Upgrading W52H/W56H Handset Firmware

This document provides detailed information on how to upgrade the W52H/W56H handset firmware. You can upgrade W52H/W56H handset firmware via a USB tool or over the air (OTA). Upgrading handset firmware via the USB tool is only applicable to W52H handset.

Upgrading W52H handset firmware via the USB tool (developed by Yealink), you need to purchase a USB cable in advance, and then upgrade the handset firmware one by one. For more information, refer to Upgrading Handset Firmware via the USB Tool.

Upgrading handset firmware via OTA means that the handset firmware can be upgraded through a wireless DECT connection (L2CAP). OTA enables the distribution of new firmware to the subscribed handsets. For more information, refer to Upgrading Handset Firmware via OTA.

OTA upgrade capability is restricted to specific firmware versions and handset hardware:

	Handset Firmware	Handset Hardware	Base Firmware
W52H	26.40.0.15 or later	26.0.0.6 or later	25.40.0.15 or later
W56H	61.80.0.15 or later	61.0.0.11 or later	25.80.0.15 or later

OTA is only available when meeting the above three conditions simultaneously.

> Upgrading handset firmware may take a period of time, please upgrade the handset outside of work hours to avoid affecting the normal use.

Upgrading Handset Firmware via the USB Tool

Yealink developed tool "W52x Handset Firmware Update Tool (USB)-[4.11.0.1]" is used to upgrade the W52H handset. You can ask Yealink distributor or FAE (Field Application Engineer) for the tool, or download it online:

http://www.yealink.com/SupportDownloadfiles_detail.aspx?ProductsID=534&CateID=308&flag=142.

This section provides you with step-by-step instructions on how to upgrade the handset firmware using this tool.

To upgrade the handset firmware, obtain the latest handset firmware file and store it on your local system. There is a USB port on the back of handset. Before the upgrade process, you need to connect the handset to the computer using a USB cable.

> Ensure the handset is turned on before connecting it to the computer.

**To connect the handset to the computer using the USB cable:**

1. Open the battery cover on the back of the handset.

    A mini USB port is located under the battery cover.

2. Connect the USB cable to the computer.

3. Connect the other end of the USB cable to the USB port on the handset.
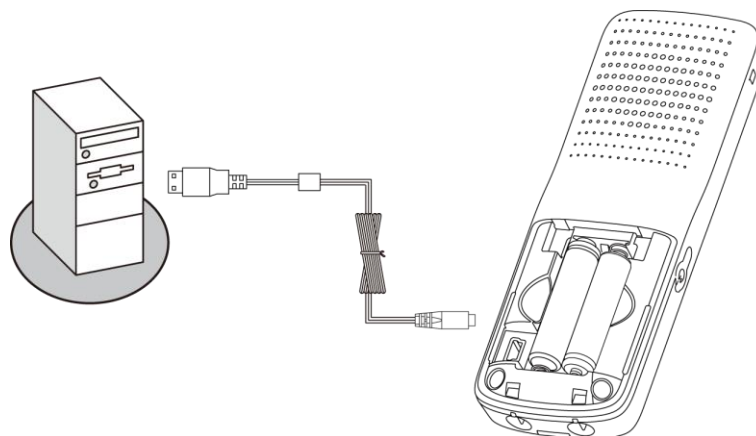
> To upgrade the handset firmware successfully, ensure the capacity of handset batteries is enough. We recommend that you place the handset in the charger cradle during the upgrade process.
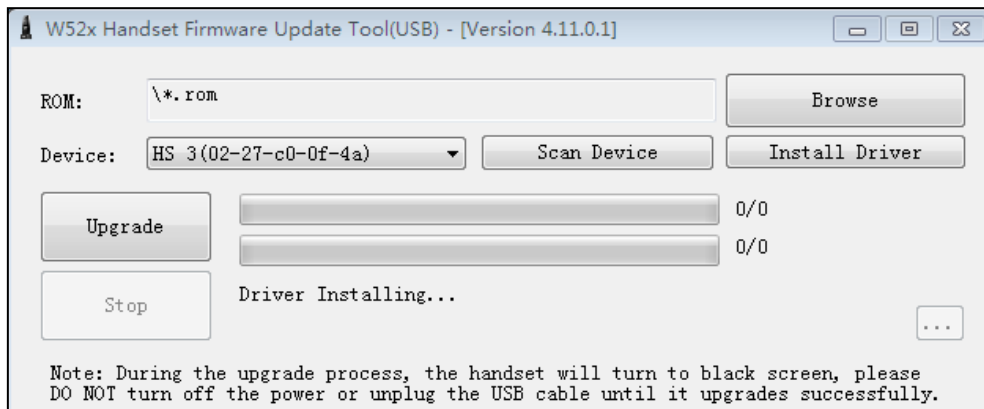
To upgrade the handset firmware:

1. Double click the W52P-Flasher [4.11.0.1].exe application.

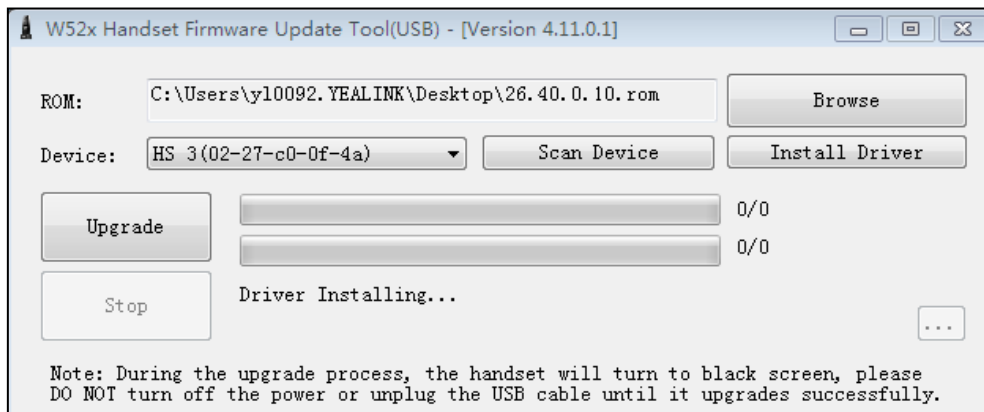   A dialog is displayed as below:
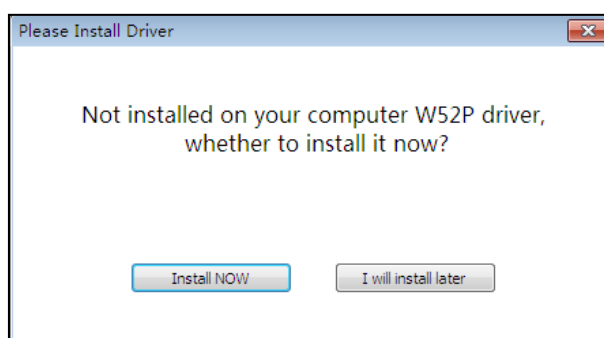
2. Click the **Install NOW** button.

The handset device information is displayed in the **Device** field. If not, click the **Scan Device** button.
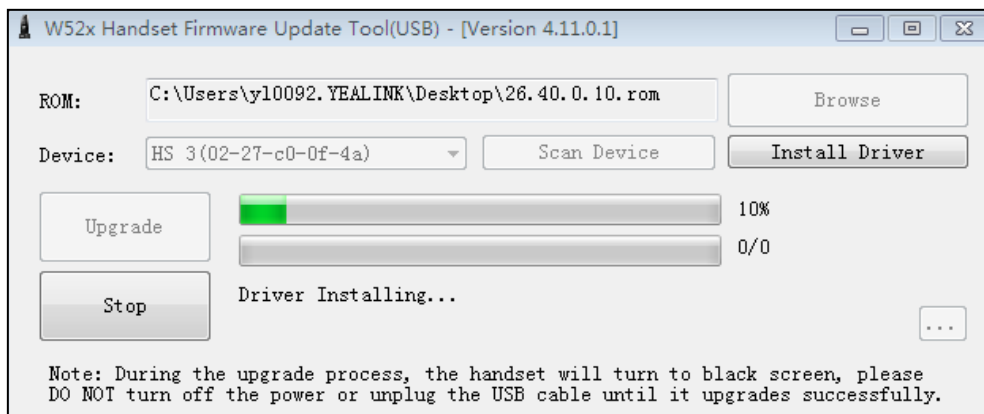

