HUAWEI TE30 Videoconferencing Endpoint
V100R001
User Guide

Issue   01

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About This Document

Overview

This document describes how to install, configure, maintain, and troubleshoot the HUAWEI TE30 Videoconferencing Endpoint (TE30 or endpoint for short). It also includes step-by-step instructions for conferencing tasks.

When using this document, note the following:

- Except chapters 11 Web-based Remote Management, 12 Troubleshooting, and 13 Maintenance, which apply to the endpoint web interface, descriptions and configuration in this document apply to the endpoint's user interface controlled by the remote control (remote controlled UI for short).

- To access the menu screen, press 🏠 on the remote control. You can find the option bar on the left of the menu screen. This option bar is your interface to all functions except calling.

- To move up, move down, hide, or show an icon in the option bar, select 🔲 and then the desired icon.

- To hide the option bar, press the left arrow key, ↰, or 🏠 on the remote control.

- To show the option bar again, press 🏠 on the remote control.

Intended Audience

This document is primarily intended for:

- Administrator

  The administrator has access to all menus on the web interface and remote controlled UI. When **Advanced Settings** is password-protected, the administrator must enter the password for access. For details about how to set the password, see 10.2.1 Setting the Administrator Password.

- Common user

  Common users have access to all menus except **Advanced Settings** on the web interface and remote controlled UI.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
⚠ DANGER	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazard with a medium or low level of risk, which if not avoided, could result in minor or moderate injury.
⚠ CAUTION	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
⚇ TIP	Indicates a tip that may help you solve a problem or save time.
📖 NOTE	Provides additional information to emphasize or supplement important points of the main text.

Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

Issue 01 (2013-01-30)

This issue is the first official release.

Contents

1 Product Introduction

The TE30 is a compact, easy to install, and easy to use videoconferencing endpoint designed by Huawei.

The TE30 is an all-in-one endpoint incorporating a digital camera and stereo microphone. It is ready for video communication as soon as it is powered on and connected to a network. The TE30 is suitable for executive personnel who want to attend video conferences from their executive offices or small conference rooms as well as home users.

HD Video

The TE30 supports HD video with the following resolutions:

- 720p (1280 x 720 pixels and progressive scanning)
- 1080p (1920 x 1080 pixels and progressive scanning)

H.239 Dual Stream

- Your TE30 complies with the H.239 standard and supports concurrent transmission of two video channels.
- A presentation can either be a video or computer desktop content.
- A presentation can be displayed independently or on the same display as the video.

Multiple Conferencing Modes

- Point-to-point conference
- Multipoint conference
- Joining a conference as the called party
- One press to join conference
- Joining a conference by dialing two required numbers
- Voice dialing with Chinese and English support

UI

- Multiple languages
- Rich operation hints and statistics

Network Features

- Maximum call bandwidth: 4 Mbit/s
- IP-based network
- Packet loss concealment
- Wi-Fi capable

2 Installation and Initial Configuration

About This Chapter

Install and configure your TE30 before use.

Your TE30 offers multiple installation options. You can use any of them for quick deployment.

Connect cables to your TE30 before using it for conferencing.

With all cables connected to the TE30, power it on.

The Wizard helps to set the general, network, and camera parameters on your TE30 quickly and conveniently.

2.1 Installing Your TE30

Your TE30 offers multiple installation options. You can use any of them for quick deployment.

For details about your TE30 installation options and instructions, see the *HUAWEI TE30 Videoconferencing Endpoint Quick Start Guide* provided with your TE30.

2.2 Connecting Cables

Connect cables to your TE30 before using it for conferencing.

Please refer to the *HUAWEI TE30 Videoconferencing Endpoint Quick Start Guide* to familiarize yourself with the TE30 rear ports. This helps you connect cables.

Refer to Figure 2-1 to connect cables to your TE30.

