
Call Waiting	Call waiting tone

Condition	Description
Auto Answer	When answering a call automatically

Tones parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Select Country</b>	<p>Customizes tones or selects the desired country tone set.</p> <p><b>Default:</b> Custom</p>	Web User Interface
<b>Ring Back</b>	<p>Customizes the ring-back tone for the system.</p> <p>tone = element1[,element2][,element3]...[,element8]</p> <p>Where</p> <p><b>element</b> = [!]Freq1[+Freq2][+Freq3][+Freq4] /Duration</p> <p><b>Freq:</b> the frequency of the tone (ranges from 200Hz to 7000 Hz). If it is set to 0Hz, it means the tone is not played. A tone consists of at most four different frequencies.</p> <p><b>Duration:</b> the duration (in milliseconds) of the dial tone, ranges from 0 to 30000ms.</p> <p>You can configure at most eight different tones for one condition, and separate them by commas. (e.g., 250/200, 0/1000, 200+300/500, 600+700+800+1000/2000).</p> <p>If you want the system to play tones once, add an exclamation mark "!" before tones (e.g., !250/200, 0/1000, 200+300/500, 600+700+800+1000/2000).</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the parameter "Select Country" is set to Custom.</p>	Web User Interface
<b>Busy</b>	<p>Customizes the busy tone for the system.</p> <p>For more information on how to</p>	Web User Interface

Parameter	Description	Configuration Method
	<p>customize the tone, refer to the parameter "Ring Back".</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the parameter "Select Country" is set to Custom.</p>	
<b>Call Waiting</b>	<p>Customizes the call waiting tone for the system.</p> <p>For more information on how to customize the tone, refer to the parameter "Ring Back".</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the parameter "Select Country" is set to Custom.</p>	Web User Interface
<b>Auto Answer</b>	<p>Customizes the auto answer tone for the system.</p> <p>For more information on how to customize the tone, refer to the parameter "Ring Back".</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the parameter "Select Country" is set to Custom.</p>	Web User Interface

**To configure tones via web user interface:**

1. Click on **Setting->Tones**.
2. Select the desired value from the pull-down list of **Select Country**.

If you select **Custom**, you can customize the tone for indicating each condition of the system.

Parameter	Value
Select Country	Custom
Ring Back	2000+800+600/500,3000+
Busy	700+1200+400+6000/5000
Call Waiting	400+1200/500,1000+6000
Auto Answer	1800+500+1000+900/6000

3. Click **Confirm** to accept the change.



# System Management

This chapter provides operating instructions, such as managing directory, call history and dual screen. Topics include:

- [Directory](#)
- [LDAP](#)
- [Call History](#)
- [Search Source List in Dialing](#)
- [Dual Screen](#)
- [License](#)
- [VCS Integrated with Control Systems](#)

## Directory

The VC400 system can store up to 500 local contacts and 100 conference contacts. The VC120 system can store up to 500 local contacts, and does not support conference contacts.

You can add multiple numbers for a local contact (at most 3). A conference contact consists of one or more local contacts (at least 1, at most 3). You can establish a conference call quickly by calling conference contacts.

You can import or export local contact list to different systems to share the local directory. The system only supports the XML and CSV format contact lists. You can view local directory via web user interface, remote control and the video conferencing phone. But you can edit or delete the local directory via web user interface and remote control.

If you register a Yealink Cloud account, Yealink Cloud contacts will display in your directory menu. Yealink Cloud contacts are created by your Yealink Cloud enterprise administrator. Only Yealink Cloud enterprise administrator can add, edit and delete Yealink Cloud contacts on the Yealink web management service, these operations will update to VC400/VC120 automatically. You do not have the permission to do the operations on your VC400/VC120. You can only search and place calls to the Yealink Cloud contacts. For more information on Yealink web management service, refer to [Yealink VC Cloud Management Service Administrator Guide](#).

### Note

Starleaf/Zoom/Pexip/BlueJeans/Mind platform does not provide Cloud contacts for video conferencing system.

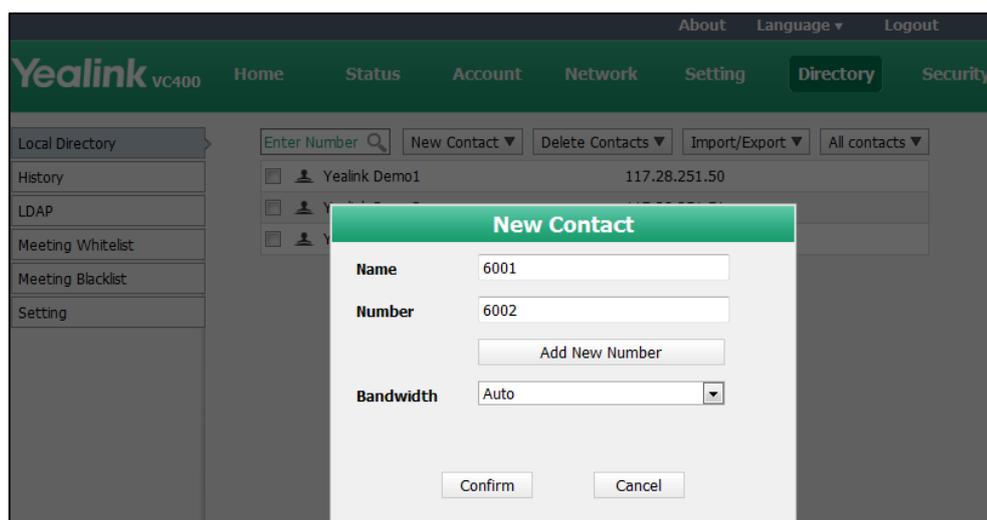
The following sections give you detailed steps on how to manage the directory.

#### To add local contacts via web user interface:

1. Click on **Directory**->**Local Directory**.

2. Click **New Contact**, and select **Local**.
3. Enter the desired name in the **Name** field.
4. Enter the desired number in the **Number** field.
5. Click **Add New Number**, enter other number of the contact.
6. Select the desired contact bandwidth from the pull-down list of **Bandwidth**.

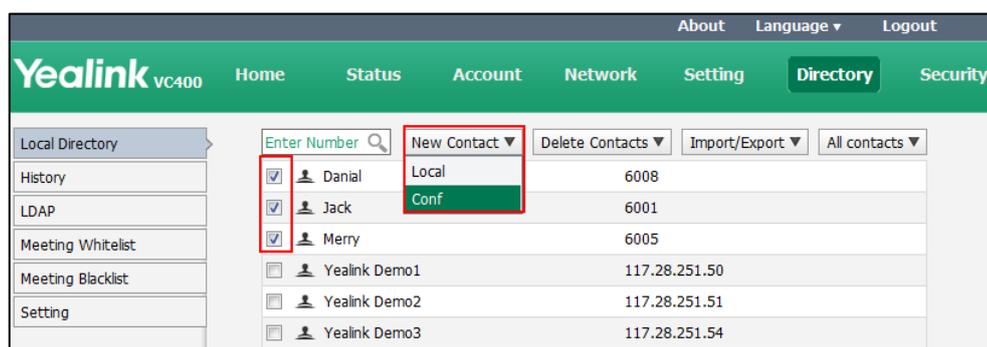
The default contact bandwidth is **Auto**. The system will select the appropriate bandwidth automatically



7. Click **Confirm** to accept the change.

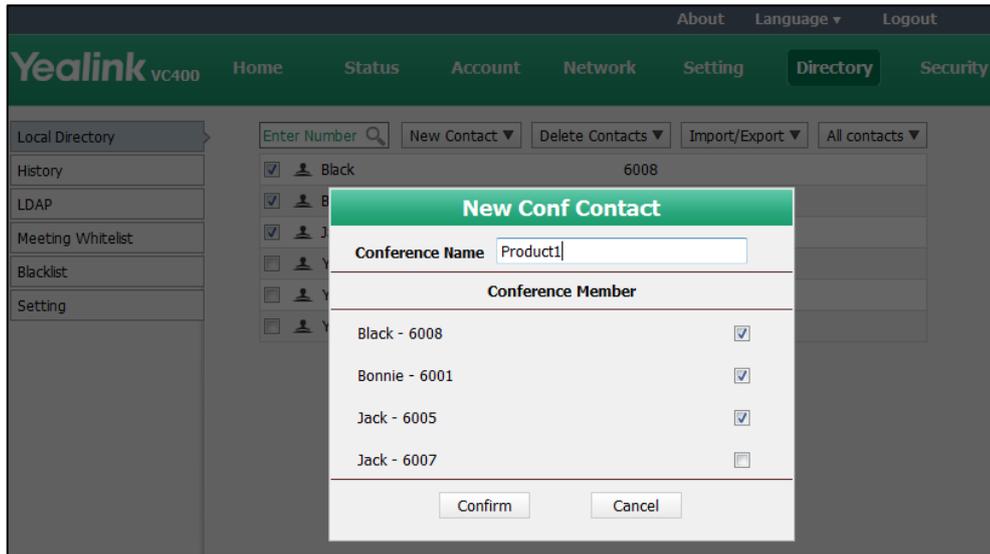
**To add conference contacts via web user interface:**

1. Click on **Directory**->**Local Directory**.
2. Check the checkboxes of the desired contacts.
3. Click **New Contact**, and select **Conf**.



4. Enter the desired name in the **Conference Name** field.

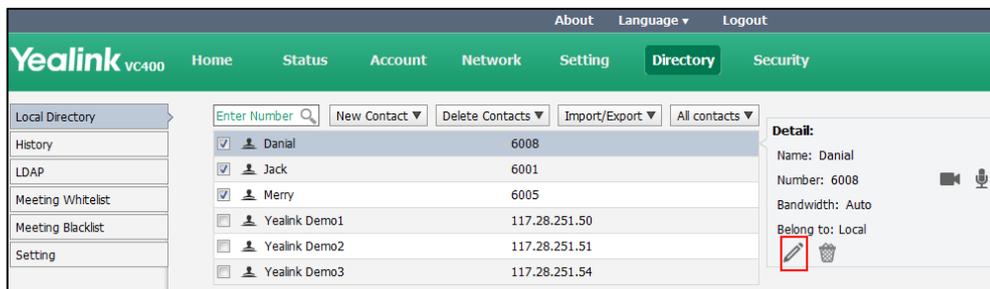
If multiple numbers are stored for the selected contacts, the system will select number 1 by default.



5. Click **Confirm** to accept the change.

**To edit local contacts via web user interface:**

1. Click on **Directory**->**Local Directory**.
2. Hover your cursor over the local contact you want to edit.
3. Click  in the pop-up detail box.

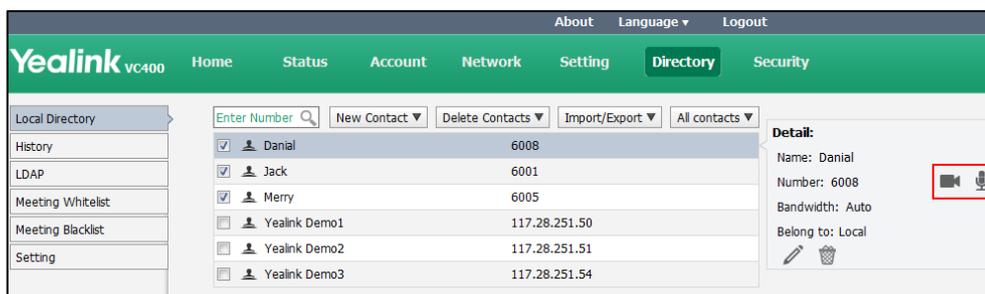


4. Edit the contact information.
5. Click **Confirm** to accept the change.

**To place calls to contacts from the local directory via web user interface:**

1. Click on **Directory**->**Local Directory**.
2. Hover your cursor over the desired contact.

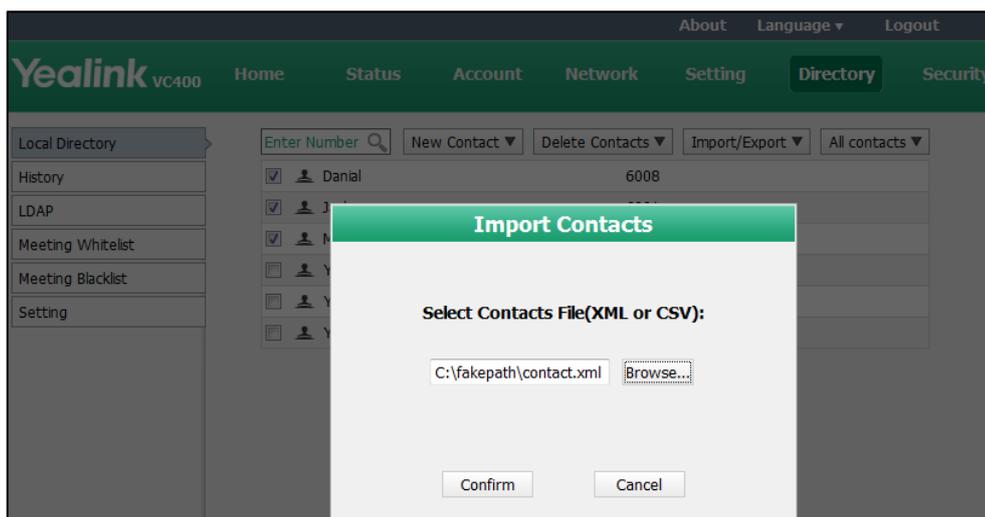
- Click  or  in the pop-up detail box to place a video or voice call.



The web user interface prompts “Connecting, please wait!” and jumps automatically to the **Home** screen.

**To import an XML file of the local contact list via web user interface:**

- Click on **Directory->Local Directory**.
- Click **Import/Export**, and select **Import**.
- Click **Browse** to locate a contact list file (file format must be \*.xml) from your local system.



- Click **Confirm** to import the contact list.  
The web user interface prompts “Contacts imported successfully!”.

**To import a CSV file of local contact list via web user interface:**

- Click on **Directory->Local Directory**.
- Click **Import/Export**, and select **Import**.
- Click **Browse** to locate a contact list file (file format must be \*.csv) from your local system.
- Click **Confirm**.

The web user interface is shown below:

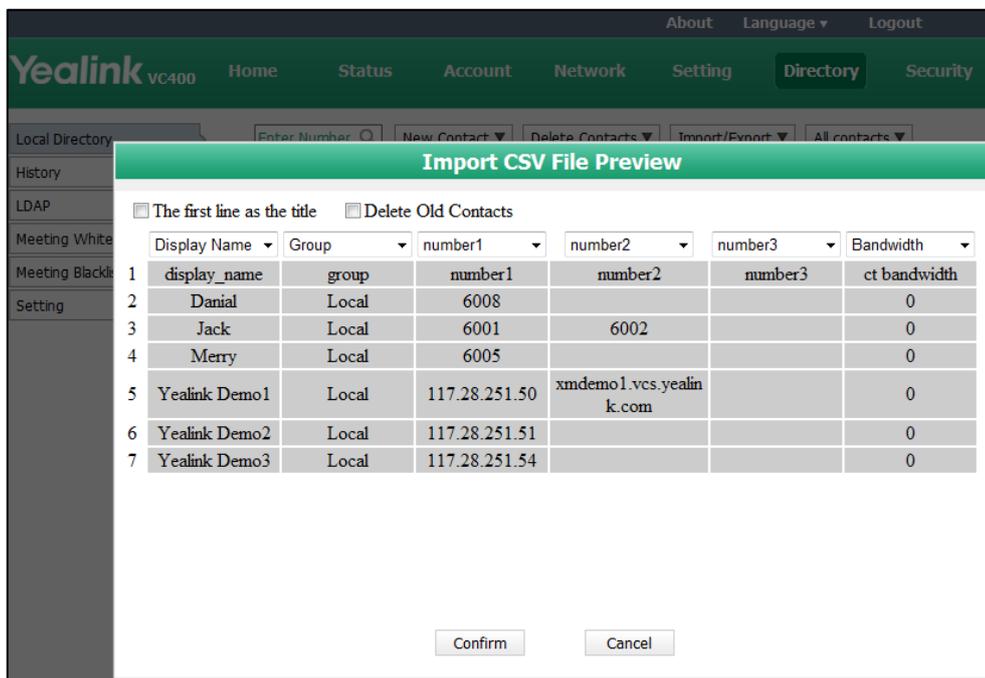
The screenshot shows the 'Import CSV File Preview' dialog in the Yealink web interface. The dialog has a green header and contains the following elements:

- Checkboxes:  The first line as the title,  Delete Old Contacts
- Column headers: ignore, ignore, ignore, ignore, ignore, ignore
- Table data:
 

	display_name	group	number1	number2	number3	ct bandwidth
1	Danial	Local	6008			0
2	Jack	Local	6001	6002		0
3	Merry	Local	6005			0
4	Yealink Demo1	Local	117.28.251.50	xmdemo1.vcs.yealink.com		0
5	Yealink Demo2	Local	117.28.251.51			0
6	Yealink Demo3	Local	117.28.251.54			0
- Buttons: Confirm, Cancel

5. (Optional.) Check the **The first line as the title** checkbox.  
It will prevent importing the title of the contact information which is located in the first line of the CSV file.
6. (Optional.) Check the **Delete Old Contacts** checkbox.  
It will delete all existing contacts while importing the contact list.
7. Select the desired value from the pull-down list.
  - If **Ignore** is selected, this column will not be imported to the system.
  - If **Display Name** is selected, this column will be imported to the system as the contacts' name.

- If **number1/2/3** is selected, this column will be imported to the system as the contacts' number.



8. Click **Confirm** to complete importing the contact list.

The web user interface prompts "Contacts imported successfully!".

**To export a XML/CSV file of the local contact list via web user interface:**

1. Click on **Directory->Local Directory**.
2. Click **Import/Export**, and select **Export XML** or **Export CSV**.
3. The contact list is saved to your local system.

## LDAP

LDAP (Lightweight Directory Access Protocol) is an application protocol for accessing and maintaining information services for the distributed directory over an IP network. Yealink VCS systems are configurable to interface with a corporate directory server that supports LDAP version 2 or 3. The following LDAP servers are supported:

- Microsoft Active Directory
- Sun ONE Directory Server
- Open LDAP Directory Server
- Microsoft Active Directory Application Mode (ADAM)

The biggest plus for LDAP is that users can access the central LDAP directory of the corporation using the system. Therefore they do not have to maintain the local directory. Users can search and dial out from the LDAP directory and save LDAP entries to the local directory. LDAP entries displayed on the display device screen are read only. They cannot be added to, edited or

deleted by users. When an LDAP server is configured properly, the system can look up entries from the LDAP server in a wide variety of ways. The LDAP server indexes all the data in its entries, and "filters" may be used to select the desired entry or group, and retrieve the desired information.

Configurations on the system limit the amount of displayed entries when querying from the LDAP server, and decide how the attributes are displayed and sorted.

Performing a LDAP search on the system:

- Enter search content in the dialing screen. (Ensure that the LDAP is in the enabled search source lists)
- In the **Directory** screen, select **Company** to enter the LDAP search screen, and then enter a few characters which you want to search.

The system will send the search request to the LDAP server, the LDAP server then performs a search based on the entered content and configured filter condition, and returns results to the system.