3. Click the **Browse** button to locate the latest firmware file from your local system.
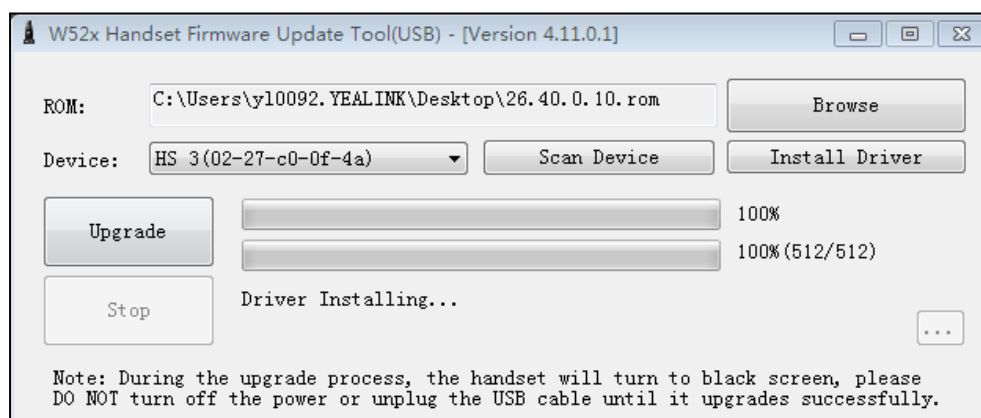

4. Click the **Upgrade** button.

A progress bar with the status of upgrade is displayed.

The handset turns to black screen during the upgrade process. It reboots after the firmware upgrade is completed.

When the upgrade is completed, the tool interface is displayed as below:

After upgrade, unplug the USB cable from the handset. To upgrade another handset, connect the handset to the computer and repeat steps 3-5.

If the handset fails to complete the upgrade, you need to repeat the above steps to upgrade the handset again. The handset device information may be displayed as HSxx (00-00-00-00-00) in the **Device** field. This is normal and will not affect the upgrade.

> Upgrade will take a few minutes. Do not unplug the USB cable during the upgrade process.
>
> If the target firmware version is the same as the current firmware version, upgrade will be skipped.

The handset performs registration to the base station automatically after reboot. If auto registration doesn't work for any reason, you need to re-register the handset to the base station manually. For more information, refer to *Yealink W52P User Guide*.

When the handset is idle, you can verify its firmware version by pressing **OK**->**Status**->**System Status**->**More**->**Handset**.

Upgrading Handset Firmware via OTA

OTA upgrade for the handset can be performed:

- Via auto provisioning

- Manually

The following will introduce these two methods in detail.

> During the upgrade process, it is advisable to place the handset in the charger cradle and closer (within 10 meters) to the base station.
>
> When there is a handset performing OTA upgrade, you cannot make any operations (e.g., placing a call) except manually trigger OTA upgrade on other subscribed handsets.
>
> OTA upgrade may take about 25 minutes. Do not cancel the upgrade during the upgrade process.
>
> The handset can perform registration to the base station automatically after completing OTA upgrade and a reboot. If auto registration doesn't work for any reason, you need to re-register the handset to the base station manually. For more information, refer to *Yealink W52P User Guide*.

Prerequisites

Before upgrading W52H/W56H handset firmware via OTA, the following prerequisites must be fulfilled:

- For W52H/W56H:

  - Handset with hardware version should be appropriate. If your W52H handset hardware version is prior to 26.0.0.6, you can only upgrade W52H handset firmware via the USB cable, regardless of the handset firmware version.

  - Current firmware running on the handset and base station should be appropriate. If the current firmware running on the W52H handset does not support OTA upgrade, you can first upgrade the handset firmware to a firmware with version 26.40.0.15 or later via USB cable, and then upgrade the handset via OTA.

- The handset must be subscribed and within the radio coverage of the base station.

- There is no external call in progress on the base station, which means all subscribed handsets are not in external call state.

- The handset battery is enough (at least 50% charged) to finish the firmware upgrade.

- Latest handset firmware file is available.