Figure 2-1 Connecting cables
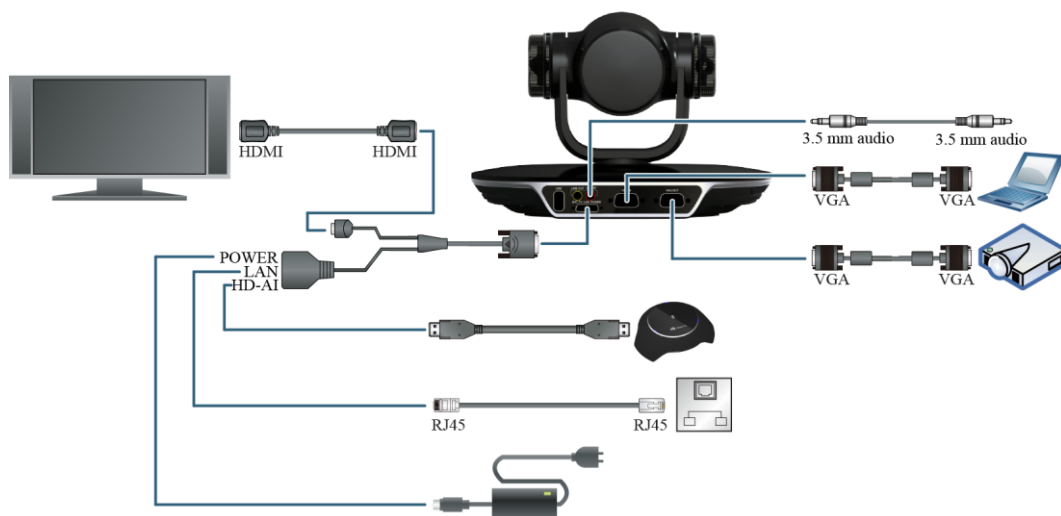
In Figure 2-1:

- Video input: Use the built-in camera in your TE30 as the video input source. Your TE30 cannot be connected to external cameras.

- Presentation input: Use a VGA cable to connect the TE30 VGA IN port to a computer VGA out port.

- Audio input: Use the built-in microphone. Alternatively, use the 10 m proprietary cable provided by a VPM220 microphone array to connect the integrated cable HD-AI connector and the VPM220.

- Computer audio input: Use a 3.5 mm audio cable to connect the TE30 LINE IN port to a computer audio output port.

- Video and audio output: Connect the provided integrated cable to the TE30 MIC/TV/LAN/POWER port and use an HDMI cable to connect the HDMI connector to the monitor HDMI input port.

- Presentation output: Use a VGA cable to connect the TE30 VGA OUT port to a projector VGA out port.

- LAN connection: Use the provided network cable to connect the integrated cable LAN connector to the network port of a network device.

- Power supply: Use the provided power cable and power adapter to connect the integrated cable power connector to the power socket.

📖 NOTE

- The VGA and 3.5 mm audio cables are not provided with your TE30. You need to purchase the cables of the same model by yourself.

- The 10 m proprietary cable is provided as standard with the VPM220, and the integrated cable is provided as standard with the TE30.

- The cable connection described in this section is provided only for reference.

2.3 Powering On and Off

With all cables connected to the TE30, power it on.

⚠ **CAUTION**

- When your TE30 is powered on, ensure that the power cable is connected to the TE30 securely to prevent power disconnection.
- Before isolating your TE30 from its external power supply (for example, the power supply from a power socket) and removing the power cable, power off the TE30 properly.

Check whether the power cable and power adapter are correctly connected to the relevant devices. Ensure that:

- The AC power supply voltage is at 50 Hz or 60 Hz within the 100-240 V range.
- The sequence of and voltage difference between the live wire, neutral wire, and ground wire comply with the relevant international standards. In addition, ensure that the ground wire is properly grounded.

With all cables connected correctly, use the power adapter to connect the TE30 to a power supply. The power adapter indicator then comes on, and the TE30 is automatically powered on.

Table 2-1 describes the TE30 indicator status.

Table 2-1 Indicator status

Indicator Status	TE30 Status
Blinking green	Starting
Steady green	Operating correctly
Blinking red	Encountered a fault, such as a self-check error, overheating, and software malfunction
Blinking orange	Sleeping
Steady orange	Being powered off
Off	Powered off

The OLED display shows the IP address, site number, and indications for startup, upgrade, sleep mode, and malfunction. Table 2-2 describes the content shown on the OLED display.