## LDAP Attributes

The following table lists the most common attributes used to configure the LDAP lookup on the system:

Abbreviation	Name	Description
gn	givenName	First name
cn	commonName	LDAP attribute is made up from given name joined to surname.
sn	surname	Last name or family name
dn	distinguishedName	Unique identifier for each entry
dc	dc	Domain component
-	company	Company or organization name
-	telephoneNumber	Office phone number
mobile	mobilephoneNumber	Mobile or cellular phone number
ipPhone	IPphoneNumber	Home phone number

LDAP parameters are described below:

Parameter	Description	Configuration Method
<b>LDAP Enable</b>	Enables or disables the LDAP feature on the system. <b>Default:</b> Disabled	Web User Interface
<b>LDAP Name Filter</b>	Configures the name attribute for LDAP searching.	Web User Interface

Parameter	Description	Configuration Method
	<b>Example:</b> ((cn=*)(sn=*))	
<b>LDAP Number Filter</b>	Configures the number attribute for LDAP searching. <b>Example:</b> ((telephoneNumber=*)(mobile=*))	Web User Interface
<b>LDAP TLS Mode</b>	Configures the connection mode between the LDAP server and video conferencing system. <ul style="list-style-type: none"> <li>• <b>LDAP</b>–Unencrypted connection between LDAP server and the system (port 389 is used by default).</li> <li>• <b>LDAP TLS Start</b>–TLS/SSL connection between LDAP server and the system (port 389 is used by default).</li> <li>• <b>LDAPS</b>–TLS/SSL connection between LDAP server and the system (port 636 is used by default).</li> </ul> <b>Default:</b> LDAP	Web User Interface
<b>LDAP Server Address</b>	Configures the domain name or IP address of the LDAP server.	Web User Interface
<b>Port</b>	Configures the LDAP server port. <b>Default:</b> 389	Web User Interface
<b>LDAP User Name</b>	Configures the user name used to login the LDAP server. <b>Note:</b> The user name is provided by the server administrator. If the LDAP server allows 'anonymous' to login, you don't need to provide the user name to access the LDAP server.	Web User Interface
<b>LDAP Password</b>	Configures the password to login the LDAP server. <b>Note:</b> The password is provided by	Web User Interface

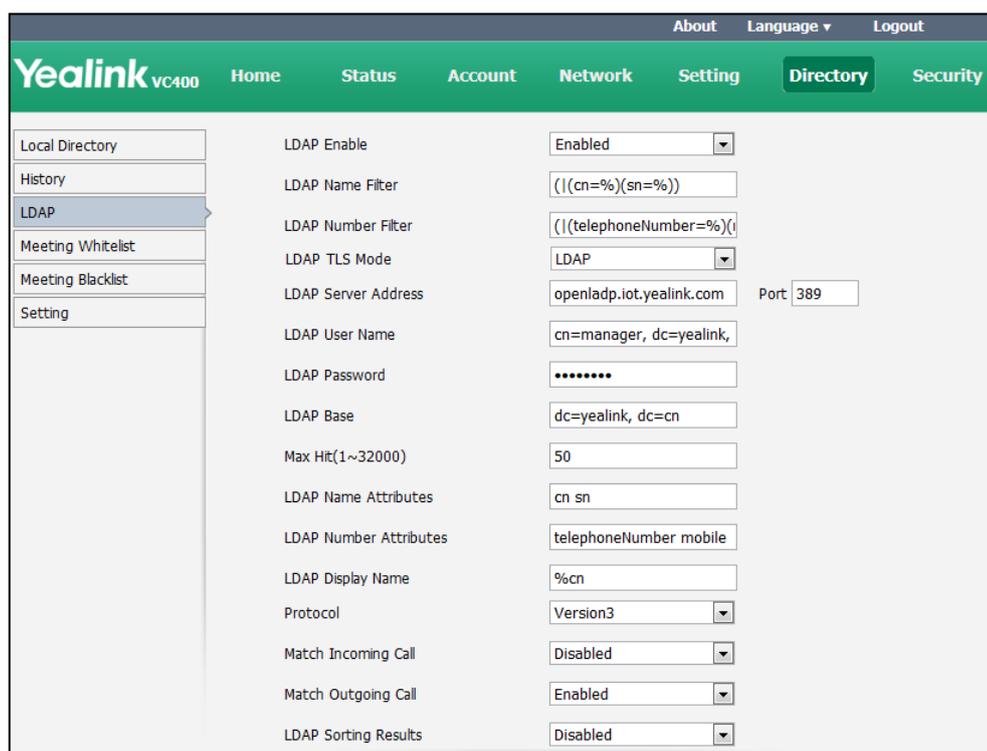
Parameter	Description	Configuration Method
	the server administrator. If the LDAP server allows 'anonymous' to login, you don't need to provide the user password to access the LDAP server.	
<b>LDAP Base</b>	Configures the root path of the LDAP search base. <b>Example:</b> cn=manager,dc=yealink,dc=cn	Web User Interface
<b>Max Hit(1~32000)</b>	Configures the maximum number of search results to be returned by the LDAP server.	Web User Interface
<b>LDAP Name Attributes</b>	Configures the name attributes of each record to be returned by the LDAP server. <b>Note:</b> multiple name attributes should be separated by spaces. <b>Example:</b> cn sn	Web User Interface
<b>LDAP Number Attributes</b>	Configures the number attributes of each record to be returned by the LDAP server. <b>Note:</b> multiple numbers attributes should be separated by spaces. <b>Example:</b> telephoneNumber mobile	Web User Interface
<b>LDAP Display Name</b>	Configures the display name of the contact record displayed on the LCD screen. <b>Note:</b> multiple numbers attributes should be separated by spaces. <b>Example:</b> %cn	Web User Interface
<b>Protocol</b>	Configures the protocol for the LDAP server. <b>Note:</b> Make sure the protocol value corresponds with the version assigned on the LDAP server.	Web User Interface
<b>Match Incoming Call</b>	Enables or disables the system to match caller numbers with LDAP contacts. <b>Default:</b> Disabled	Web User Interface

Parameter	Description	Configuration Method
	<p><b>Note:</b> If the match is successful, the system will display the caller name when receives an incoming call.</p>	
<b>Match Outgoing Call</b>	<p>Enables or disables the system to match outgoing call numbers with LDAP contacts.</p> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If the match is successful, the system will display the contact name when places a call.</p>	Web User Interface
<b>LDAP Sorting Results</b>	<p>Enables or disables the system to sort the search results in alphabetical order or numerical order.</p> <p><b>Default:</b> Disabled</p>	Web User Interface

For more information on string representations of LDAP query filters, refer to [RFC2254](#).

**To configure LDAP via web user interface:**

1. Click on **Directory**->**LDAP**.
2. Enter the desired values in the corresponding fields.
3. Select the desired values from the corresponding pull-down lists.



- Click **Confirm** to accept the change.

## Call History

The VC400/VC120 video conferencing system maintains call history lists of All Calls, Missed Calls, Placed Calls and Received Calls. Call history lists supports up to 100 entries (local entries and Cloud entries).

You can view the call history, place a call or delete an entry from the call history list. You can view the call history and place a call from the call history list via web user interface or the remote control, but you can delete call history only via web user interface.

History record feature is enabled by default. If it is disabled, the call history won't be saved. For more information, refer to [History Record](#) on page 146.

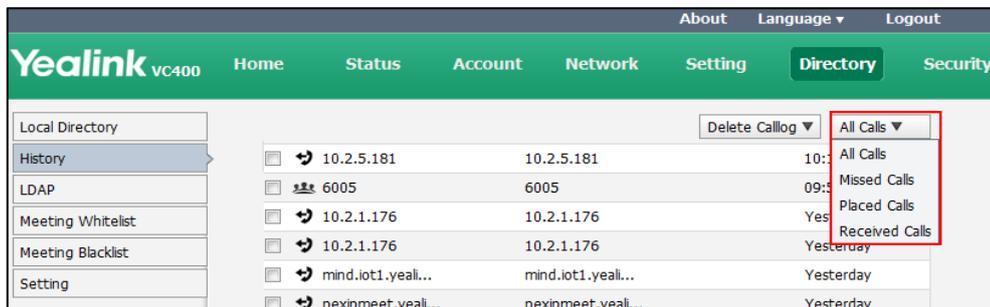
### Note

VC120 video conferencing system only supports local call history. It does not support conference call history.

### To view call history via web user interface:

- Click on **Directory**->**History**.

The web user interface displays all call history.



- Click **All Calls**, select the desired call history list.

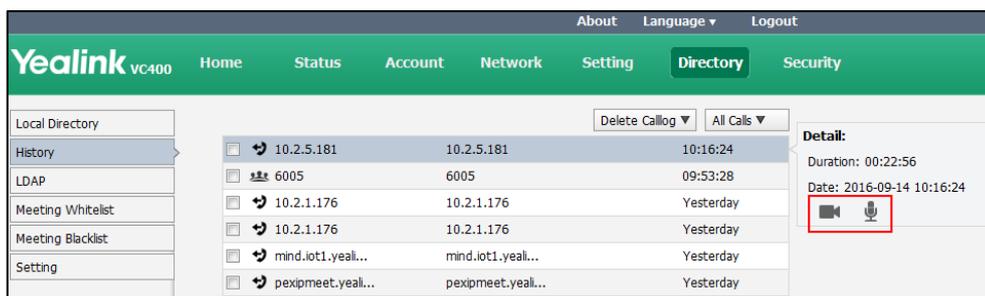
### To place a call from the call history list via web user interface:

- Click on **Directory**->**History**.

The web user interface displays all call history.

- Hover your cursor over the entry you want to call.

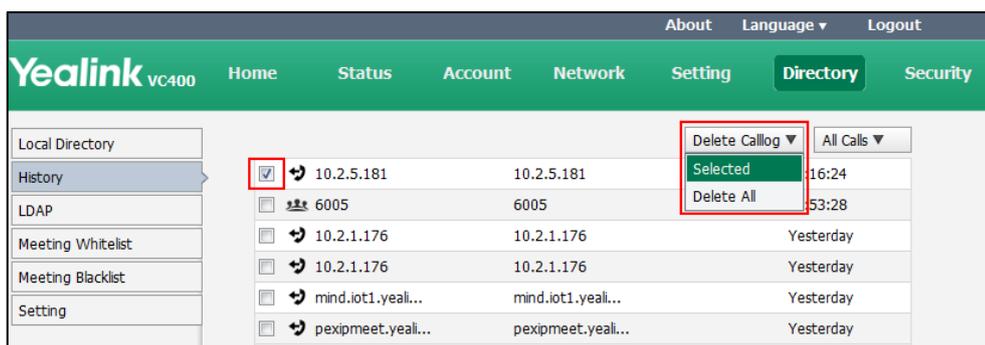
- Click  or  in the pop-up detail box to place a video or voice call.



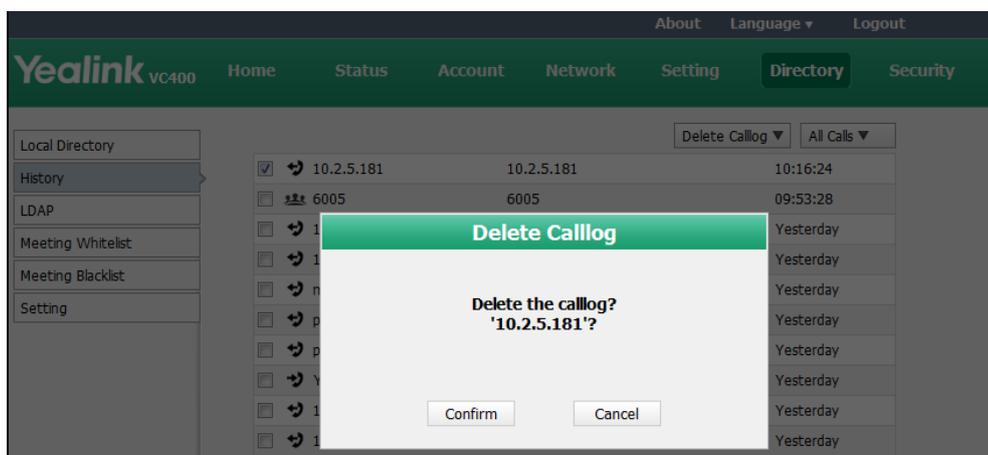
The web user interface prompts "Connecting, please wait!" and jumps automatically to the **Home** screen.

**To delete an entry from the call history list via web user interface:**

- Click on **Directory->History**.  
The web user interface displays all call history.
- Mark the checkbox for the entry you want to delete.
- Click **Delete Callog**, and select **Selected**.



The web user interface prompts "Delete the callog?"



- Click **Confirm** to delete the callog.

You can also select **Delete All** from the pull-down list of **Delete Callog** to delete all call log.

## Search Source List in Dialing

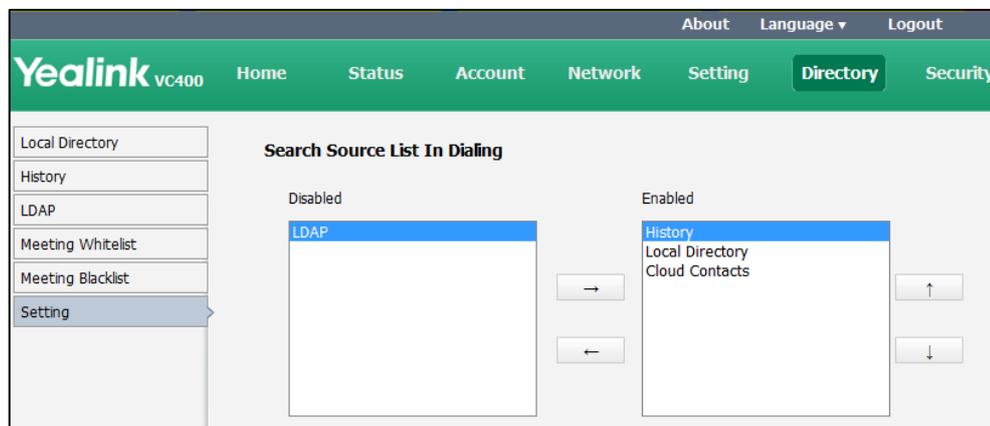
When you enter a few characters in the dialing screen, the system will search for contacts from the enabled search source lists, and display the result in the dialing screen. The lists can be History, Local Directory, Cloud Contacts and LDAP.

To match the desired list, you need to enable the search source list first. If you want to match the LDAP list, make sure LDAP is already configured. For more information on how to configure LDAP, refer to [LDAP](#) on page 214.

### To configure search source list in dialing via web user interface:

1. Click on **Directory->Setting**.
2. In the **Search Source List In Dialing** block, select the desired list from the **Disabled** column and click .
 

The selected list appears in the **Enabled** column.
3. Repeat step 2 to add more lists to the **Enabled** column.
4. (Optional.) To remove a list from the **Enabled** column, select the desired list and then click .
5. To adjust the display order of the enabled list, select the desired list, and click  or .



6. Click **Confirm** to accept the change.

## Dual Screen

The VC400/VC120 has two display ports. When connecting only one display device to the VC400/VC120 codec, Display1 port is the only available port. To make it easier for users to view video images, users can connect two display devices to Display1 and Display2 ports respectively. When two display devices are connected to the VC400/VC120 codec, the status bar of the primary display device will display  icon.

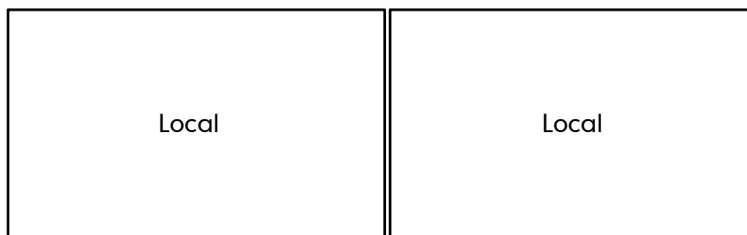
## Default Layout of Dual Screen

**Two display devices (dual screen) are connected to the VC400/VC120 codec:**

- When the VC400/VC120 is idle and does not start a presentation:

In the primary display device, the local video image is shown in full size.

In the secondary display device, the local video image is shown in full size (no menu and status bar).



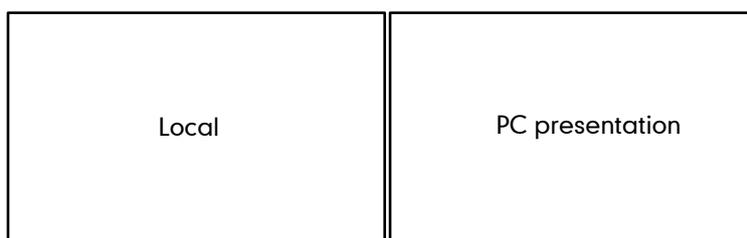
Primary display device

Secondary display device

- When the VC400/VC120 is idle and starts a presentation:

In the primary display device, the local video image is shown in full size.

In the secondary display device, the presentation is shown in full size (no menu and status bar).



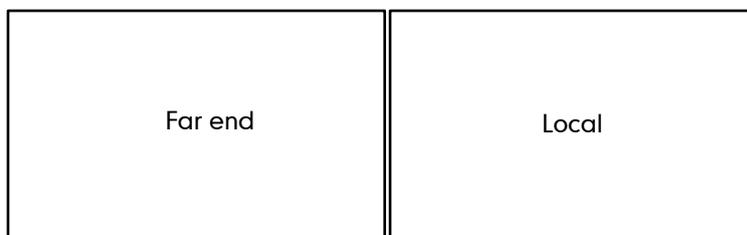
Primary display device

Secondary display device

- When the VC400/VC120 is during a call and does not start a presentation:

In the primary display device, the remote video image is shown in full size.

In the secondary display device, the local video image is shown in full size.



Primary display device

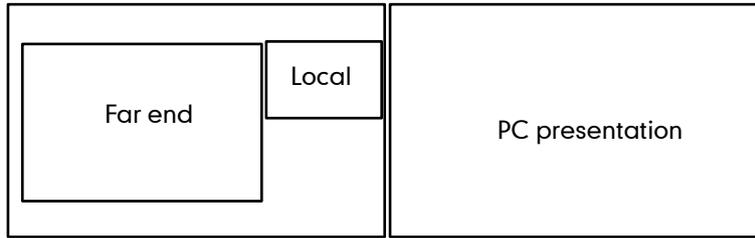
Secondary display device

- When the VC400/VC120 is during a call and starts a presentation:

In the primary display device, the remote video image is shown in big size, and the local

video image along the right side of the screen is shown in small size.

In the secondary display device, the presentation is shown in full size.



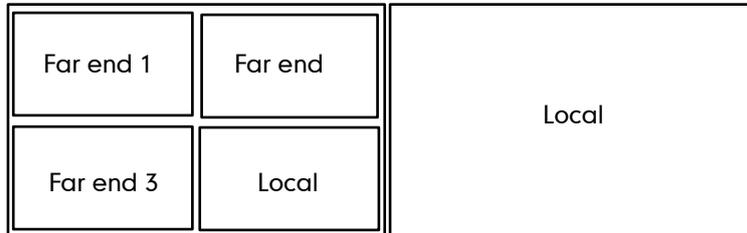
Primary display device

Secondary display device

- When the VC400/VC120 is during multiple active calls (take 4 parties as an example) and does not start a presentation.

In the primary display device, the video images are shown in the same size.

In the secondary display device, the local video image is shown in full size.



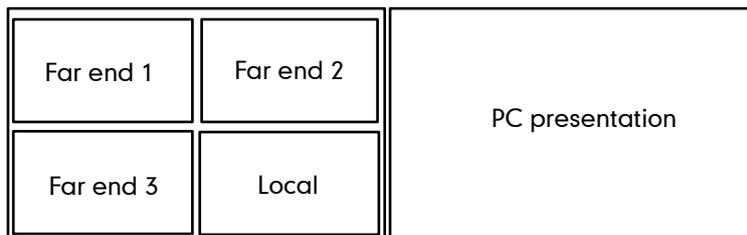
Primary display device

Secondary display device

- When the VC400/VC120 is during multiple active calls (take 4 parties as an example) and starts a presentation.