A system administrator can check firmware versions of base station and all subscribed handsets via web user interface.

To check firmware versions of base station and subscribed handsets via web user interface:

1. Enter the IP address of base station in the address bar of the web browser on your PC.

2. Enter the administrator user name (default: admin) and password (default: admin) in the login page.

3. Click **Confirm** to login.

   Status information of the base station is displayed on the web user interface.

4. Click on **Handset&VoIP**.

   Status information of subscribed handsets is displayed on the web user interface.
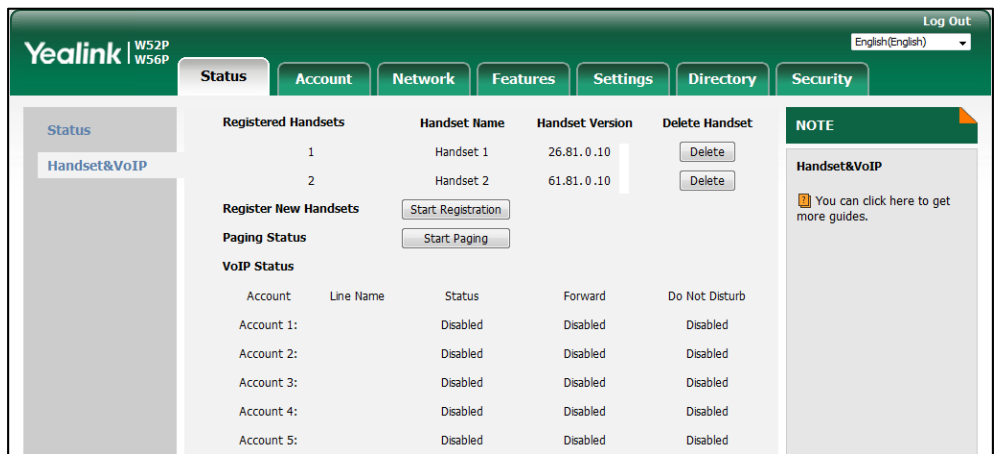
Performing OTA Upgrade via Auto Provisioning

Before performing OTA upgrade via auto provisioning, you need to be familiar with the following features:

Base Trigger

Base trigger feature allows OTA upgrade for handset to be triggered automatically. A base-triggered OTA upgrade will be effective for all handsets subscribed to the base station. When the base station completes downloading a new handset firmware file from the provisioning server, base trigger feature forces all subscribed handsets fulfilling prerequisites to perform OTA upgrade. Base trigger feature is especially useful to upgrade a large number of handsets.

Handset Trigger

Handset trigger feature allows OTA upgrade for handset to be triggered automatically. It is only applicable when the current handset firmware is different with the one on provisioning server. When the handset is registered to a base or turned on successfully, handset trigger feature forces the handset fulfilling prerequisites to perform OTA upgrade.

New Version Tip

When performing an OTA upgrade via auto provisioning, the base station first gets the version

6

information of the handset firmware file. IP DECT phones provide "New Version Tip" feature to allow the handset to prompt the message "Handset has a new firmware, update now?" when the current handset firmware version differs from the one stored in the base station. The prompt message can inform the user of the new firmware. You can press the Upgrade soft key to upgrade the handset timely or the Cancel soft key to cancel update and the prompt message displayed on the LCD screen.

The two features are applicable to OTA upgrade via auto provisioning and configurable using configuration files only.

The following introduces the configuration parameters of these features:

Parameter	Description	Valid Value
over_the_air.base_trigger	Enables or disables base trigger feature.	0-Disabled 1-Enabled (default)
over_the_air.handset_trigger	Enables or disables base handset feature.	0-Disabled 1-Enabled (default)
over_the_air.handset_tip	Enables or disables new version tip feature.	0-Disabled 1-Enabled (default)

The following is an example of configurations for reference:

over_the_air.base_trigger = 1

over_the_air.handset_trigger = 1

over_the_air.handset_tip = 1

Configuring the Access URL of the Handset Firmware File

Before OTA upgrade, you need to prepare a provisioning server, obtain the latest handset firmware file and upload it to the root directory of the provisioning server. For more information on how to configure a provisioning server, refer to *Yealink_SIP-T2 Series_T19(P) E2_T4_Series_T5_Series_W5_Series_IP_Phones_Auto_Provisioning_Guide*.