Table 2-2 OLED display content

When the TE30 Is...	OLED Display Shows...
Starting	Message "Booting..."
Operating	IP address and site number of the TE30 in turn at 10 seconds intervals

When the TE30 Is...	OLED Display Shows...
correctly	
Being updated	• Message "Downloading" during software downloading • Message "Updating" during software updates
Sleeping	Message "Standby"
Malfunctioning	• Indications that signify fan running stop, overheating, or other faults • Hexadecimal error code following each indication

Press ⏻ on the remote control, select **Shut Down**, and follow the onscreen instructions to power off your TE30.

2.4 Using the Wizard

The Wizard helps to set the general, network, and camera parameters on your TE30 quickly and conveniently.

Background

When configuring the TE30 for the first time, you can use the Wizard. For details, see the *HUAWEI TE30 Videoconferencing Endpoint Quick Start Guide*.

If a USB flash drive is provided with your TE30, you can also load the configuration file on the USB flash drive to configure your TE30. For details, see the *HUAWEI TE30 Videoconferencing Endpoint Quick Installation Guide*.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Installation** > **Wizard**.

The **General** screen is displayed.

Step 2 Set the general parameters according to Table 2-3 and Table 3-1.

Table 2-3 General parameters

Parameter	Description	Setting
Site name	Specifies the site name you want to be superimposed on the video of your site when it displays to other sites. When your site joins a multipoint conference, this site name is displayed in the site list.	The default value is **site**.
Language	Specifies the language for the remote	The default value is **English**.

Parameter	Description	Setting
	controlled UI.	
Time zone	Specifies the time difference between the local time and the Greenwich Mean Time (GMT). Your TE30 automatically sets this parameter based on your settings of **Location**.	The default value is **(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi**. Your TE30 automatically sets this parameter based on the value set for **Location**.
Time format	Specifies the format in which time is displayed.	The default value is **24-hour**.
NMS server	Specifies the IP address of the HUAWEI SMC 2.0. After you set this parameter and **Connection type**, **Local IP address**, **Subnet mask**, and **Gateway address**, your TE30 automatically attempts to obtain the HUAWEI SMC 2.0 settings. After it obtains the configuration, it displays the conferencing screen. **NOTE** 　This parameter is available on the **General** screen only when you are configuring the TE30 for the first time.	For details, contact the local reseller or operator.

Step 3　Select **Next**. Set the H.323 parameters by referring to Table 3-2.

Step 4　Select **Next**. Set the Session Initiation Protocol (SIP) parameters by referring to Table 3-3.

Step 5　Select **Next**. Set the video input parameters by referring to Table 4-5.

Step 6　Select **Save**.

　　----End

Follow-up Procedure

To set date and time parameters listed in Table 2-4, choose **Advanced Settings** > **Settings** > **General** > **Date and time**.

Table 2-4 Date and time parameters

Parameter	Description	Setting
Location	Specifies the country or area where your TE30 is located. When you set this parameter, your TE30 automatically adjusts the value of the Time zone parameter.	The default value is **China**.

Parameter	Description	Setting
Adjust time automatically based on DST	Specifies whether to adjust the endpoint clock based on local observance of Daylight Savings Time (DST). If this function is enabled, the endpoint clock is automatically adjusted one hour forward. **NOTE** The presence of this parameter is controlled by your settings of **Time zone**. This parameter is available for countries and regions that support DST.	This parameter is deselected by default.
Date format	Specifies the format in which the date is displayed.	The default value is **YYYY/MM/DD**.
Enable NTP	Specifies whether to automatically synchronizes system time with a Network Time Protocol (NTP) server at an interval of 300 seconds. **NOTE** If you set this parameter to Enable NTP, you must also set **NTP server address**.	This parameter is deselected by default.
NTP address type	Specifies the mode for your TE30 to obtain the NTP server IP address. • **Auto**: Your TE30 automatically obtains the NTP server IP address. • **Manual**: You must manually set the NTP server IP address. This parameter is available only when **Connection type** is set to **Dynamic IP**. **NOTE** For details about how to set **Connection type**, see 3.1 Setting IP Parameters.	The default value is **Manual**.
NTP server address	Specifies the NTP server IP address.	No default value is set for this parameter.

To set custom parameters listed in Table 2-5, choose **Advanced Settings** > **Settings** > **Display** > **Personalize**.