In the primary display device, the video images are shown in the same size.

In the secondary display device, the presentation is shown in full size.



Primary display device

Secondary display device

## License

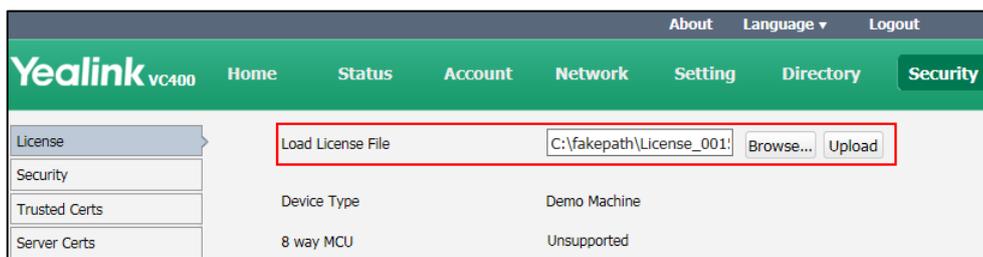
### Device Type License

If the VC400/VC120 is a demo machine, namely it is used by agents to demonstrate system functions to the customers. The LCD screen of the system will prompt "DEMO ONLY, NOT FOR

RESELL". You can change the VC400/VC120 from a demo machine to be a normal machine by importing a device type license. The device type license is configurable via web user interface only.

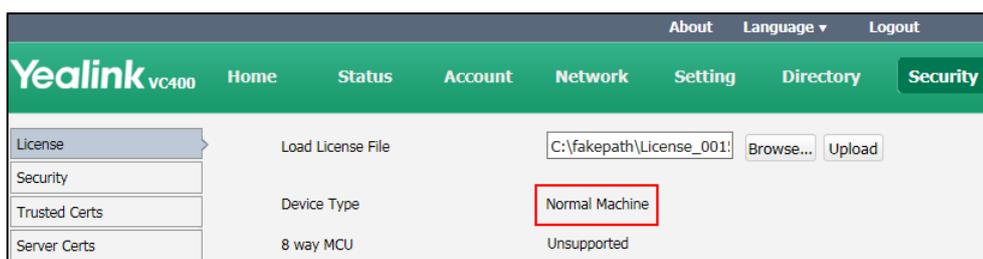
**To import the device type license via web user interface:**

1. Click on **Security** -> **License**.
2. Click **Browse** to locate the device type license (the file format must be \*.dat) from your local system.



3. Click **Upload** to complete importing the device type license.

The device type will change from "Demo Machine" to "Normal Machine".



## 8-Way Conference License

The basic version of VC400 video conferencing system supports up to 4-way video calls and an additional voice call (an original caller and four other sites).

The basic version of VC120 video conferencing system supports up to 2-way video calls and an additional voice call (an original caller and two other sites).

You can import an 8-way conference license to extend the VC400/VC120 to support 8-way video calls and an additional voice call (an original caller and eight other sites). 8-way conference license is configurable via web user interface only.

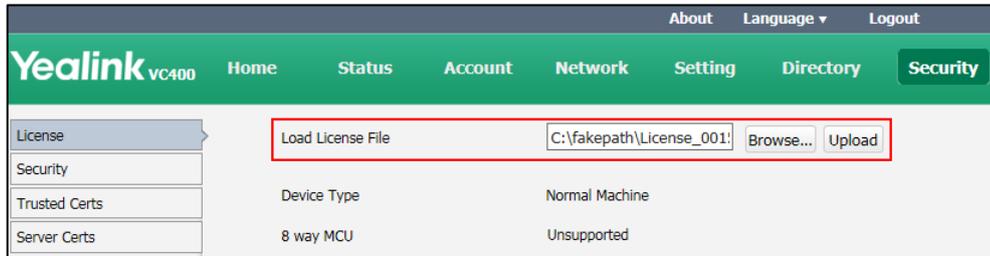
VC400/VC120 supports a permanent version of the 8-way conference license and a trial version of the 8-way conference license. They have the same feature.

- **Permanent version of the 8-way conference license:** each video conferencing system has a unique license. The license cannot be used for other systems. You need to contact Yealink resellers to purchase it, please provide the MAC address of your VC400/VC120 when purchasing.
- **Trial version of the 8-way conference license:** video conferencing system can share this

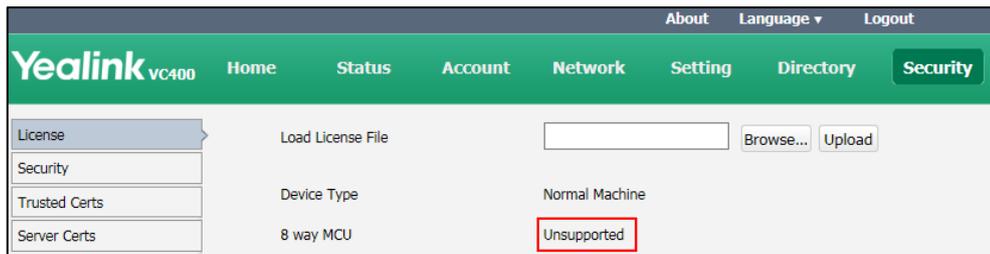
license. You can download a 30-day trial from Yealink website.

**To import the 8-way conference license via web user interface:**

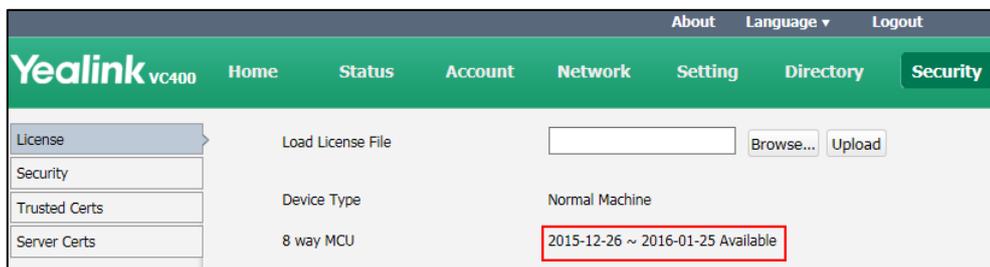
1. Click on **Security** -> **License**.
2. Click **Browse** to locate the 8-way conference license (the file format must be \*.dat) from your local system.



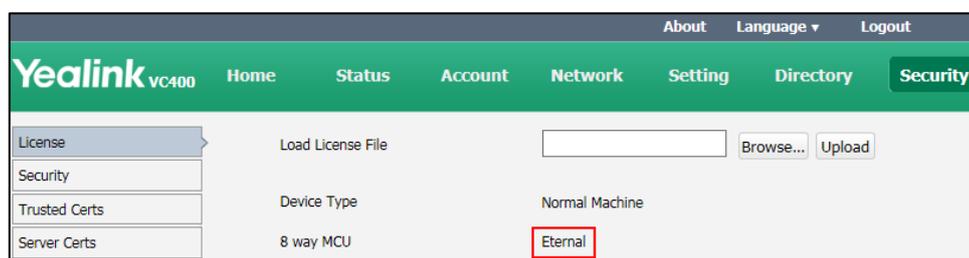
3. Click **Upload** to complete importing the 8-way conference license.
  - If the 8 way MCU displays **Unsupported**, it means you have not imported an 8-way conference license.



- If the 8 way MCU displays **X~Y Available**, it means you have imported a trial version of 8-way conference license. So the VC400/VC120 supports up to 8-way video calls and an additional voice call (an original caller and eight other sites) in X~Y period.



- If the 8 way MCU displays **Eternal**, it means you have imported a permanent version of the 8-way conference license. So the VC400/VC120 supports up to 8-way video calls and an additional voice call (an original caller and eight other sites) permanently.

**Note**

Upgrading the system or performing a factory reset will not affect the imported 8-way license.

If the system has been imported a trial version of the 8-way license and the license has not expired, and you import a permanent version to the system, the permanent version will overwrite the trial version.

If the system has been imported a permanent version of the 8-way license, and you import a trial version to the system, the permanent version will not be overwritten.

## VCS Integrated with Control Systems

The Yealink video conferencing systems provide an API interface for the third-party control system. The interface allows you to control the Yealink video conferencing system through the touch panels installed in the control device.

When you successfully deploy environment and configure the third-party control system, the Yealink video conferencing systems and the control devices, you can remotely manage certain features of your video conferencing system via the control device.

Please visit

<http://support.yealink.com/documentFront/forwardToDocumentDetailPage?documentId=1> to read related documents.

## Configuring Security Features

This chapter provides information for making configuration changes for the following security-related features:

- [User Mode](#)
- [Administrator Password](#)
- [Web Server Type](#)
- [Transport Layer Security](#)
- [Secure Real-Time Transport Protocol](#)
- [H.235](#)
- [Attack Defense in Public Network](#)

### User Mode

Users can access the system menus directly (except the “Advanced” menu) on the display device. The “Advanced” menu requires administrator credentials. You can enable the user mode to provide two levels of access for the menus. You need to configure a password for the user when the user mode is enabled. Users are prompted to enter the password when accessing the menus (except the “Status” menu). After the user mode is enabled, the user can log into the web user interface of the system with user credentials. The default user name is “user”.

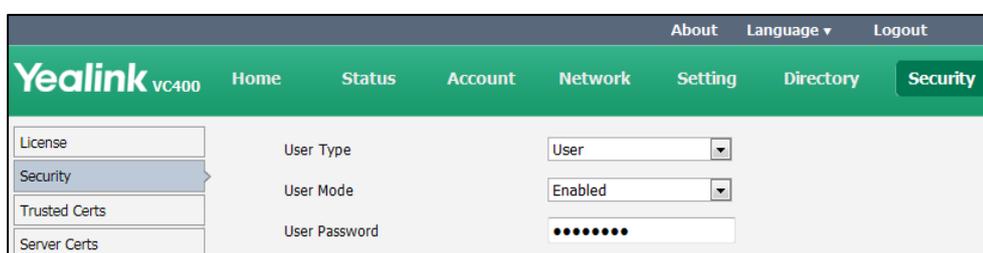
User mode parameters on the system are described below:

Parameter	Description	Configuration Method
<b>User Type</b>	Specifies the user type. <b>Default:</b> Administrator <b>Note:</b> To enable the user mode, you need to select User for this parameter.	Web User Interface
<b>User Mode</b>	Enables or disables the user mode. <b>Default:</b> Disabled <b>Note:</b> It is only applicable to the user mode. The administrator mode is enabled by default.	Web User Interface
<b>User Password</b>	Configures a password for the user to access the menu options or log into the web user interface. <b>Note:</b> It can only be configured	Web User Interface

Parameter	Description	Configuration Method
	when the user mode is enabled. The system supports ASCII characters 32-126(0x20-0x7E) in passwords. You can leave the password blank.	

**To configure user mode via web user interface:**

1. Click on **Security**->**Security**.
2. Select **User** from the pull-down list of **User Type**.
3. Select **Enabled** from the pull-down list of **User Mode**.
4. Configure a password or leave it blank in the **User Password** field.



5. Click **Confirm** to accept the change.

## Administrator Password

The default enabled user type is administrator. Users can log into the web user interface and access the “Advanced” menu option with administrator privilege by default. The default administrator password is “0000” and can be only changed by an administrator. For security reasons, the administrator should change the default administrator password as soon as possible. The system supports ASCII characters 32-126(0x20-0x7E) in passwords.

Administrator password parameters on the system are described below:

Parameter	Description	Configuration Method
<b>User Type</b>	Specifies the user type. <b>Default:</b> Administrator <b>Note:</b> To configure a new administrator password, you need to select Administrator for this parameter.	Web User Interface
<b>Old Password</b>	Enters the old administrator password. <b>Note:</b> The default administrator password is “0000”.	Remote Control Web User Interface

Parameter	Description	Configuration Method
<b>New Password</b>	Configures a new administrator password. <b>Note:</b> You can leave the password blank.	Remote Control Web User Interface
<b>Confirm Password</b>	Enters the new configured administrator password. <b>Note:</b> The entered password must be the same as the one configured by the parameter "New Password".	Remote Control Web User Interface

**To configure administrator password via web user interface:**

1. Click on **Security**->**Security**.
2. Select **Administrator** from the pull-down list of **User Type**.
3. Enter the old administrator password in the **Old Password** field.
4. Enter a new password in the **New Password** field.
5. Enter the new password or leave it blank in the **User Password** field.

6. Click **Confirm** to accept the change.

**To configure administrator password via the remote control:**

1. Select **Menu**->**Advanced** (default password: 0000) ->**Password Reset**.
2. Enter the old password in the **Current Password** field.
3. Configure a new password in the **New Password** and **Confirm Password** fields.
4. Press the **Save** soft key to accept the change.

## Web Server Type

Web server type determines the access protocol of the system's web user interface. The system supports both HTTP and HTTPS protocols for accessing the web user interface. HTTP is an application protocol that runs on top of the TCP/IP suite of protocols. HTTPS is a web protocol that encrypts and decrypts user page requests as well as the pages returned by the web server. Both the HTTP and HTTPS port numbers are configurable.

Web server type parameters on the system are described below:

Parameter	Description	Configuration Method
<b>HTTP</b>	Enables or disables the user to access the web user interface of the system using the HTTP protocol. <b>Default:</b> Enabled <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>HTTP Port</b>	Specifies the HTTP port for the user to access the web user interface of the system. <b>Valid Values:</b> 1-65535 <b>Default:</b> 80 <b>Note:</b> Ensure that the configured port is not used. If you change this parameter, the system will reboot to make the change take effect.	Web User Interface
<b>HTTPS</b>	Enables or disables the user to access the web user interface of the system using the HTTPS protocol. <b>Default:</b> Enabled <b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.	Remote Control Web User Interface
<b>HTTPS Port</b>	Specifies the HTTPS port for the user to access the web user interface of the system. <b>Valid Values:</b> 1-65535 <b>Default:</b> 443 <b>Note:</b> Ensure that the configured port is not used. If you change this parameter, the system will reboot to make the change take effect.	Web User Interface

**To configure web server type via web user interface:**

1. Click on **Network->Advanced**.
2. Select the desired value from the pull-down list of **HTTP**.
3. Enter the desired HTTP port in the **HTTP Port** field.
4. Select the desired value from the pull-down list of **HTTPS**.

5. Enter the desired HTTPS port in the **HTTPS Port** field.

The screenshot shows the Yealink VC400 Network Settings page. The 'Web Server' section is highlighted with a red box. The settings are as follows:

Section	Field	Value
QoS	Audio Priority	60
	Video Priority	34
	Data Priority	63
MTU	Video MTU	1500
SNMP	Active	Disabled
	Port	161
	Trusted Address	
Web Server	HTTP	Enabled
	HTTP Port	80
	HTTPS	Enabled
	HTTPS Port	443
802.1x	802.1x Mode	Disabled
	Identity	
	MD5 Password	.....

6. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
7. Click **Confirm** to reboot the system immediately.

**To configure web server type via the remote control:**

1. Select **Menu**->**Advanced** (default password: 0000) ->**Advanced Network**.
2. Select the desired value from the pull-down list of **Web Server Type**.
3. Press the **Save** soft key to accept the change.  
The display device prompts "Reboot now?".
4. Select **OK** to reboot the system immediately.

## Transport Layer Security

TLS is a commonly-used protocol for providing communications privacy and managing the security of message transmission, allowing the system to communicate with other remote parties and connect to the HTTPS URL for provisioning in a way that is designed to prevent eavesdropping and tampering.

TLS protocol is composed of two layers: TLS Record Protocol and TLS Handshake Protocol. The TLS Record Protocol completes the actual data transmission and ensures the integrity and privacy of the data. The TLS Handshake Protocol allows the server and client to authenticate each other and negotiate an encryption algorithm and cryptographic keys before data is exchanged.

The system supports TLS 1.0. A cipher suite is a named combination of authentication, encryption, and message authentication code (MAC) algorithms used to negotiate the security settings for a network connection using the TLS/SSL network protocol. The system supports the following cipher suites:

- DHE-RSA-AES256-SHA
- DHE-DSS-AES256-SHA
- AES256-SHA
- EDH-RSA-DES-CBC3-SHA
- EDH-DSS-DES-CBC3-SHA
- DES-CBC3-SHA
- DHE-RSA-AES128-SHA
- DHE-DSS-AES128-SHA
- AES128-SHA
- IDEA-CBC-SHA
- DHE-DSS-RC4-SHA
- RC4-SHA
- RC4-MD5
- EXP1024-DHE-DSS-DES-CBC-SHA
- EXP1024-DES-CBC-SHA

- EDH-RSA-DES-CBC-SHA
- EDH-DSS-DES-CBC-SHA
- DES-CBC-SHA
- EXP1024-DHE-DSS-RC4-SHA
- EXP1024-RC4-SHA
- EXP1024-RC4-MD5
- EXP-EDH-RSA-DES-CBC-SHA
- EXP-EDH-DSS-DES-CBC-SHA
- EXP-DES-CBC-SHA
- EXP-RC4-MD5

The following figure illustrates the TLS messages exchanged between the system and TLS server to establish an encrypted communication channel:

No.	Time	Source	Destination	Protocol	Info
1	0.000000	192.168.3.86	192.168.0.230	SSLv3	Client Hello
2	0.021345	192.168.0.230	192.168.3.86	SSLv3	Server Hello, Certificate, Server Key Exchange, Server Hello Done
3	0.954947	192.168.3.86	192.168.0.230	SSLv3	Client Key Exchange, Change Cipher Spec, Encrypted Handshake Message
4	0.970099	192.168.0.230	192.168.3.86	SSLv3	Change Cipher Spec, Encrypted Handshake Message
5	1.012295	192.168.3.86	192.168.0.230	SSLv3	Application Data, Application Data
6	1.013562	192.168.0.230	192.168.3.86	SSLv3	Application Data
7	1.013667	192.168.0.230	192.168.3.86	SSLv3	Application Data

Frame 13: 652 bytes on wire (5216 bits), 652 bytes captured (5216 bits)  
 Ethernet II, Src: Vmware\_72:c9:2e (00:0c:29:72:c9:2e), Dst: Xiamenye\_11:12:b7 (00:15:65:11:12:b7)  
 Internet Protocol, Src: 192.168.0.230 (192.168.0.230), Dst: 192.168.3.86 (192.168.3.86)  
 Transmission Control Protocol, Src Port: https (443), Dst Port: rmsserver (2244), Seq: 1482, Ack: 437, Len: 586  
 Secure Socket Layer

**Step1:** The system sends “Client Hello” message proposing SSL options.

**Step2:** Server responds with “Server Hello” message selecting the SSL options, sends its public key information in “Server Key Exchange” message and concludes its part of the negotiation with “Server Hello Done” message.

**Step3:** The system sends key session information (encrypted by server’s public key) in the “Client Key Exchange” message.

**Step4:** Server sends “Change Cipher Spec” message to activate the negotiated options for all future messages it will send.

The system can encrypt SIP with TLS, which is called SIPS. When TLS is enabled for the SIP account, the message of the SIP account will be encrypted after the successful TLS negotiation.

## Certificates

The system can serve as a TLS client or a TLS server. The TLS requires the following security certificates to perform the TLS handshake:

- **Trusted Certificate:** When the system requests a TLS connection with a server, the system should verify the certificate sent by the server to decide whether it is trusted based on the trusted certificates list. The system has 33 built-in trusted certificates. You can upload up to 10 custom certificates to the system. The format of the certificates must be \*.pem, \*.cer, \*.crt and \*.der. For more information on 33 trusted certificates, refer to [Appendix B: Trusted](#)

[Certificates](#) on page 278.