After uploading the handset firmware file to the provisioning server, you need to specify the access URL of the handset firmware file. This is configurable using the configuration file only. You can use a boot file to customize the download sequence of configuration files.

To specify the access URL of the handset firmware file using the configuration file:

1. Specify the desired download path (e.g., tftp://192.168.1.20/upgrade.cfg) of the configuration files in the boot file.

2. Add the parameter in template configuration file, and then specify the access URL of the handset firmware file.

Parameters	Permitted Values	Default
over_the_air.url	**URL within 511 characters**	**Blank**
Description: Configures the access URL of the handset (W52H or W56H) firmware file. **Example:** over_the_air.url = http://192.168.1.20/61.80.0.1.rom **Note:** The priority of parameter "over_the_air.url" is lower than "over_the_air.url.w52h" and "over_the_air.url.w56h". If you change this parameter, the IP DECT phone will reboot to make the change take effect.		
over_the_air.url.w52h	**URL within 511 characters**	**Blank**
Description: Configures the access URL of the W52H handset firmware file. **Example:** over_the_air.url.w52h = http://192.168.1.20/26.81.0.1.rom **Note:** The priority of parameter "over_the_air.url.w52h" is higher than "over_the_air.url". If you change this parameter, the IP DECT phone will reboot to make the change take effect.		
over_the_air.url.w56h	**URL within 511 characters**	**Blank**
Description: Configures the access URL of the W56H handset firmware file. **Example:** over_the_air.url.w56h = http://192.168.1.20/61.80.0.1.rom **Note:** The priority of parameter "over_the_air.url.w56h" is higher than "over_the_air.url". If you change this parameter, the IP DECT phone will reboot to make the change take effect.		

The following is an example of configuration for reference:

over_the_air.url = http:// 192.168.1.20/61.80.0.15.rom

Ensure the handset firmware file (26.40.0.15.rom) is uploaded to the provisioning server before performing OTA upgrade.

3. Place the template boot and configuration files to the root directory of the provisioning server.

4. Configure the DECT phone to obtain the provisioning server address for downloading configuration files.

For more information, refer to *Yealink_SIP-T2 Series_T19(P) E2_T4_Series_T5_Series_W5_Series_IP_Phones_Auto_Provisioning_Guide*.

Triggering an OTA Upgrade

OTA upgrade can be triggered:

- **Automatically**: an OTA upgrade can be triggered automatically during the auto provisioning process.

- **Manually**: an OTA upgrade can be triggered manually from the handset.

Triggering an OTA Upgrade Automatically

When base trigger feature is enabled, an OTA upgrade is triggered automatically during the auto provisioning process. An OTA upgrade can be triggered:

- When the base station starts up

- At a fixed interval or specific time depending on the updating mode of the auto provisioning.

During the auto provisioning process, the base station first obtains version information of the handset firmware file stored on the provisioning server. If the firmware on the provisioning server differs from the one running on the handset, all subscribed handsets fulfilling prerequisites will perform OTA upgrade automatically. During the upgrade process, a progress bar is displayed on the LCD screen indicating the upgrade process. The handsets reboot, and the message key LEDs flash red after completing upgrade. If the firmware on the provisioning server is the same as the one running on the handset, the handset will have no performance and prompt.

During the upgrade process, other handsets fulfilling prerequisites will automatically perform OTA upgrade when they reboot or re-subscribe to the base station. The handsets not fulfilling prerequisites will not perform an OTA upgrade. The LCD screens of handsets may display a new version prompt if new version tip feature is enabled.

If the handset fails to perform an OTA upgrade, and the LCD screen prompts "Upgrade fails, please upgrade again". After a short while, the handset automatically attempts to perform an OTA upgrade again.

Triggering an OTA Upgrade Manually

In some cases, you may need to upgrade a specific handset. What you need to do is to disable base trigger feature, and manually trigger an OTA upgrade via the handset. A manually triggered OTA upgrade will only be effective for the handset itself, and should be performed after the base station gets the handset firmware information via auto provisioning.