- **Server Certificate:** When clients request a TLS connection with the system, the system sends the server certificate to the clients for authentication. The system has two types of built-in server certificates: a unique server certificate and a generic server certificate. You can only upload one server certificate to the system. The old server certificate will be overridden by the new one. The format of the server certificate files must be \*.pem and \*.cer.
  - **A unique server certificate:** It is installed by default and is unique to a system (based on the MAC address) and issued by the Yealink Certificate Authority (CA).
  - **A generic server certificate:** It is installed by default and is issued by the Yealink Certificate Authority (CA). Only if no unique certificate exists, the system may send a generic certificate for authentication.

The system can authenticate the server certificate based on the trusted certificates list. The trusted certificates list and the server certificates list contain the default and custom certificates. You can specify the type of certificates the system accepts: default certificates, custom certificates, or all certificates.

Common Name Validation feature enables the system to mandatorily validate the common name of the certificate sent by the connecting server. And Security verification rules are compliant with RFC 2818.

TLS parameters on the system are described below:

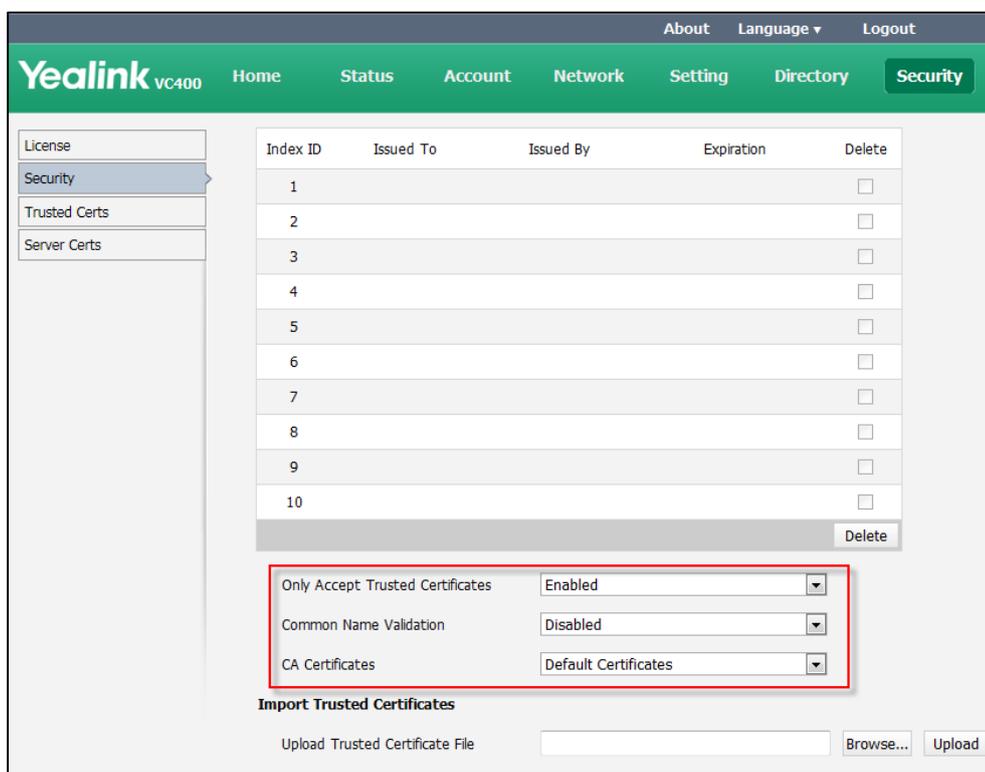
Parameter	Description	Configuration Method
<b>Transport</b>	<p>Configures the type of transport protocol. You can configure it for the Zoom/Pexip/BlueJeans/Mind/Custom platform, or SIP account separately.</p> <ul style="list-style-type: none"> <li>• <b>UDP</b>—provides best-effort transport via UDP for the SIP signaling.</li> <li>• <b>TCP</b>—provides reliable transport via TCP for SIP signaling.</li> <li>• <b>TLS</b>—provides secure communication for SIP signaling.</li> <li>• <b>DNS-NAPTR</b>—performs the DNS NAPTR and SRV queries for the service type and port if no server port is given.</li> </ul> <p><b>Default:</b>                      For Zoom/Pexip/BlueJeans/Mind/Custom platform, the default value is TCP.                      For SIP account, the default value is UDP.</p>	<p>Remote Control Web User Interface</p>

Parameter	Description	Configuration Method
	<p><b>Note:</b> You cannot configure it for the Yealink/StarLeaf Cloud platform.</p>	
<b>Only Accept Trusted Certificates</b>	<p>Enables or disables the system to only trust the server certificates in the Trusted Certificates list.</p> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If it is enabled, the system will authenticate the server certificate based on the trusted certificates list. Only when the authentication succeeds, will the system trust the server.</p> <p>If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>Common Name Validation</b>	<p>Enables or disables the system to mandatorily validate the CommonName or SubjectAltName of the certificate sent by the server.</p> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>CA Certificates</b>	<p>Configures the type of certificates in the Trusted Certificates list for the system to authenticate for the TLS connection.</p> <ul style="list-style-type: none"> <li>• <b>Default Certificates</b></li> <li>• <b>Custom Certificates</b></li> <li>• <b>All Certificates</b></li> </ul> <p><b>Default:</b> Default Certificates</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>Upload Trusted Certificate File</b>	<p>Upload the custom CA certificate to the system.</p> <p><b>Note:</b> A maximum of 10 CA certificates can be uploaded to the system. The certificate you want to upload must be in *.pem, *.crt, *.cer or *.der format.</p>	Web User Interface
<b>Device</b>	Upload the customized CA certificate to the	Web User Interface

Parameter	Description	Configuration Method
<b>Certificates</b>	<p>system.</p> <ul style="list-style-type: none"> <li><b>Default Certificates</b></li> <li><b>Custom Certificates</b></li> </ul> <p><b>Default:</b> Default Certificates</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	
<b>Upload Server Certificate File</b>	<p>Upload the custom device certificate to the system.</p> <p><b>Note:</b> Only one device certificate can be uploaded to the system. The device certificate you want to upload must be in *.pem or *.cer format.</p>	Web User Interface

**To configure the trusted certificate feature via web user interface:**

1. Click on **Security->Trusted Certs.**
2. Select the desired value from the pull-down list of **Only Accept Trusted Certificates.**
3. Select the desired value from the pull-down list of **Common Name Validation.**
4. Select the desired value from the pull-down list of **CA Certificates.**



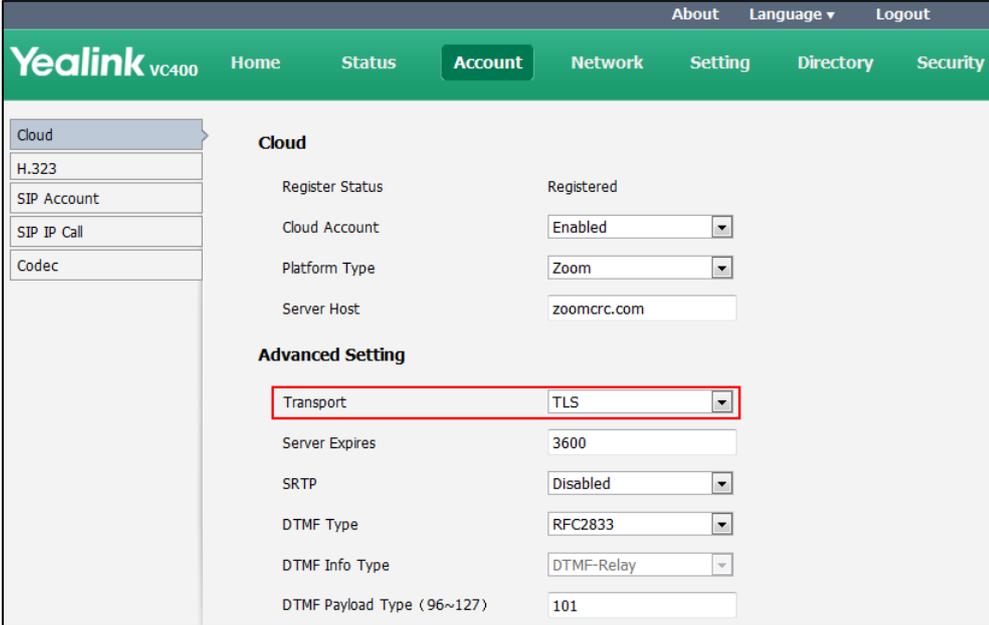
5. Click **Confirm** to accept the change.

A dialog box pops up to prompt that the settings will take effect after a reboot.

6. Click **Confirm** to reboot the system immediately.

**To configure TLS for the Zoom/Pexip/BlueJeans/Mind/Custom platform via web user interface:**

1. Click on **Account->Cloud**
2. Select **Zoom/Pexip/BlueJeans/Mind/Custom** from the pull-down list of **Platform Type**.
3. Select **TLS** from the pull-down list of the **Transport**.



The screenshot displays the Yealink VC400 web user interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account', 'Network', 'Setting', 'Directory', and 'Security'. The 'Account' section is active, showing a sidebar with 'Cloud', 'H.323', 'SIP Account', 'SIP IP Call', and 'Codec'. The 'Cloud' configuration page is shown, with the following settings:

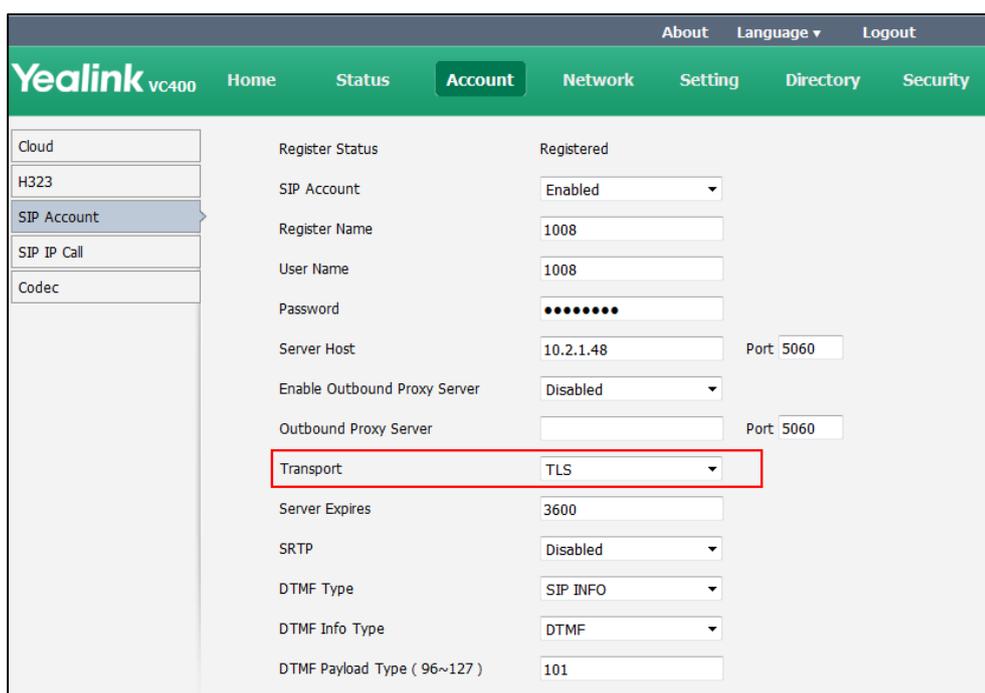
Cloud	
Register Status	Registered
Cloud Account	Enabled
Platform Type	Zoom
Server Host	zoomcrc.com
Advanced Setting	
Transport	TLS
Server Expires	3600
SRTP	Disabled
DTMF Type	RFC2833
DTMF Info Type	DTMF-Relay
DTMF Payload Type (96~127)	101

4. Click **Confirm** to accept the change.

**To configure TLS for the SIP account via web user interface:**

1. Click on **Account->SIP Account**.

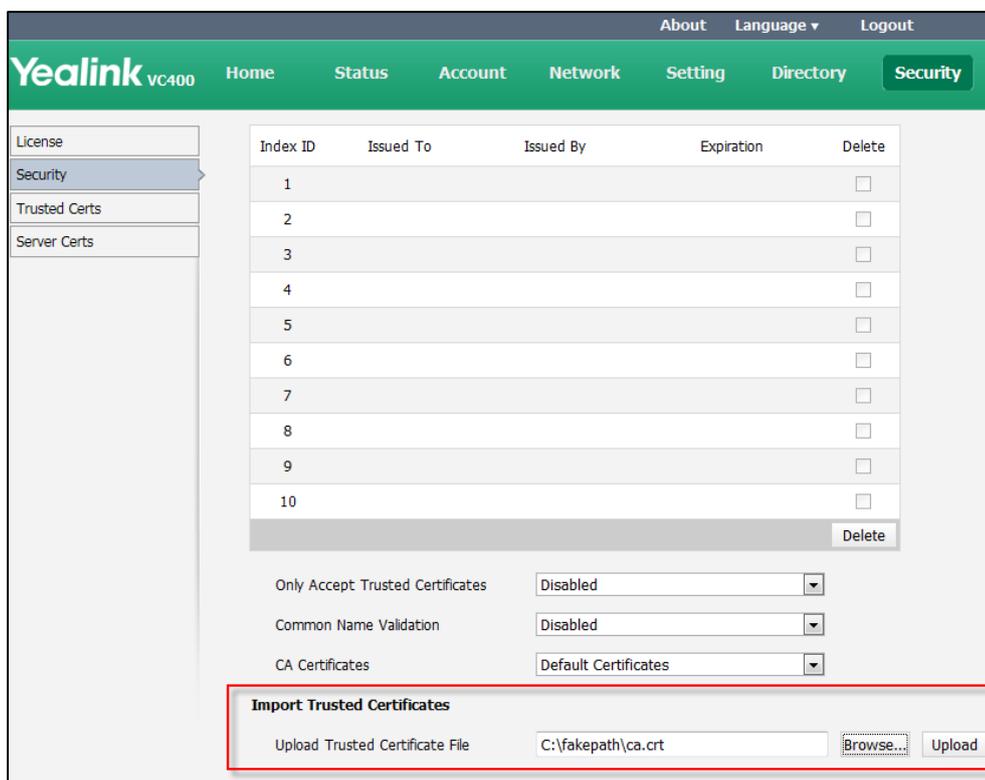
2. Select **TLS** from the pull-down list of the **Transport**.



3. Click **Confirm** to accept the change.

**To upload a CA certificate via web user interface:**

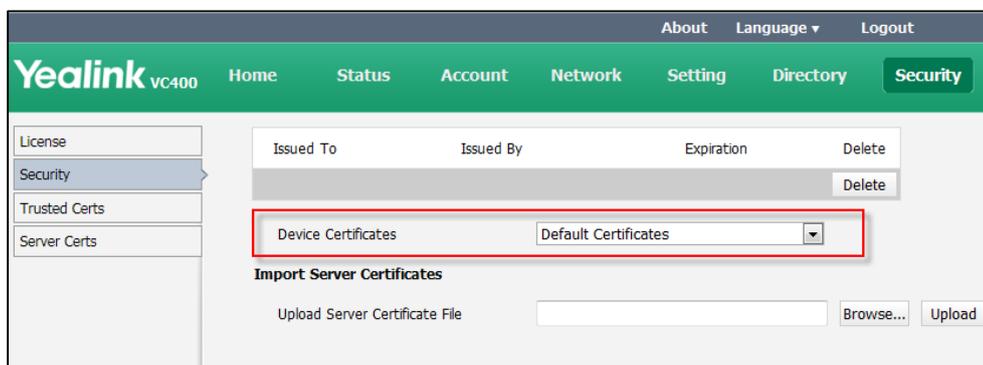
1. Click on **Security->Trusted Certs**.
2. Click **Browse** to locate the certificate (\*.pem,\*.cert, \*.cer or \*.der) from your local system.



3. Click **Upload** to upload the certificate.

**To configure the device certificate via web user interface:**

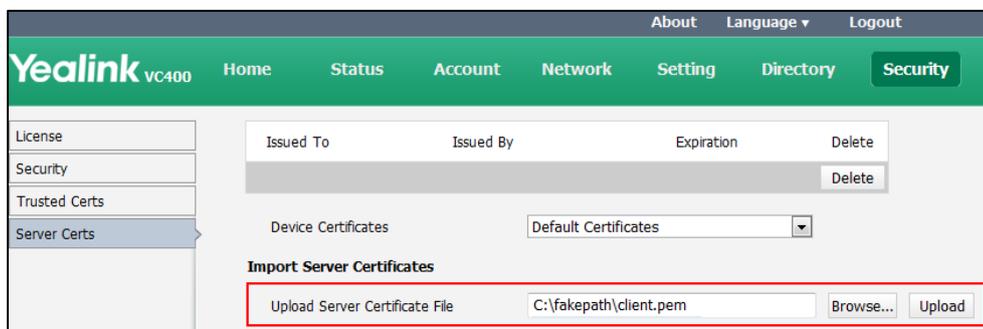
1. Click on **Security->Server Certs**.
2. Select the desired value from the pull-down list of **Device Certificates**.



3. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
4. Click **Confirm** to reboot the system immediately.

**To upload a device certificate via web user interface:**

1. Click on **Security->Server Certs**.
2. Click **Browse** to locate the certificate (\*.pem or \*.cer) from your local system.



3. Click **Upload** to upload the certificate.

## Secure Real-Time Transport Protocol

During a confidential call, you can configure Secure Real-Time Transport Protocol (SRTP) to encrypt RTP streams to avoid interception and eavesdropping. Both RTP and RTCP signaling may be encrypted using an AES algorithm as described in RFC3711. Encryption modifies the data in the RTP streams so that, if the data is captured or intercepted, it cannot be understood—it sounds like noise. Only the receiver knows the key to restore the data. To use SRTP encryption for SIP calls, the participants in the call must enable SRTP simultaneously. When this feature is enabled on both systems, the encryption algorithm utilized for the session is negotiated between the systems. This negotiation process is compliant with RFC 4568.

When a site places a call on the SRTP enabled system, the system sends an INVITE message with the RTP encryption algorithm to the destination system.

The following is an example of the RTP encryption algorithm carried in the SDP of the INVITE message:

```
m=audio 11780 RTP/SAVP 0 8 18 9 101
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:NzFINTUwZDk2OGVIOTc3YzNkYTkwZWVkmMTM1YWFj
a=crypto:2 AES_CM_128_HMAC_SHA1_32
inline:NzkyM2FjNzQ2ZDgxYjg0MzQwMGVmMGUxMzdmNWVm
a=crypto:3 F8_128_HMAC_SHA1_80 inline:NDliMWIzZGE1ZTAwZjA5ZGFhNjQ5YmEANTMzYzA0
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:18 G729/8000
a=fmtp:18 annexb=no
a=rtpmap:9 G722/8000
a=fmtp:101 0-15
a=rtpmap:101 telephone-event/8000
a=ptime:20
a=sendrecv
```

The callee receives the INVITE message with the RTP encryption algorithm, and then answers the call by responding with a 200 OK message which carries the negotiated RTP encryption algorithm.

The following is an example of the RTP encryption algorithm carried in the SDP of the 200 OK message:

```
m=audio 11780 RTP/SAVP 0 101
a=rtpmap:0 PCMU/8000
a=rtpmap:101 telephone-event/8000
a=crypto:1 AES_CM_128_HMAC_SHA1_80 inline:NGY4OGViMDYzZjQzYTNiOTNkOWRiYzRiMjM0Yzcy
a=sendrecv
a=ptime:20
a=fmtp:101 0-15
```

The SRTP parameter on the system is described below:

Parameter	Description	Configuration Method
<b>SRTP</b>	Specifies the SRTP type. You can configure it for the Zoom/Pexip/BlueJeans/Mind/Custom platform, SIP account or SIP IP call separately.	Web User Interface

Parameter	Description	Configuration Method
	<ul style="list-style-type: none"> <li>• <b>Disabled</b>—do not use SRTP in SIP calls.</li> <li>• <b>Optional</b>—negotiate with the far site whether to use SRTP for media encryption in SIP calls.</li> <li>• <b>Compulsory</b>—compulsory use SRTP for media encryption in SIP calls.</li> </ul> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> You cannot configure it for the Yealink/StarLeaf Cloud platform.</p>	

Rules of SRTP for media encryption in SIP calls:

Far \ Near	Compulsory	Optional	Disabled
Compulsory	SRTP Call	SRTP Call	Fail to establish call
Optional	SRTP Call	SRTP Call	RTP Call
Disabled	Fail to establish call	RTP Call	RTP Call

When SRTP is enabled on both systems, RTP streams will be encrypted, and the lock icon  appears on the display device of each system after successful negotiation.

#### Note

If SRTP is enabled for the Cloud platform or SIP account, you should also configure the transport type to TLS. This ensures the security of SRTP encryption. For more information on TLS, refer to [Transport Layer Security](#) on page 232.

**To configure SRTP for Zoom/Pexip/BlueJeans/Mind/Custom platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **Zoom/Pexip/BlueJeans/Mind/Custom** from the pull-down list of **Platform Type**.

3. Select the desired value from the pull-down list of **SRTP**.

The screenshot shows the Yealink VC400 web interface. The top navigation bar includes 'About', 'Language', and 'Logout'. The main menu has 'Home', 'Status', 'Account' (selected), 'Network', 'Setting', 'Directory', and 'Security'. On the left, a sidebar menu lists 'Cloud', 'H.323', 'SIP Account', 'SIP IP Call', and 'Codec'. The main content area is titled 'Cloud' and contains the following settings:

Register Status	Registered
Cloud Account	Enabled
Platform Type	Zoom
Server Host	zoomcrc.com
<b>Advanced Setting</b>	
Transport	TCP
Server Expires	3600
<b>SRTP</b>	<b>Compulsory</b>
DTMF Type	RFC2833
DTMF Info Type	DTMF-Relay
DTMF Payload Type (96~127)	101
Keep Alive Interval	30
BFCP	Enabled
FECC(SIP)	Enabled

4. Click **Confirm** to accept the change.

**To configure SRTP for SIP account via web user interface:**

1. Click on **Account->SIP Account**.
2. Select the desired value from the pull-down list of **SRTP**.

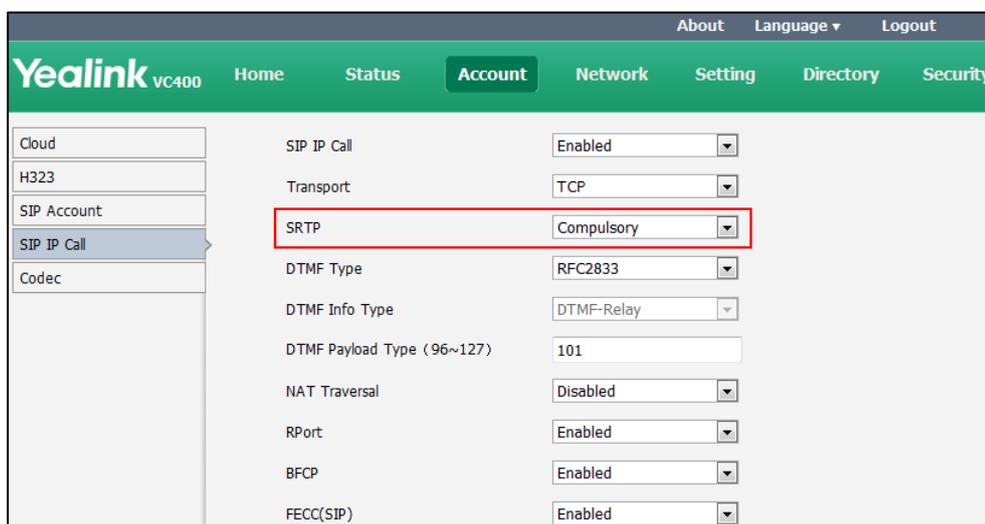
The screenshot shows the Yealink VC400 web interface with the 'SIP Account' settings page selected. The top navigation bar and main menu are the same as in the previous screenshot. The left sidebar menu now highlights 'SIP Account'. The main content area contains the following settings:

Register Status	Registered	
SIP Account	Enabled	
Username	9000	
Register Name	9000	
Password	••••••••	
Server Host	10.2.1.48	Port 5060
Enable Outbound Proxy Server	Disabled	
Outbound Proxy Server		Port 5060
Transport	UDP	
Server Expires	3600	
<b>SRTP</b>	<b>Compulsory</b>	
DTMF Type	RFC2833	
DTMF Info Type	DTMF-Relay	
DTMF Payload Type (96~127)	101	
NAT Traversal	Disabled	

3. Click **Confirm** to accept the change.

**To configure SRTP for SIP IP call via web user interface:**

1. Click on **Account->SIP IP Call**.
2. Select the desired value from the pull-down list of **SRTP**.



3. Click **Confirm** to accept the change.

## H.235

Yealink video conferencing systems support H.235 128-bit AES algorithm using the Diffie-Hellman key exchange protocol in H.323 calls. To use H.235 feature for H.323 calls, the participants in the call must enable the H.235 feature simultaneously. When a site places a call on the H.235 feature enabled system, the system negotiates the encryption algorithm with the destination system.

The H.235 parameter on the system is described below:

Parameter	Description	Configuration Method
<b>H.235 Encryption</b>	<p>Specifies the H.235 type. You can configure it for the StarLeaf Cloud platform or H.323 call separately.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>—do not use H.235 in H.323 calls.</li> <li>• <b>Optional</b>—negotiate with the far site whether to use H.235 in H.323 calls.</li> <li>• <b>Compulsory</b>—compulsively use H.235 in H.323 calls.</li> </ul> <p><b>Default:</b> Disabled</p>	Web User Interface

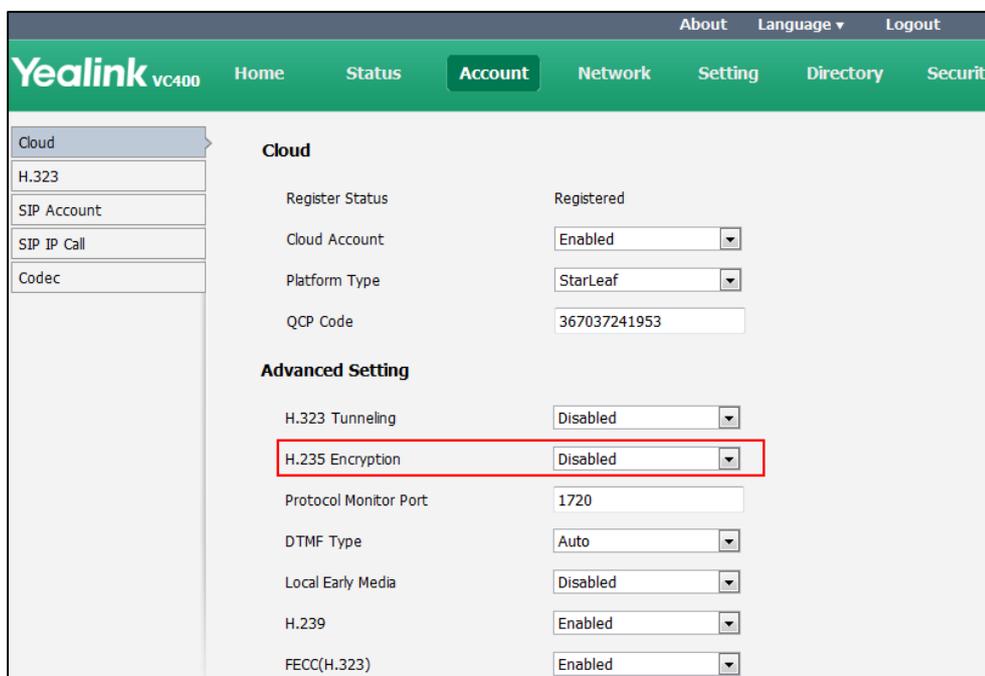
Rules of H.235 security in H.323 calls:

Far \ Near	Compulsory	Optional	Disabled
Compulsory	H.235 Call	H.235 Call	Fail to establish call
Optional	H.235 Call	H.235 Call	RTP Call
Disabled	Fail to establish a call	RTP Call	RTP Call

When H.235 is enabled on both systems, calls will be encrypted, and the lock icon  appears on the display device of each system during a call.

**To configure H.235 for StarLeaf Cloud platform via web user interface:**

1. Click on **Account->Cloud**.
2. Select **StarLeaf** from the pull-down list of **Platform Type**.
3. Select the desired value from the pull-down list of **H.235 Encryption**.



4. Click **Confirm** to accept the change.

**To configure H.235 for H.323 via web user interface:**

1. Click on **Account->H.323**.

- Select the desired value from the pull-down list of **H.235 Encryption**.

The screenshot shows the Yealink VC400 web interface. The 'Account' tab is selected. On the left sidebar, 'H323' is highlighted. The main configuration area shows various H.323 settings. The 'H.235 Encryption' dropdown menu is highlighted with a red box and is set to 'Compulsory'. Other settings include 'Register Status' (Registered), 'H323 Protocol' (Enabled), 'H.323 Account' (Enabled), 'H.323 Name' (9000), 'H.323 Extension' (9000), 'Gatekeeper Mode' (Manual), 'Gatekeeper IP Address 1' (10.2.1.43) with Port 1719, 'Gatekeeper IP Address 2' (empty) with Port 1719, 'Gatekeeper Authentication' (Disabled), 'Gatekeeper Username' (empty), 'Gatekeeper Password' (masked), 'H.460 Active' (Disabled), 'H.323 Tunneling' (Disabled), and 'Protocol Monitor Port' (1720).

- Click **Confirm** to accept the change.

## Attack Defense in Public Network

VoIP phones often suffer from network attacks in public network, which results in communication failure. To ensure the safety of the enterprise VoIP phone, you can configure abnormal call answering feature for handling abnormal calls using the SIP protocol. For abnormal calls using the H.323 protocol, you can configure safe mode call feature to handle them.

### Abnormal Call Answering

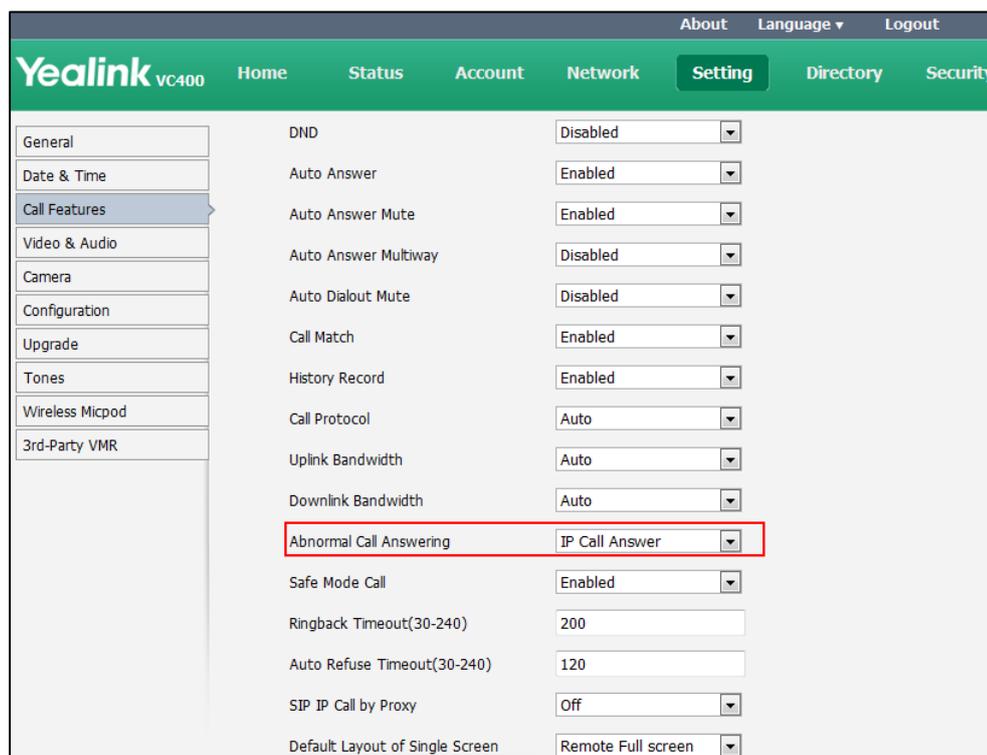
The abnormal call answering parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Abnormal Call Answering</b>	<p>Specifies the account type for answering SIP incoming call</p> <p>Specifies the account type for answering SIP incoming call from public network.</p> <ul style="list-style-type: none"> <li><b>Disabled</b>—reject the SIP incoming call from public</li> </ul>	Web User Interface

Parameter	Description	Configuration Method
	<p>network.</p> <ul style="list-style-type: none"> <li>• <b>Account Answer</b>—use first SIP account to answer the SIP incoming call from public network.</li> <li>• <b>IP Call Answer</b>—use IP to answer the SIP incoming call from public network.</li> </ul> <p><b>Default:</b> IP Call Answer</p>	

To configure abnormal call answering via web user interface:

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Abnormal Call Answering**.



3. Click **Confirm** to accept the change.

## Configuring Safe Mode Call

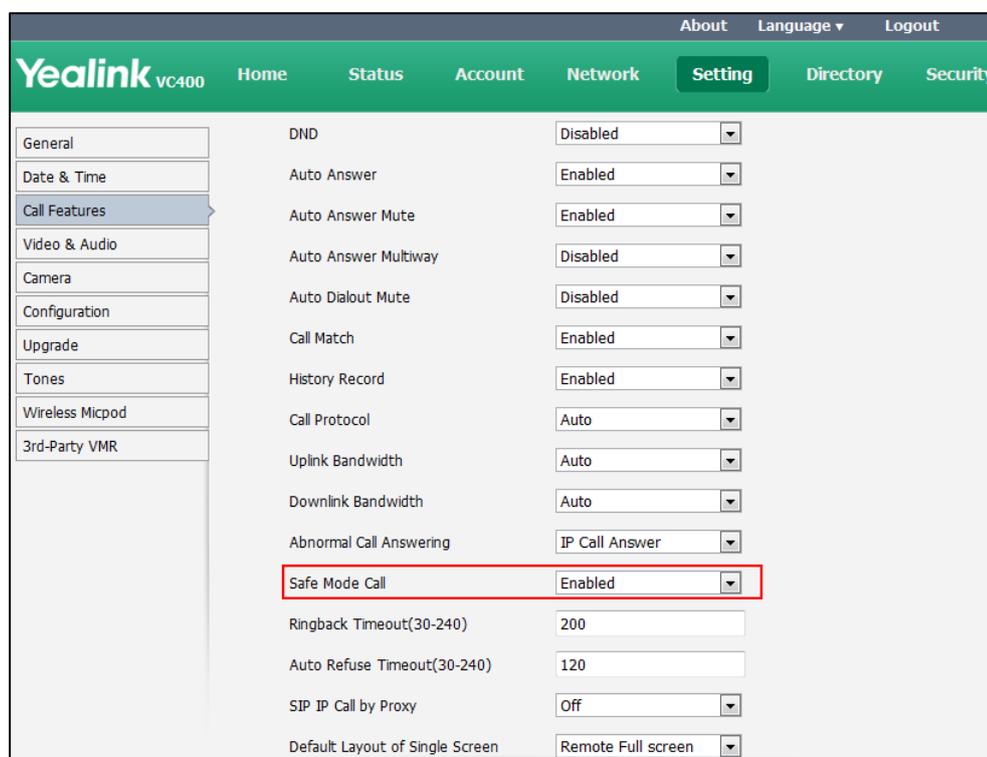
You can configure safe mode call feature to handle abnormal H.323 calls.

The safe mode call parameters on the system are described below:

Parameter	Description	Configuration Method
<b>Safe Mode Call</b>	<p>Enables or disables the safe mode call feature for H.323 incoming call from public network.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>—do not use safe mode call.</li> <li>• <b>Enabled</b>—use safe mode call.</li> </ul> <p><b>Default:</b> Enabled</p> <p><b>Note:</b> If it is enabled, the system will reject H.323 incoming call from public network. If it is disabled, any H.323 incoming call from public network can be accepted.</p>	Web User Interface

**To configure safe mode call via web user interface:**

1. Click on **Setting->Call Features**.
2. Select the desired value from the pull-down list of **Safe Mode Call**.



3. Click **Confirm** to accept the change.



## System Maintenance

This chapter provides basic system maintenance, including upgrading firmware, managing configurations, resetting systems and how to monitor network via SNMP. Topics include:

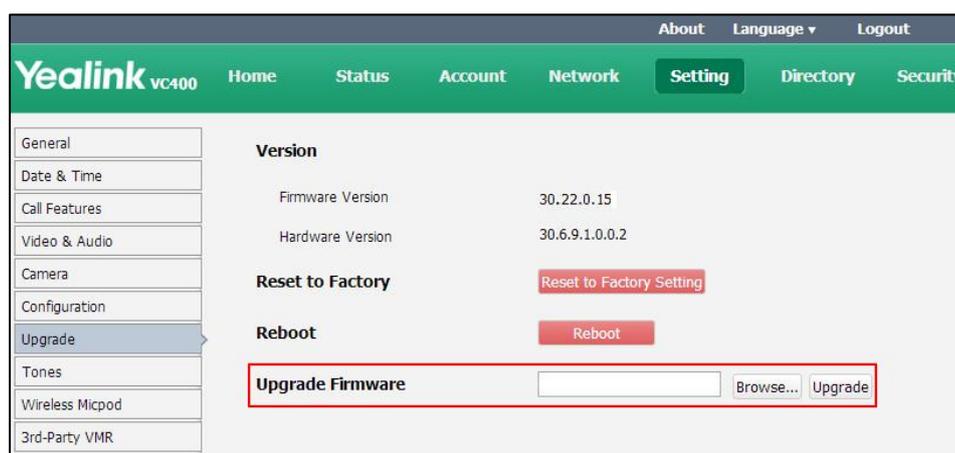
- [Upgrading System Firmware](#)
- [Upgrading VCC20 Camera Firmware](#)
- [Importing/Exporting Configuration](#)
- [Resetting to Factory](#)
- [SNMP](#)

### Upgrading System Firmware

The newly released firmware version may add new features. Because of this, Yealink recommends you to update the latest firmware. You can upgrade the system firmware via web user interface. The firmware name of the VC400 video conferencing system is: 30.x.x.x.rom (x is the actual firmware version), the firmware name of the VC120 video conferencing system is: 40.x.x.x.rom (x is the actual firmware version). You can download the latest firmware version from the Yealink website.

**To upgrade firmware via web user interface:**

1. Click on **Setting**->**Upgrade**.
2. Click **Browse** to locate the firmware from your local system.



3. Click **Upgrade** to upgrade the firmware.

The browser pops up the dialog box "Firmware of the video conference system will be updated. It will take 5 minutes to complete. Please don't power off!".

4. Click **Confirm** to confirm upgrading.

**Note**

**Caution!** Don't remove the Ethernet cable and power cord during the upgrade process. Don't close or refresh the web page when upgrading the firmware via web user interface.