To trigger an OTA upgrade manually:

1. Press the **OK** key on the handset.

2. Select **Settings**->**Upgrade Firmware**, and then press the **OK** soft key.

The LCD screen prompts "Press "Upgrade" to check new firmware".

3. Press the **OK** key or the **Upgrade** soft key.

The LCD screen first displays "Checking, Please wait...", then prompts "Upgrade to XXX?". XXX equals to the firmware version which the handset will update to.

4. Press the **Yes** soft key.

The LCD screen displays a progress bar with the status of upgrade. The handset reboots, and the message key LED flashes red after completing upgrade.

If the current firmware version is the same as the firmware on the provisioning server, the handset prompts "Handset software is newest version" after finishing the step 3. You can press the Cancel soft key to cancel the upgrade.

If the handset fails to complete the upgrade, the LCD screen prompts "Upgrade failed, please upgrade again". You need to manually trigger an OTA upgrade again.

If new version tip feature is enabled, all subscribed handsets will prompt the message "Handset has a new firmware, update now?" on the LCD screen. You can press the **Upgrade** soft key, and then press the **Yes** soft key to trigger OTA upgrade for each handset directly.

> If the handset battery is low, the LCD screen will prompt "Low battery, please put handset on charger, and try again!" when you manually trigger an OTA upgrade. In this case, you need to charge the handset first, and then re-trigger an OTA upgrade after the handset battery is enough to finish the OTA upgrade.

Performing OTA Upgrade Manually

This upgrade method requires you to store the handset firmware file to local system first, and then trigger an OTA upgrade via web user interface. All subscribed handsets fulfilling prerequisites are forced to perform OTA upgrade. Base Trigger and New Version Tip features are not applicable to this upgrade method.

To trigger an OTA upgrade via web user interface:

1. Click on **Settings**->**Upgrade**.

2. In the **Select and Upgrade Handset Firmware** block, click **Browse** to locate the handset firmware file from local system.
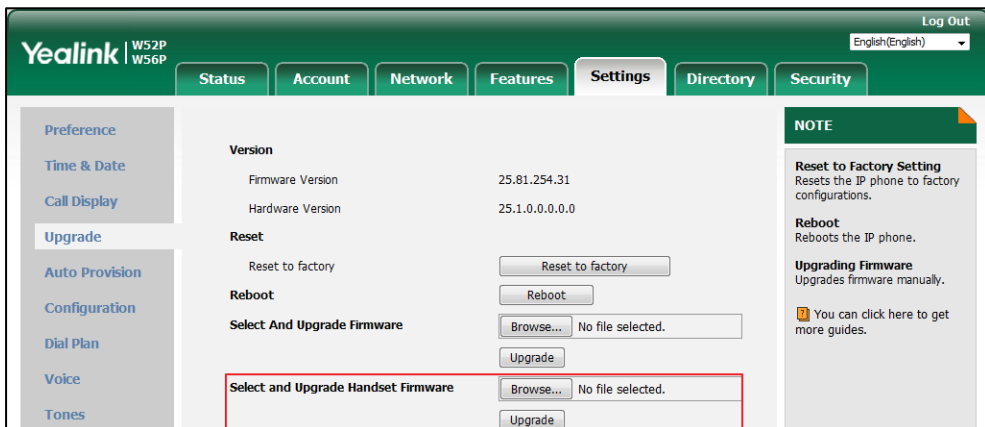
3. Click **Upgrade** to trigger the OTA update.

   A dialog box pops up to prompt "Handset Firmware of the SIP Phone will be updated. It will take 10 minutes to complete. Please don't power off!".

4. Click **OK** to confirm the OTA upgrade.

   The web user interface prompts "Handset Firmware updating. Please wait and do not power off. And the browser must not be closed or refreshed!".

All subscribed handsets will perform OTA upgrade if fulfilling prerequisites, and display a progress bar with the status of upgrade on the LCD screen. The handset will reboot, and the message key LED flashes red after completing OTA upgrade.

During the upgrade process, other handsets fulfilling prerequisites will automatically perform OTA upgrade when they reboot or re-subscribe to the base station.

If the handset fails to perform an OTA upgrade, and the LCD screen prompts "Upgrade fails, please upgrade again". After a short while, the handset automatically attempts to perform an OTA upgrade again.