## Upgrading VCC20 Camera Firmware

Camera firmware is included in the system firmware. The VCC20 camera will upgrade automatically in one the following situations:

- The VCC20 camera has been connected to the VC120 Codec. When you upgrade the VC120 video conferencing system, the VCC20 camera will upgrade automatically.
- After you upgrade the VC120 video conferencing system, and then you connect the VCC20 camera to the VC120 Codec with the supplied DVI cable. The VCC20 will detect the new firmware, and upgrade automatically.

When the VCC20 is updating, the display device prompts "The camera is updating, do not plug out the camera, please waiting..."

**Note**

If you connect two VCC20 cameras to the VC400/120 Codec using the VC Dual-camera Box VCB20 (You should purchase it separately if necessary), the firmware of Camera 1 will be upgraded automatically by default. Only when you change video input resource to Camera 2, will the Camera 2 be upgraded.

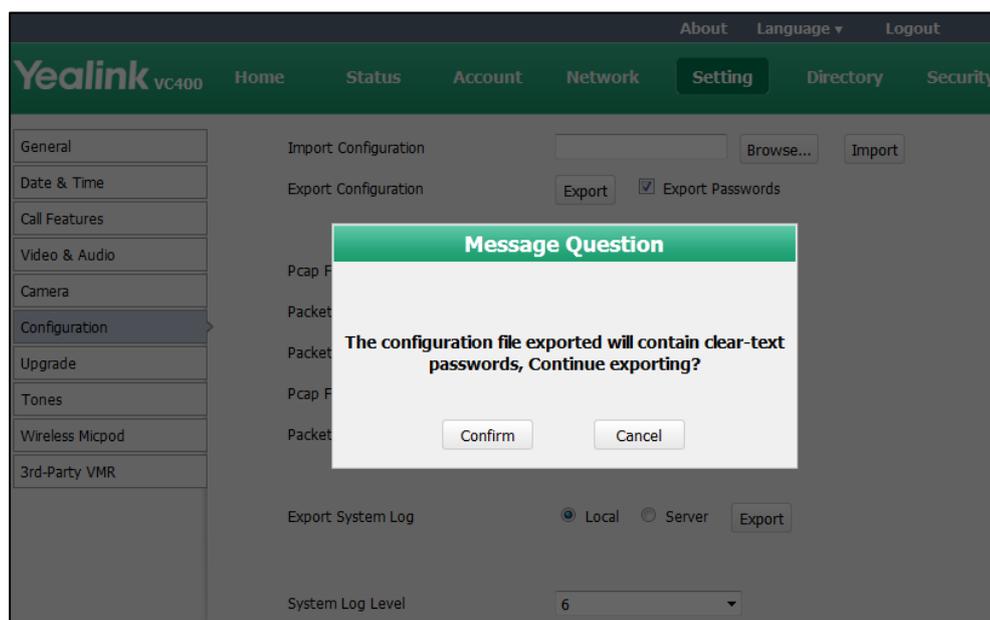
## Importing/Exporting Configuration

We may need you to provide the system configurations for the Yealink field application engineers to help analyze problems. You can import configurations to your system to configure your system quickly. The file format of configuration file must be \*.bin.

**To export the system configurations via web user interface:**

1. Click on **Setting**->**Configuration**.
2. Check or uncheck the **Export Passwords** checkbox according to actual demand.
3. Click **Export**.

If you check the **Export Passwords** checkbox, the web user interface is shown below:



4. Click **Confirm** to export the configurations.

**To import the phone configurations via web user interface:**

1. Click on **Setting**->**Configuration**.
2. Click **Browse** to locate a configuration file from your local system.
3. Click **Import** to import the configuration file.

## Resetting to Factory

Reset the system to factory configurations after you have tried all appropriate troubleshooting suggestions but still have not solved your problems.

When factory resetting the video system, the following happens:

- The call logs will be deleted.
- Passwords will be reset to default.
- All system parameters will be reset to default values.
- All custom files will be deleted. Such as, certificates, local contacts and registered accounts.

It is not possible to undo a factory reset. But you can export the configuration first, and then you can re-import the configuration to recovery the system after the reset.

You can reset the system via the reset key on the VC400/VC120 codec, remote control or web user interface.

### Note

Reset of the system may take a few minutes. Do not power off until the phone starts up successfully.

**To reset the system via web user interface:**

1. Click on **Setting**->**Upgrade**.
2. Click **Reset to Factory Setting** in the **Reset to Factory** field.  
The web user interface prompts the message "Reset your machine?".
3. Click **Confirm** to confirm the resetting.

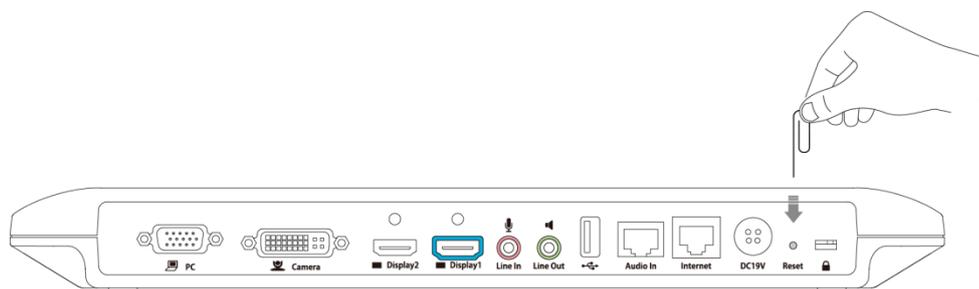
**To reset the system via the remote control:**

1. Select **Menu** ->**Advanced** (default password: 0000)->**Reboot & Reset**
2. Select **Reset**, and then press  .  
The display device prompts "Reset to Factory?".
3. Select **OK**, and then press  .  
The system reboots automatically. The system will reset to factory successfully after startup.

**To reset the system via the rest key on the VC400/VC120 codec:**

Using tiny objects (for example, the paper clip) to press and hold the reset button for 15 seconds until the screen turns black.

Do not power off the system during the factory restore process. The system reverts to the default factory settings and restarts automatically. This will take a few minutes.



## SNMP

SNMP (Simple Network Management Protocol) is an Internet-standard protocol for managing devices on IP networks. It is used mostly in network management systems to monitor network-attached devices for conditions that warrant administrative attention. SNMP exposes management data in the form of variables on the managed systems, which describe the system configuration. These variables can then be queried (and sometimes set) by managing applications. The variables accessible via SNMP are organized in hierarchies, which are described by Management Information Bases (MIBs).

Yealink systems support SNMPv1 and SNMPv2. They act as SNMP clients, receiving requests from the SNMP server. The SNMP server may send requests from any available source port to the configured port on the client, while the client responds to the source port on the SNMP server. Yealink systems only support the GET request from the SNMP server.

You can download SNMP application to monitor and manage information on a network entity. The following table lists the basic object identifiers (OIDs) supported by the system.

MIB	OID	Description
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.1.0	The textual identification of the contact person for the system, together with the contact information. For example, Sysadmin (root@localhost)
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.2.0	An administratively-assigned name for the system. If the name is unknown, the value is a zero-length string. For example, Yealink VC400.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.3.0	The physical location of the system. For example, Server Room
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.4.0	The time (in milliseconds) since the network management portion of the system was last re-initialized.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.5.0	The firmware version of the system.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.6.0	The hardware version of the system.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.7.0	The system's model.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.8.0	The MAC address of the system.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.9.0	The IP address of the system.
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.10.0	The target version to which the current version is updated automatically. Format: MacVersion[*]ComVersion[*] For example, MacVersion[0.0.0.1]ComVersion[0.0.0.1]
YEALINK-MIB	1.3.6.1.2.1.37459.2.1.11.1.0	The command of the system reboot. Format: snmpset -v 2c XXXX public 37459.2.1.11.0 s reboot XXXX refers to the IP address of the system.

SNMP parameters on the system are described below:

Parameter	Description	Configuration Method
<b>SNMP-&gt;Active</b>	<p>Enables or disables SNMP feature on the system.</p> <p><b>Default:</b> Disabled</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>Port</b>	<p>Specifies the SNMP port.</p> <p><b>Valid Values:</b> 1-65535</p> <p><b>Default:</b> 161</p> <p><b>Note:</b> If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface
<b>Trusted Address</b>	<p>Configures IP address(es) or domain name of the trusted SNMP server.</p> <p>Multiple IP addresses or domain names should be separated by spaces.</p> <p><b>Note:</b> If it is left blank, the system accepts and handles GET requests from any SNMP server.</p> <p>If you change this parameter, the system will reboot to make the change take effect.</p>	Web User Interface

**To configure SNMP via web user interface:**

1. Click on **Network->Advanced**.
2. In the **SNMP** block, select **Enabled** from the pull-down list of **Active**.
3. Enter the SNMP port in the **Port** field.

4. Enter the IP address or domain name of the SNMP server in the **Trusted Address** field.  
Multiple IP addresses or domain names should be separated by spaces.

The screenshot shows the Yealink VC400 Network Settings page. The left sidebar contains navigation options: LAN Configuration, NAT/Firewall, Advanced (selected), and Diagnose. The main content area is divided into several sections:

- QoS**: Audio Priority (60), Video Priority (34), Data Priority (63).
- MTU**: Video MTU (1500).
- SNMP** (highlighted with a red box): Active (Enabled), Port (161), Trusted Address (192.168.10.50 192.168.1.2).
- Web Server**: HTTP (Enabled), HTTP Port (80), HTTPS (Enabled), HTTPS Port (443).
- 802.1x**: 802.1x Mode (Disabled), Identity, MD5 Password, CA Certificates (with Browse... and Upload buttons).

5. Click **Confirm** to accept the change.  
A dialog box pops up to prompt that the settings will take effect after a reboot.
6. Click **Confirm** to reboot the system immediately.



# Troubleshooting

This chapter provides an administrator with general information for troubleshooting some common problems that he (or she) may encounter while using the VC400/VC120 video conferencing system.

## Troubleshooting Methods

The system can provide feedback in a variety of forms, such as log files, packets, status indicators and so on, which can help an administrator to find the system problem more easily and resolve it.

The following sections will help you to better understand and resolve the working status of the system.

- [Viewing Log Files](#)
- [Capturing Packets](#)
- [Getting Information from Status Indicators](#)
- [Analyzing Configuration Files](#)
- [Viewing Call Statistics](#)
- [Using Diagnostic Methods](#)

## Viewing Log Files

The log files are Yealink specific debug files which may be requested by the Yealink support organization if you need technical support. The current log files are time stamped event log files. You can export the log files to a syslog server or the local system. The administrator can specify the location where the log will be exported to and the severity level of the log.

System Log Level specifies the log level to be recorded. The default system log level is 6.

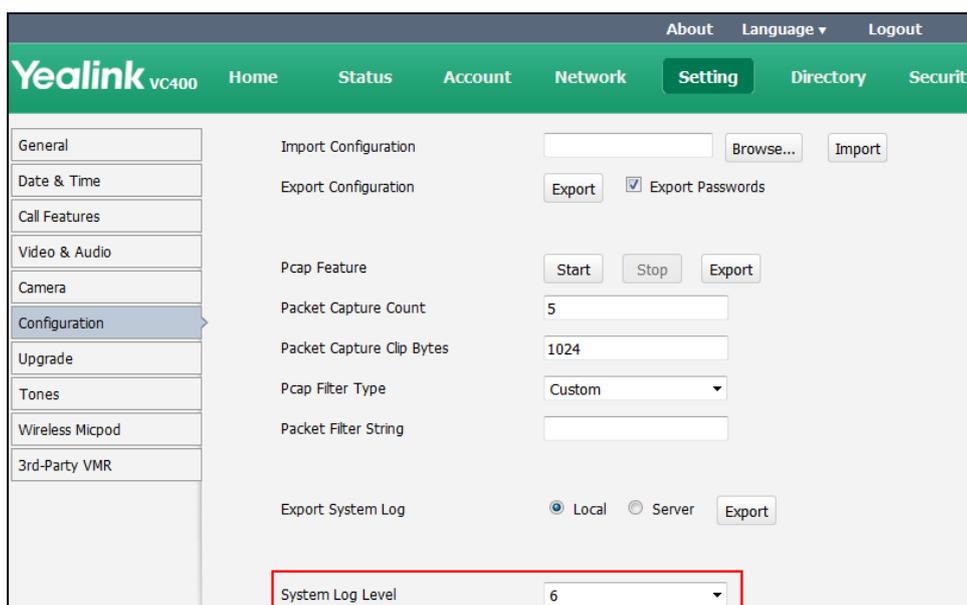
System log level parameters are described below:

Parameter	Description	Configuration Method
<b>Export System Log</b>	Specify where the system log will be exported. <b>Valid values:</b> <ul style="list-style-type: none"> <li>• <b>Local</b>-export the system log to the local computer.</li> <li>• <b>Server</b>-export the system log</li> </ul>	Web User Interface

Parameter	Description	Configuration Method
	to the specified server. <b>Default:</b> Local	
<b>Server Name</b>	Specify the server address where the log will be exported. <b>Note:</b> It only works if the parameter "Export System Log" is set to Server.	Web User Interface
<b>System Log Level</b>	Specify the system log level. <b>Note:</b> The supported level is 0-9. Higher value indicates more detailed content. <b>Default:</b> 6	Web User Interface

**To configure the system log level via web user interface:**

1. Click on **Setting->Configuration**.
2. Select the desired level from the pull-down list of **System Log Level**.

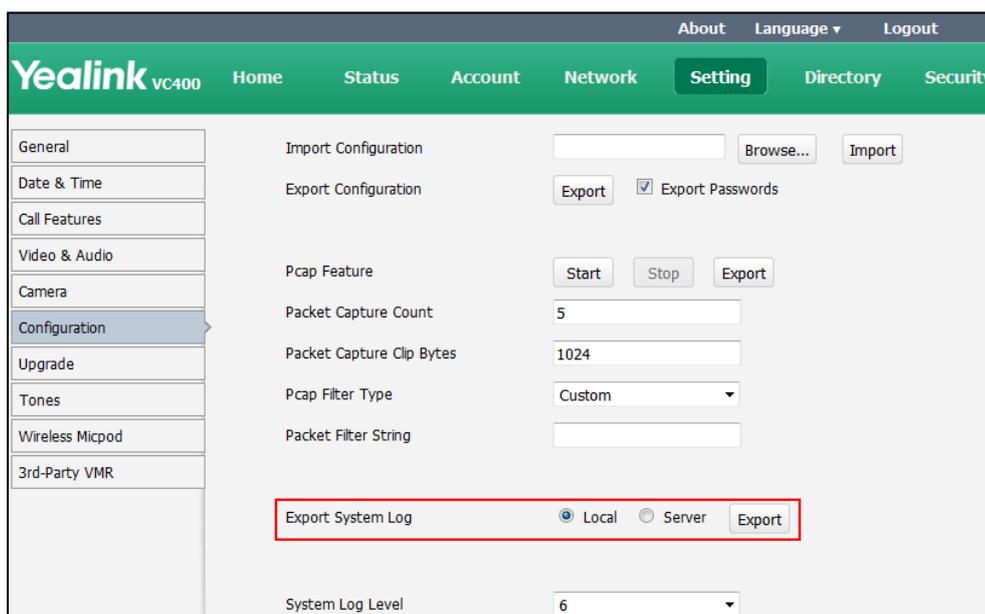


3. Click **Confirm** to accept the change.

**To export a log file to the local system via web user interface:**

1. Click on **Setting->Configuration**.

2. Mark the **Local** radio box In the **Export System Log** field.



3. Click **Export** to open the file download window, and then save the file to your local system.

The following figure shows a portion of a log file:

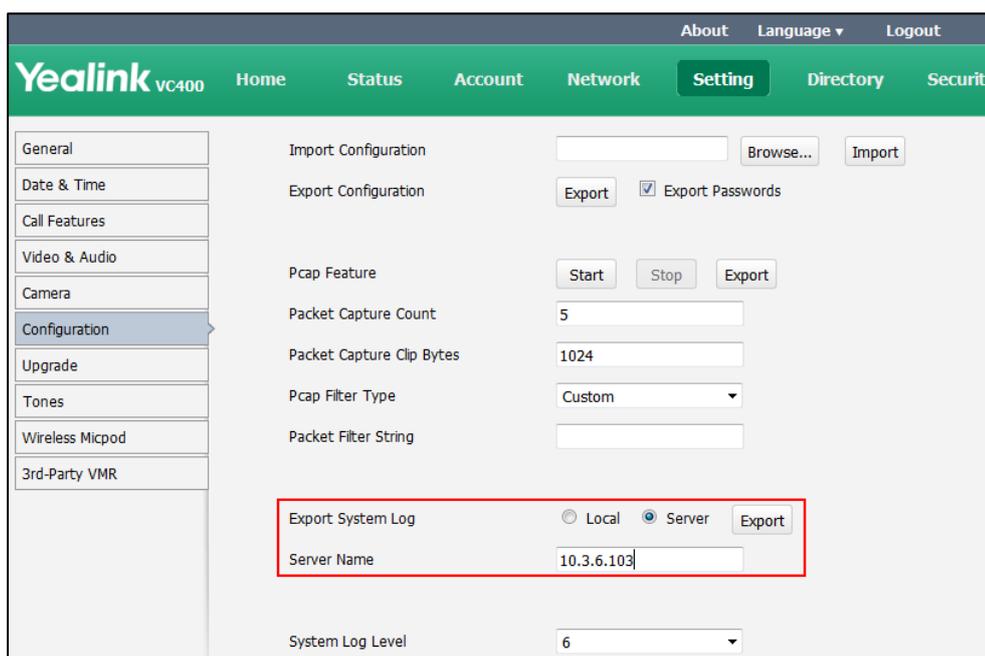
```

496 root      8876 SW    /yealink/bin/ggsvca_ipp
497 root      8876 SW    /yealink/bin/ggsvca_ipp
498 root      8876 SW    /yealink/bin/ggsvca_ipp
499 root      8876 SW    /yealink/bin/ggsvca_ipp
500 root      8876 SW    /yealink/bin/ggsvca_ipp
501 root      8876 SW    /yealink/bin/ggsvca_ipp
507 root      16424 SW   /yealink/bin/Screen.exe
508 root      10344 SW   /yealink/bin/sipServer.exe
509 root      10344 SW   /yealink/bin/sipServer.exe
515 root      16424 SW   /yealink/bin/Screen.exe
517 root      16424 SW   /yealink/bin/Screen.exe
519 root      10344 SW   /yealink/bin/sipServer.exe
521 root      16424 SW   /yealink/bin/Screen.exe
522 root      16424 SW   /yealink/bin/Screen.exe
523 root      16424 SW   /yealink/bin/Screen.exe
524 root      10344 SW   /yealink/bin/sipServer.exe
525 root      SW<    [IRQ 45]
526 root      10344 SW   /yealink/bin/sipServer.exe
527 root      16424 SW   /yealink/bin/Screen.exe
528 root      16424 SW   /yealink/bin/Screen.exe
529 root      16424 SW   /yealink/bin/Screen.exe
1147 root     1788 SWN  sleep 1000
1227 root     10120 SWN  ConfigManApp.com
1228 root      4624 SW   /yealink/bin/mini_httpd -p 80 -d /yealink/html -c cgi
1229 root      2812 SWN  sh -c cd /tmp;ifconfig >> Messages;ps >> Messages;tar
1230 root      2812 RWN  ps
Feb 29 06:01:09 mini_httpd[388]: mini_httpd.c(1510):child process 1227 exit!
Feb 29 06:01:12 mini_httpd[1232]: mini_httpd.c(1997):path:/cgi-bin/ConfigManApp.com, query:Id=27
Feb 29 06:01:12 mini_httpd[388]: mini_httpd.c(1510):child process 1232 exit!
Feb 29 06:01:12 mini_httpd[1233]: mini_httpd.c(1997):path:/cgi-bin/ConfigManApp.com, query:Id=27
Feb 29 06:01:12 mini_httpd[388]: mini_httpd.c(1510):child process 1233 exit!
Feb 29 06:01:12 mini_httpd[1234]: mini_httpd.c(1997):path:/cgi-bin/ConfigManApp.com, query:Id=27
Feb 29 06:01:12 mini_httpd[388]: mini_httpd.c(1510):child process 1234 exit!
    
```

**To export a log file to a syslog server via web user interface:**

1. Click on **Setting->Configuration**.
2. Mark the **Server** radio box in the **Export System Log** field.

3. Enter the IP address or domain name of the syslog server in the **Server Name** field.



A dialog box pops up to prompt that settings will take effect after a reboot.

4. Click **Confirm** to reboot the system immediately.

## Capturing Packets

The administrator can capture packets in three ways: capturing the packets via web user interface, remote control or using the Ethernet software. Engineers can analyze the packets to troubleshoot problems.

Packets parameters are described below:

Parameter	Description	Configuration Method
<b>Pcap Feature</b>	Start and stop capturing packets or export the captured packets.	Web User Interface
<b>Packet Capture Count</b>	Configures the count of the number of packets to capture. <b>Default: 5</b>	Web User Interface
<b>Packet Capture Clip Bytes</b>	Configures the maximum size (in KB) of every packet to capture. <b>Default: 1024</b>	Web User Interface
<b>Pcap Filter Type</b>	Configures the filter type of the packet to capture. <b>Valid Values:</b> <ul style="list-style-type: none"> <li>• <b>Custom</b>—Customize the packet</li> </ul>	Web User Interface

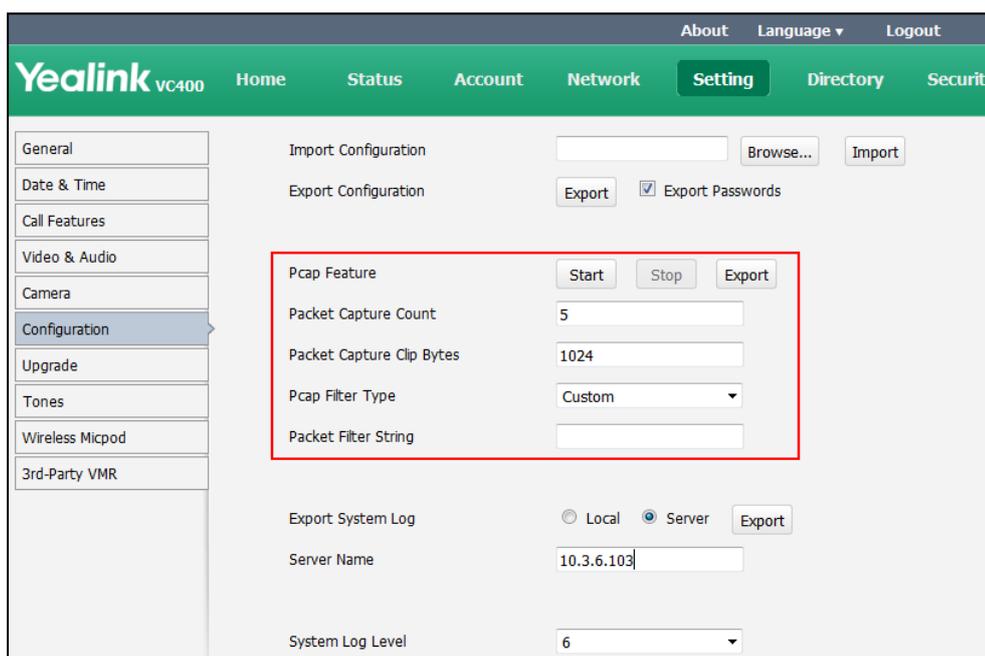
Parameter	Description	Configuration Method
	<p>filter string.</p> <ul style="list-style-type: none"> <li>• <b>SIP or H245 or H225</b>—Capture SIP, H245 and H225 packets. It depends on the supportive protocol of the system.</li> <li>• <b>RTP</b>—Capture RTP packets.</li> </ul> <p><b>Default:</b> Custom</p>	
<p><b>Packet Filter String</b></p>	<p>Customizes the packet filter string.</p> <p><b>Syntax:</b> Protocol+Direction+Host(s)+ Value +Logical Operations+Other Expression</p> <p><b>Protocol:</b> Values: ether, fddi, ip, arp, rarp, decnet, lat, sca, moprc, mopdl, tcp and udp. Application-level protocol, such as http, dns and sip are not supported. If no protocol is specified, all the protocols are used.</p> <p><b>Direction:</b> Values: src, dst, src and dst, src or dst If no source or destination is specified, the "src or dst" keywords are applied. For example: "host 10.2.2.2" is equivalent to "src or dst host 10.2.2.2".</p> <p><b>Host(s):</b> Values: net, port, host, portrange. If no host(s) is specified, the "host" keyword is used. For example: "src 10.1.1.1" is equivalent to "src host 10.1.1.1".</p> <p><b>Logical Operations:</b> Values: not, and, or. Negation ("not") has highest precedence. Alternation ("or") and concatenation ("and") have equal precedence and associate left to right. For example: "not tcp port 3128 and tcp port 23" is</p>	<p>Web User Interface</p>

Parameter	Description	Configuration Method
	<p>equivalent to "(not tcp port 3128) and tcp port 23".</p> <p>"not tcp port 3128 and tcp port 23" is NOT equivalent to "not (tcp port 3128 and tcp port 23)".</p> <p><b>Example:</b> (src host 10.4.1.12 or src net 10.6.0.0/16) and tcp dst port range 200-10000 and dst net 10.0.0.0/8</p> <p>Displays packets with source IP address 10.4.1.12 or source network 10.6.0.0/16, the result is then concatenated with packets having destination TCP port range from 200 to 10000 and destination IP network 10.0.0.0/8.</p> <p><b>Default:</b> Blank</p> <p><b>Note:</b> It only works if the parameter "Pcap Filter Type" is set to Custom.</p>	

**To capture packets via web user interface:**

1. Click on **Setting->Configuration**.
2. Enter the desired value in the **Packet Capture Count** field.
3. Enter the desired value in the **Packet Capture Clip Bytes** field.
4. Select the desired value from the pull-down list of **Pcap Filter Type**.  
If **Custom** is selected, enter the desired packet filter string in the **Packet Filter String** field.
5. Click **Start** to start capturing signal traffic.
6. Reproduce the issue to get stack traces.
7. Click **Stop** to stop capturing.

- Click **Export** to open the file download window, and then save the file to your local system.



**To capture packets via the remote control:**

Before capturing packets, you need to insert a USB flash drive to the USB port on the VC400/VC120 Codec to store packets. Make sure the USB feature is enabled.

- Long press  when the system is idle or during a call.  
The display device prompts "Onekey-capture is running, press the Backspace key for 2s to turn off it".
- Long press  for 2 seconds to stop capturing packets.  
The packets are saved in the yealink.debug folder on your USB flash driver.

**To capture packets using the Ethernet software:**

Connect the Internet ports of the system and the PC to the same hub, and then use Sniffer, Ethereal or Wireshark software to capture the signal traffic. You can also set mirror port on a switch to monitor the port connected to the system.

## Getting Information from Status Indicators

In some instances, status indicators are helpful for finding system troubles. Status indicators may consist of the power LED, icons on the status bar of the display device or prompt messages.

The following shows two examples of obtaining the system information from status indicators:

- If a LINK failure of the system is detected, the icon  will appear on the status bar of the display device, indicating the current network is not available.
- If the power LED does not light, it indicates the system is not powered on.

For more information on the icons, refer to [Icon Instructions](#) on page 25.

## Analyzing Configuration Files

Wrong configurations may have an impact on your system use. You can export configuration file to check the current configuration of the system and troubleshoot if necessary. For more information on how to export system configuration, refer to [Importing/Exporting Configuration](#) on page 250.

## Viewing Call Statistics

You can enter the view call statistics screen during an active call. Information includes:

- **Total Bandwidth:** Uplink Bandwidth and Downlink Bandwidth.
- **Video:** Resolution, Codec, Bandwidth, Frame Rate, Jitter, Total Packet Lost, Packet Lost(%)
- Protocol used during a call.
- Device information of the far site.
- **Audio:** Codec, Bandwidth, Sample Rate, Jitter, Total Packet Lost, Packet Lost(%)
- **Share:** Resolution, Codec, Bandwidth, Frame Rate.

Use the remote control to select **More->Call Statistics** during an active call to view call statistics.

## Using Diagnostic Methods

The system supports the following diagnostic methods:

- **Audio Diagnose:** Check whether the audio input device and audio output device are working properly.
- **Camera Diagnose:** Check whether the camera can pan and change focus normally.
- **Ping:** Check whether the system can establish contact with the IP address that you specify.
- **Trace Route:** Display the route (path) and measure transit delays of packets across an Internet Protocol (IP) network.

### To diagnose audio via the remote control:

1. Select **Menu->Diagnose** menu.
2. Select **Audio Diagnose**, and then press .
3. Speak into the microphone.
4. Check whether the microphone can pick up audio and play back the audio properly.  
If the system plays back the audio normally, it means that audio works well.
5. Press  to stop audio diagnostics.

**To diagnose the camera via the remote control:**

1. Select **Menu**->**Diagnose** menu.
2. Select **Camera Diagnose**, and then press .
3. Press navigation keys to adjust the camera position.
4. Press  or  to adjust the focus.

If the camera can move and zoom normally, it means that the camera works properly.

5. Press the **Back** soft key to stop camera diagnose.

**To diagnose network via the remote control:**

1. Select **Menu**->**Diagnose** menu.
2. Select **Ping**, and then press .
3. Enter IP address (for example, the IP address of the far site).
4. Press **Start**, and then press .

The display device displays the network diagnose information.

5. Press the **Back** soft key to return to the Diagnose menu.

It measures the round-trip time from transmission to reception and reports errors and packet loss. The results of the test include a statistical summary of the response packets received, including the minimum, maximum, and the mean round-trip times.

**Trace Route:**

1. Select **Menu**->**Diagnose** menu.
2. Select **Trace Route**, and then press .
3. Enter IP address (for example, the IP address of the far site).
4. Press **Start**, and then press .

The display device displays the network diagnose information.

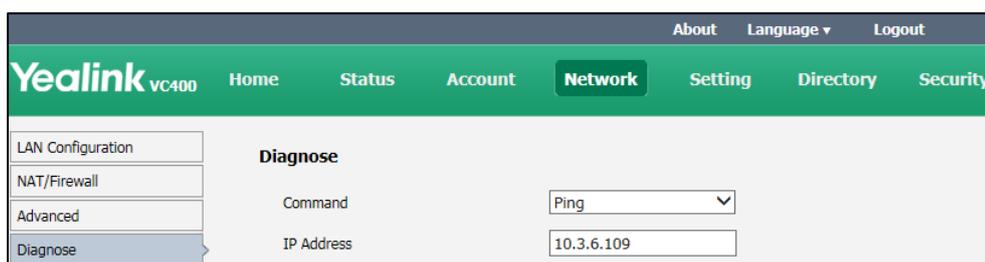
5. Press the **Back** soft key to return to the Diagnose menu.

If the test is successful, the VC400/VC120 system lists the hops between the system and the IP address you entered. You can check whether congestion happens via the time cost between hops.

**To diagnose network via web user interface:**

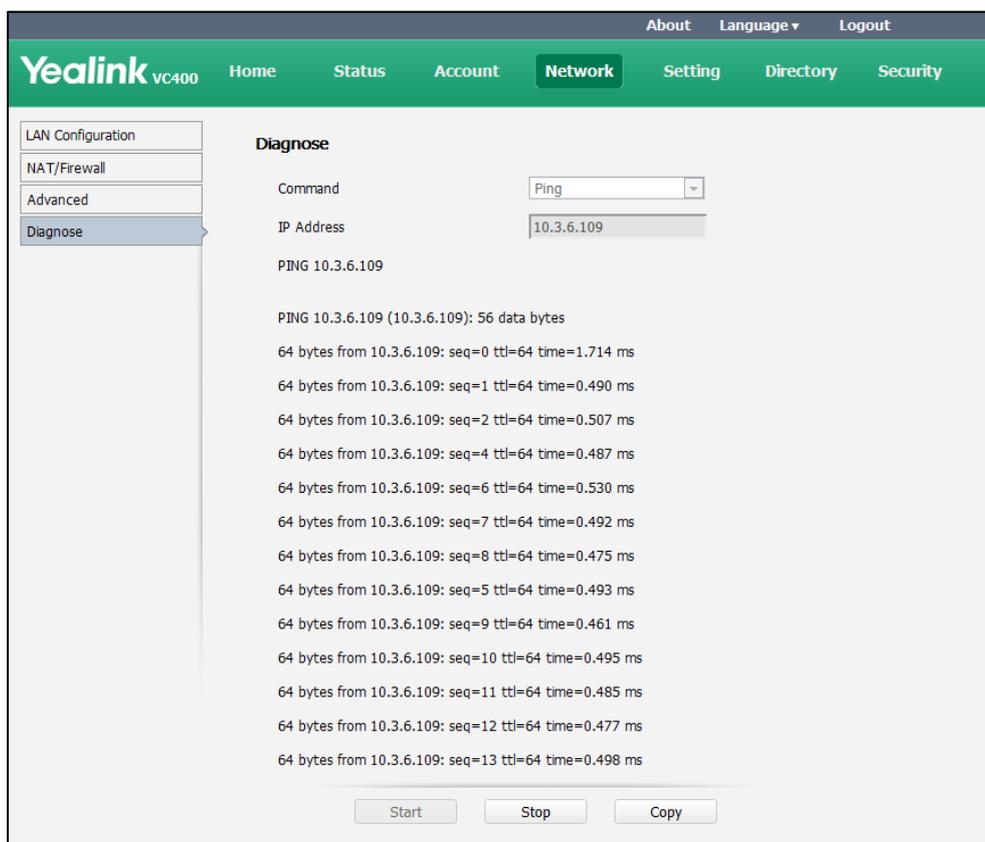
1. Click on **Network** ->**Diagnose**.
2. Select the desired diagnostic method from the pull-down list of **Command**.

- Enter IP address in the **IP Address** field.



- Click **Start** to start diagnosing.

The web page displays the diagnosis:



- Click **Stop** to complete diagnosing.

You can click **Copy** to copy the content to the clipboard.

## Troubleshooting Solutions

This chapter provides general troubleshooting solutions to help you solve the problems you might encounter when using your system.

Ensure the system has not been physically damaged when experiencing a problem. Check whether the cables are loose and the connections are correct and secure. These are common causes of problems.

If problems you encounter are not mentioned in this chapter, you can contact your distributor or Yealink FAE.

## General Issues

### Why is the display device black?

- Check whether the display device is connected properly to the VC400/VC120 codec.
- Check whether the system is in sleep mode. Press any key on the video conferencing phone or remote control to resume system operation.
- Check whether the display device is in sleep mode or is turned off. Press the power button on the remote control or on the display device.
- Check whether you have selected the correct video input source. You can try to switch video input source.

### Why doesn't the display device display time and date correctly?

- If you have configured the system to obtain the time and date from the NTP server automatically, ensure that SNTP server and time zone are configured correctly in the system and whether the connection between the system and NTP server is working properly.
- If you have configured the system to obtain the time and date manually, ensure that you have configured the time and date correctly.

### Why doesn't the remote control work?

- Check whether the system is powered on.
- Check whether the positive and negative charges of the battery are connected correctly.
- Check whether the battery has sufficient power left.
- Check whether no special fluorescent or neon signs nearby.

### Why does the system fail to call the far site?

- Check whether the network of the near site is available.
- Check whether the network of the far site is available.
- Check whether the far site enables the DND feature.
- Check whether the accounts have been registered correctly, and the system uses the appropriate account to call the far site.
- Ensure that the number you are calling is correct.
- Check whether the far site rejects your call.
- Check whether the firewall blocks the inbound traffics from the other site.

- Check whether the far site has already up to maximum call-in limitation.
- If the near site is forced to use encryption, ensure that the far site enables encryption too. For more information on call encryption, refer to [Secure Real-Time Transport Protocol](#) on page 239 and [H.235](#) on page 243.
- Ensure the far site supports the same call protocol as the near site.

### Why does the system fail to call the far site via IP address?

- Ensure that at least one call protocol is enabled on both sites. For more information, refer to [Configuring SIP Settings](#) on page 122 and [Configuring H.323 Settings](#) on page 126.
- Ensure that the network is connected correctly.
- Ensure that the network is configured correctly. For more information, refer to [Configuring LAN Properties](#) on page 48.
- Ping the IP address of the far site. Contact your system administrator if it fails. For more information, refer to [Using Diagnostic Methods](#) on page 264.

### Why doesn't the status bar of the display device display IP address?

- Check whether the network is available.
- Check whether the LAN property is configured correctly. For more information on LAN property configuration, refer to [Configuring LAN Properties](#) on page 48.
- Check whether the system has enabled the hide IP address feature. For more information on disabling the hide IP address feature, refer to [Hide IP Address](#) on page 165.
- Check whether the system has configured firewall and NAT correctly. For more information on, refer to [Configuring the System for Use with a Firewall or NAT](#) on page 77.

### Why does the network keep losing packets?

- Check whether the network is available and the LED indicator on the left of the Internet port illuminates green.
- Try to use the low speed connection to check whether packets are lost. Deficient bandwidth is an important reason for packet loss.
- Check the configuration of the network speed and duplex mode on the system, switch and router.

## Camera Issues

### Why can't I adjust the camera angle and focus?

- You can adjust the camera when the system is idle or during a call. The camera cannot be adjusted when the system is in the menu screen.
- Ensure that the batteries in the remote control are in good working condition, and

installed correctly.

- Aim the remote control at the sensor when operating the unit.
- Ensure that no objects are obstructing the sensor on the front of the camera.
- Ensure that the LED on the front of the camera flashes green when you use the remote control to operate the unit.
- Ensure that what you are controlling is the local camera.
- Reboot the system.
- If the above suggestions cannot solve your problem, perhaps the remote control is broken. You can contact your system administrator for help.

### Why can't adjust the remote camera during an active call?

- Use the remote control to control the local camera to check whether the remote control can be used normally.
- Ensure that the far site has enabled the Far Control Near Camera feature. For more information, refer to [Far-end Camera Control](#) on page 193.
- Ensure that what you are controlling is the remote camera. Select **More->Near/Far Camera** during an active call and then select the remote video image.
- Ensure the far site supports the same call protocol as the near site. For more information, refer to [Camera Control Protocol](#) on page 195.

### Why is the video quality bad?

- Ensure that the display device has suitable resolution.
- Check whether the packet has been lost. For more information on packet loss, refer to [Viewing Call Statistics](#) on page 264.
- Ensure that camera settings are configured correctly, such as brightness and white balance.
- Avoid high-intensity indoor light or direct sunlight on the camera.

## Video & Audio Issues

### Why can't I hear the audio during a call?

- Ensure that the local audio output device is connected correctly.
- Use audio diagnose to check whether the audio device is working normally.
- Ensure that the ringer volume is not set to the minimum.
- Check whether the far site is muted.

### Why can't the far site hear the local audio?

- Ensure that the local audio input device is connected correctly.

- Check whether the near site is muted.
- Check whether the system has enabled the auto answer mute feature.
- Check whether the system has enabled the auto dialout mute feature.

### Why can't I hear the other site clearly during a call?

- Ensure that the speaker volume of the far site is not set too low.
- Muffled audio reception from the far side may be caused by highly reverberant rooms. Speak in close proximity to the phone.
- Adjust the priority order for your audio codec if you have chosen a low-bandwidth audio codec to be first. For more information, refer to [Audio Codecs](#) on page 137.
- For best results, ensure that the caller is using a Yealink video conferencing system. Audio quality from your video conferencing system will vary when calling a non-Yealink system.
- Dust and debris may cause audio quality. Do not use any kind of liquid or aerosol cleaner on the phone. A soft, slightly damp cloth should be sufficient to clean the top surface of the phone if necessary.

### Why is the voice quality poor?

Users may receive poor voice quality during a call, such as intermittent voice, low volume, echo or other noise. It is difficult to diagnosis the root causes of the voice anomalies. The possible reasons are:

- Users sit too far from or near to the microphone.
- The audio pickup device is moved frequently.
- Intermittent voice is probably caused by voice packet loss or jitter. Voice packet loss may occur due to network congestion. Jitter may occur due to information reorganization of the transmission or receiving equipment, such as, delay processing, retransmission mechanism or buffer overflow.
- Noise devices, such as computers or fans, may make it difficult to hear each other's voices clearly.
- Wires may also cause this problem. Replace the old with the new cables, and then reconnect to check whether the new cables provide better connectivity.

### Why can't I view the local video image?

- Check whether the near site camera is connected to the VC400/VC120 codec correctly.
- Check whether camera is powered on, and the LED indicator illuminates green.
- Check whether the camera is selected for the current video input source.
- Check the screen layout to see whether the remote video image is shown in full size.

### Why can't I view the menu?

- Check whether the Display1 port of VC400/VC120 codec is connected to the HDMI port on the display device.

### Why can't I start a presentation?

- Check whether a PC is connected to the VC400/VC120 codec.
- Check whether the PC is sending a signal.
- Check the call statistics to see whether the system is sharing content.
- Ensure that dual-stream is configured correctly. For more information, refer to [Dual-Stream Protocol](#) on page 183.

## Why does the far-site display black screen when local starts a presentation?

This situation may be due to the difference between Signaling Server address and the Media Server address.

The actual address is different from the negotiated address, so that starting a presentation in this situation will result in the failure of sending packets to the correct address. You can disable the network adaptive feature, so that the system will send packets to the negotiated address other than the actual address.

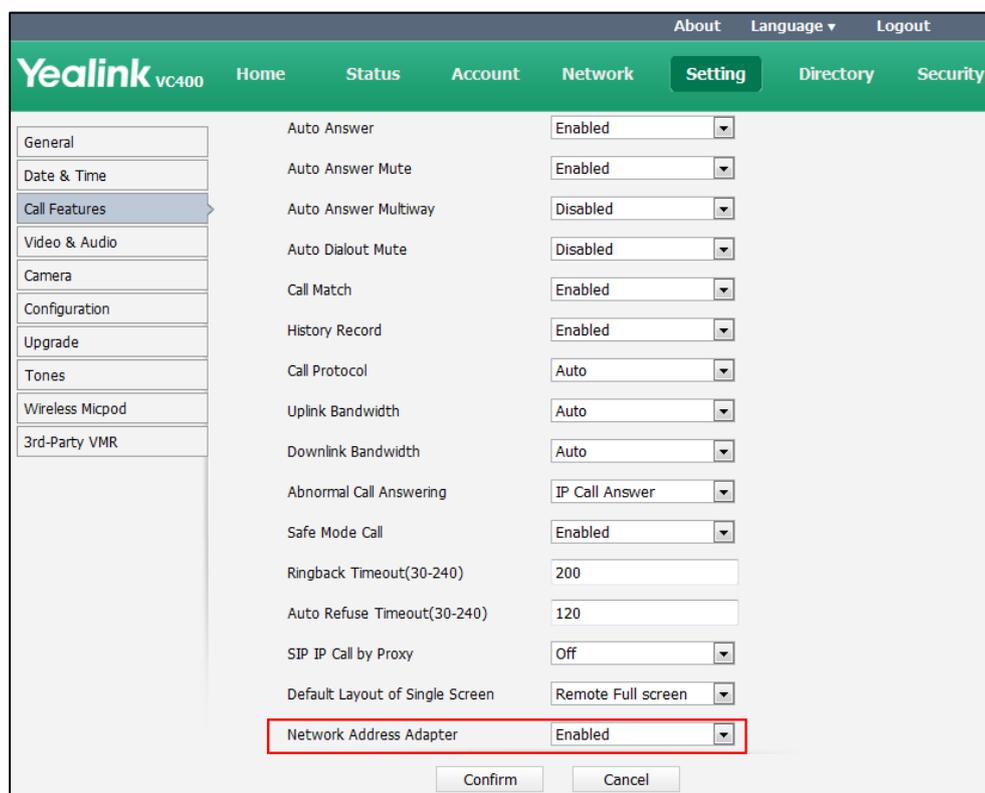
Network address adapter parameter is described below:

Parameter	Description	Configuration Method
<b>Network address adapter</b>	<p>Enable or disable the network address adapter feature.</p> <p><b>Valid values:</b></p> <ul style="list-style-type: none"> <li>• <b>Enabled</b>-send packets to the actual address.</li> <li>• <b>Disabled</b>- send packets to the negotiated address other than the actual address.</li> </ul> <p><b>Default:</b> Enabled</p>	Web User Interface

**To configure the network address adapter via web user interface:**

1. Click on **Setting->Call Features**.

2. Select the desired level from the pull-down list of **Network Address Adapter**.



3. Click **Confirm** to accept the change.

## System Maintenance

### How to prevent monitor burn-in?

Refer to your monitor's documentation for specific recommendations and instructions. The following guidelines help prevent image burn-in:

- Ensure that static images are not displayed for long periods.
- Be aware that meetings that last more than an hour without much movement can have the same effect as a static image.
- Configure the automatic sleep time to be 1 hours or less.
- Consider decreasing the monitor's sharpness, brightness, and contrast settings if they are set to their maximum values.

### How to reboot the system?

When you do one of the following, the system will reboot:

- Reboot system
- Reset system

- Upgrade firmware
- Configure some features need to take effect after a reboot

You can reboot the system in the following ways:

- Long press the power button on the VC400/VC120 codec.
- Select **Menu->Advanced** (default password: 0000) -> **Reboot & Reset->Reboot**, and then press  .
- Login web user interface and click on **Setting->Upgrade->Reboot**, and then click **Confirm**.

To avoid corrupting the system, you should not unplug the power adapter from the system to power off the system.

### Why does the system fail to upgrade?

- Ensure that the firmware is different from the firmware currently in use.
- Ensure that the downloaded firmware applies to the system.
- Ensure that the system is powered on normally, and the network is available during the upgrade process.
- When upgrading firmware via web user interface, ensure that the web user interface is not refreshed or closed during the upgrade process.



## Appendix

### Appendix A: Time Zones

Time Zone	Time Zone Name
-11:00	Samoa
-10:00	United States-Hawaii-Aleutian
-10:00	United States-Alaska-Aleutian
-09:30	French Polynesia
-09:00	United States-Alaska Time
-08:00	Canada(Vancouver, Whitehorse)
-08:00	Mexico(Tijuana, Mexicali)
-08:00	United States-Pacific Time
-07:00	Canada(Edmonton, Calgary)
-07:00	Mexico(Mazatlan, Chihuahua)
-07:00	United States-Mountain Time
-07:00	United States-MST no DST
-06:00	Canada-Manitoba(Winnipeg)
-06:00	Chile(Easter Islands)
-06:00	Mexico(Mexico City, Acapulco)
-06:00	United States-Central Time
-05:00	Bahamas(Nassau)
-05:00	Canada(Montreal, Ottawa, Quebec)
-05:00	Cuba(Havana)
-05:00	United States-Eastern Time
-04:30	Venezuela(Caracas)
-04:00	Canada(Halifax, Saint John)
-04:00	Chile(Santiago)
-04:00	Paraguay(Asuncion)
-04:00	United Kingdom-Bermuda(Bermuda)
-04:00	United Kingdom(Falkland Islands)
-04:00	Trinidad&Tobago
-03:30	Canada-New Foundland(St.Johns)
-03:00	Denmark-Greenland(Nuuk)
-03:00	Argentina(Buenos Aires)
-03:00	Brazil(no DST)
-03:00	Brazil(DST)
-02:30	Newfoundland and Labrador
-02:00	Brazil(no DST)
-01:00	Portugal(Azores)

Time Zone	Time Zone Name
0	GMT
0	Greenland
0	Denmark-Faroe Islands(Torshavn)
0	Ireland(Dublin)
0	Portugal(Lisboa, Porto, Funchal)
0	Spain-Canary Islands(Las Palmas)
0	United Kingdom(London)
0	Morocco
+01:00	Albania(Tirane)
+01:00	Austria(Vienna)
+01:00	Belgium(Brussels)
+01:00	Caicos
+01:00	Chad
+01:00	Spain(Madrid)
+01:00	Croatia(Zagreb)
+01:00	Czech Republic(Prague)
+01:00	Denmark(Kopenhagen)
+01:00	France(Paris)
+01:00	Germany(Berlin)
+01:00	Hungary(Budapest)
+01:00	Italy(Rome)
+01:00	Luxembourg(Luxembourg)
+01:00	Macedonia(Skopje)
+01:00	Netherlands(Amsterdam)
+01:00	Namibia(Windhoek)
+01:00	Poland (Warsaw)
+02:00	Estonia(Tallinn)
+02:00	Finland(Helsinki)
+02:00	Gaza Strip(Gaza)
+02:00	Greece(Athens)
+02:00	Israel(Tel Aviv)
+02:00	Jordan(Amman)
+02:00	Latvia(Riga)
+02:00	Lebanon(Beirut)
+02:00	Moldova(Kishinev)
+02:00	Russia(Kaliningrad)
+02:00	Romania(Bucharest)
+02:00	Syria(Damascus)
+02:00	Turkey(Ankara)
+02:00	Ukraine(Kyiv, Odessa)
+03:00	East Africa Time

<b>Time Zone</b>	<b>Time Zone Name</b>
+03:00	Iraq(Baghdad)
+03:00	Russia(Moscow)
+03:30	Iran(Teheran)
+04:00	Armenia(Yerevan)
+04:00	Azerbaijan(Baku)
+04:00	Georgia(Tbilisi)
+04:00	Kazakhstan(Aktau)
+04:00	Russia(Samara)
+04:30	Afghanistan(Kabul)
+05:00	Kazakhstan(Aqtobe)
+05:00	Kyrgyzstan(Bishkek)
+05:00	Pakistan(Islamabad)
+05:00	Russia(Chelyabinsk)
+05:30	India(Calcutta)
+05:45	Nepal(Katmandu)
+06:00	Kazakhstan(Astana, Almaty)
+06:00	Russia(Novosibirsk, Omsk)
+06:30	Myanmar(Naypyitaw)
+07:00	Russia(Krasnoyarsk)
+07:00	Thailand(Bangkok)
+08:00	China(Beijing)
+08:00	Singapore(Singapore)
+08:00	Australia(Perth)
+08:00	Russia(Irkutsk, Ulan-Ude)
+08:45	Eucla
+09:00	Korea(Seoul)
+09:00	Japan(Tokyo)
+09:00	Russia(Yakutsk, Chita)
+09:30	Australia(Adelaide)
+09:30	Australia(Darwin)
+10:00	Australia(Sydney, Melbourne, Canberra)
+10:00	Australia(Brisbane)
+10:00	Australia(Hobart)
+10:00	Russia(Vladivostok)
+10:30	Australia(Lord Howe Islands)
+11:00	New Caledonia(Noumea)
+11:00	Russia(Srednekolymsk Time)
+11:30	Norfolk Island
+12:00	New Zealand(Wellington, Auckland)
+12:00	Russia(Kamchatka Time)
+12:45	New Zealand(Chatham Islands)

Time Zone	Time Zone Name
+13:00	Tonga(Nukualofa)
+13:30	Chatham Islands
+14:00	Kiribati

## Appendix B: Trusted Certificates

Yealink video conferencing system trust the following CAs by default:

- DigiCert High Assurance EV Root CA
- Deutsche Telekom AG Root CA-2
- Equifax Secure Certificate Authority
- Equifax Secure eBusiness CA-1
- Equifax Secure Global eBusiness CA-1
- GeoTrust Global CA
- GeoTrust Global CA2
- GeoTrust Primary CA
- GeoTrust Primary CA G2 ECC
- GeoTrust Universal CA
- GeoTrust Universal CA2
- Thawte Personal Freemail CA
- Thawte Premium Server CA
- Thawte Primary Root CA - G1 (EV)
- Thawte Primary Root CA - G2 (ECC)
- Thawte Primary Root CA - G3 (SHA256)
- Thawte Server CA
- VeriSign Class 1 Public Primary Certification Authority
- VeriSign Class 1 Public Primary Certification Authority - G2
- VeriSign Class 1 Public Primary Certification Authority - G3
- VeriSign Class 2 Public Primary Certification Authority - G2
- VeriSign Class 2 Public Primary Certification Authority - G3
- VeriSign Class 3 Public Primary Certification Authority
- VeriSign Class 3 Public Primary Certification Authority - G2
- VeriSign Class 3 Public Primary Certification Authority - G3
- VeriSign Class 3 Public Primary Certification Authority - G4
- VeriSign Class 3 Public Primary Certification Authority - G5
- VeriSign Class 4 Public Primary Certification Authority - G2
- VeriSign Class 4 Public Primary Certification Authority - G3

- VeriSign Universal Root Certification Authority
- ROOT CA
- IntermediateCA
- ssl\_certificate

**Note**

Yealink endeavors to maintain a built-in list of most common used CA Certificates. Due to memory constraints, we cannot ensure a complete set of certificates. If you are using a certificate from a commercial Certificate Authority not in the list above, you can send a request to your local distributor. At this point, you can upload your particular CA certificate into your phone. For more information on uploading custom CA certificate, refer to [Transport Layer Security](#) on page 232.



# Index

## Numeric

802.1x Authentication [68](#)

## A

Abnormal Call Answering [245](#)

About This Guide [v](#)

Account Polling [129](#)

Adjusting MTU of Video Packets [181](#)

Administrator Password [228](#)

Analyzing Configuration Files [264](#)

Appendix A: Time Zones [275](#)

Appendix B: Trusted Certificates [278](#)

Attack Defense in Public Network [245](#)

Audio Input Device [178](#)

Audio Output Device [177](#)

Auto Answer [143](#)

Auto Dialout Mute [144](#)

Automatic Sleep Time [164](#)

Auto Refuse Timeout [150](#)

## B

Backlight of the Video Conferencing Phone [156](#)

Bandwidth [147](#)

## C

Call History [219](#)

Call Match [144](#)

Call Protocol [140](#)

Camera Control Protocol [195](#)

Camera Issues [268](#)

Codecs [137](#)

Configuring Call Preferences [101](#)

Configuring Camera Settings [188](#)

Configuring Cloud Settings [101](#)

Configuring H.323 Setting [126](#)

Configuring LAN Properties [48](#)

Configuring Network [47](#)

Configuring Network Settings Manually [52](#)

Configuring Network Speed and Duplex Mode [60](#)

Configuring Packets [260](#)

Configuring Safe Mode Call [246](#)

Configuring SIP Settings [101](#)

Configuring System Settings [155](#)

Configuring the System for Use with a Firewall or NAT [77](#)

Configuring the Third-party Virtual Meeting Room [118](#)

## D

Date and Time [158](#)

Default Layout of Single Screen [151](#)

DHCP [48](#)

Directory [209](#)

Documentations [v](#)

Do Not Disturb [141](#)

DTMF [129](#)

Dual Screen [221](#)

Dual-Stream Protocol [183](#)

## E

Enabling Communication with Other Systems [40](#)

## F

Far-end Camera Control [193](#)

Firmware [v](#)

## G

General Issues [267](#)

Getting Information from Status Indicators [263](#)

Getting Started [33](#)

## H

- H.235 [243](#)
- H.323 Tunneling [73](#)
- H.460 Firewall Traversal [91](#)
- Hide IP Address [165](#)
- Hiding Icons in a Call [171](#)
- History Record [146](#)

## I

- Icons on Display Device [25](#)
- Icons on Video Conferencing Phone [27](#)
- Importing/Exporting Configuration [250](#)
- Index [281](#)
- Intelligent Firewall Traversal [93](#)
- In This Guide [vi](#)
- IPv6 Support [56](#)

## K

- Keep Alive [88](#)
- Keyboard Input Method [176](#)
- Key Tone [167](#)

## L

- Language [157](#)
- LDAP [214](#)
- LED Instructions [29](#)
- License [223](#)
- LLDP [62](#)
- Logging into the BlueJeans Cloud Platform [111](#)
- Logging into the Mind Platform [113](#)
- Logging into the StarLeaf Cloud Platform [105](#)
- Logging into the Yealink Cloud Platform [101](#)
- Logging into the Zoom Cloud Platform [106](#)

## M

- Manual Configuration for VLAN [65](#)
- Meeting Blacklist [171](#)
- Meeting Password [168](#)
- Meeting Whitelist [169](#)
- Methods of Transmitting DTMF Digit [132](#)
- Mix Sending [187](#)

## N

- Network Address Translation [80](#)

## O

- Output Resolution [199](#)

## P

- Packaging Contents [3](#)
- Physical Features of Yealink VCS System [2](#)
- Placing a Test Call from VCS [45](#)
- Powering the System On and Off [39](#)
- Preparing the Network [47](#)

## Q

- Quality of Service [94](#)

## R

- Relog Offtime [166](#)
- Remote Control [31](#)
- Remote Control via Web User Interface [32](#)
- Registering a Custom Account [115](#)
- Registering a Pexip Account [108](#)
- Reserved Ports [78](#)
- Resetting to Factory [251](#)
- Ringback Timeout [149](#)
- Rport [90](#)

## S

- Screenshot [203](#)
- Search Source List in Dialing [221](#)
- Secure Real-Time Transport Protocol [239](#)
- Setup Wizard [40](#)
- SIP IP Call by Proxy [151](#)
- Site Name [155](#)
- SNMP [252](#)
- Static DNS [50](#)
- STUN [84](#)
- Summary of Changes [vi](#)
- System Component Instructions [10](#)
- System Installation [39](#)

---

System Maintenance Issues [271](#)  
System Startup [40](#)

## T

Table of Contents [xi](#)  
Tones [204](#)  
Transport Layer Security [232](#)  
Troubleshooting [257](#)  
Troubleshooting Methods [257](#)  
Troubleshooting Solutions [266](#)

## U

Upgrading System Firmware [249](#)  
Upgrading VCC20 Camera Firmware [250](#)  
USB Configuration [200](#)  
User Interfaces [30](#)  
User Mode [227](#)  
Using Diagnostic Methods [264](#)

## V

VC400/VC120 Codec [10](#)  
VCC18/VCC20 HD Camera [12](#)  
VCM30 Video Conferencing Microphone Array [19](#)  
VCR10 Remote Control [23](#)  
VCS Integrated with Control Systems [226](#)  
Video & Audio Issues [269](#)  
Video Codecs [138](#)  
Video Conferencing Phone [14](#)  
Video Recording [201](#)  
Viewing Call Statistics [264](#)  
Viewing Log Files [257](#)  
VLAN [61](#)  
VoIP Principles [1](#)  
VPN [97](#)

## W

Web Server Type [229](#)  
Web User Interface [30](#)