Table 2-5 Custom parameters

Parameter	Description	Setting
Transparency	Specifies the transparency of the background photograph of the menu screen.	The default value is **15%**.

Parameter	Description	Setting
	If you set the parameter to **Opaque**, no background photograph is displayed on the menu screen. If you st this parameter to values other than **Opaque**, a background photograph is displayed behind the menu screen with a degree of transparency corresponding to the value chosen.	
Display IP address	Specifies whether to display the local IP address on the conferencing screen.	This parameter is selected by default.
Select conference control operation	Specifies the conference controls to display on the **Conference Control** screen.	-
Display position	Specifies the display position for the site name superimposed on the local video.	The default value is **Lower right corner**.
Display duration	Specifies the duration to display the site name.	The default value is **Always display**.
Display time and zone	Specifies whether to superimpose the time zone and time on the video of your site after your site joins a conference.	This parameter is deselected by default.
Font color	Specifies the color in which the site name is displayed.	The default color is white.
Font size	Specifies the font size for the site name display.	The default value is **Medium**.
Font Type	Specifies the typeface for the site name. This parameter is available only when **Language** is set to 中文(简体).	The default value is **Boldface**.
Bold	Specifies whether the site name is displayed in bold.	This parameter is deselected by default.
Set the horizontal offset	Fine-tunes the site name's location leftward and rightward on the video.	Value range: 0-96. The default value is **48**.
Set the vertical offset	Fine-tunes the site name's location upward and downward on the video.	Value range: 0-96. The default value is **48**.

3 Network

About This Chapter

With network settings configured correctly, your TE30 can properly communicate with other network devices.

3.1　Setting IP Parameters

To use your TE30 on an IP network to implement video communication, correctly set IP parameters, which include DNS server address, network interface mode, and gateway address.

3.2　Setting H.323 Parameters

When an H.323 network gatekeeper (GK) is used on your videoconferencing system, set the H.323 parameters.

3.3　Setting SIP Parameters

To prepare your TE30 for video communication using SIP, set SIP parameters, which includes whether to register with a SIP server.

3.4　Setting Wi-Fi Parameters

To use your TE30 to implement video communication over a Wi-Fi network, configure the Wi-Fi settings.

3.5　Setting QoS Parameters

The quality of service (QoS) settings determine the mode for processing IP data packets in a conference.

3.6　Setting Firewall Parameters

With the firewall settings correctly configured, video conferences held using your TE30 are secure.

3.7　Setting Network Diagnostics Parameters

Correct settings on the ports used for diagnostics enable you to use a network diagnostics tool to diagnose your TE30 using the ports.

3.1 Setting IP Parameters

To use your TE30 on an IP network to implement video communication, correctly set IP parameters, which include DNS server address, network interface mode, and gateway address.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **IP** > **IP**. Set the IP parameters by referring to Table 3-1.

Table 3-1 IP parameters

Parameter	Description	Setting
IPv6	Specifies whether IPv6 is used. If you use IPv6, you must also set **Connection type**, **Local IP address**, **Subnet prefix length**, and **Gateway address**.	This parameter is deselected by default.
DNS server address	Specifies the IP address of the active Domain Name System (DNS) server. After you set this parameter, domain names can be used as the addresses of network gatekeeper (GK) and Session Initiation Protocol (SIP) servers. The DNS server will translate the domain names into the IP addresses of the GK and SIP servers.	Example: 202.98.192.67
Alternate DNS server IP address	Specifies the IP address of the standby DNS server. The standby DNS server is used when the active DNS server is unavailable or responds slowly.	Example: 202.98.198.167
Network interface mode	Specifies the working mode for the network ports on your TE30. • **Auto detection**: When accessing the network, your TE30 automatically negotiates with a remote network device to determine the optimal work mode. • **10 Mbps and half duplex**: The data transmission rate is 10 Mbit/s, and data cannot be sent and received at the same time. • **10 Mbps and full duplex**: The data transmission rate is 10 Mbit/s, and data can be sent and received at the same time. • **100 Mbps and half duplex**: The data transmission rate is 100 Mbit/s, and data cannot be sent and received at the same time. • **100 Mbps and full duplex**: The data	The default value is **Auto detection**. NOTE If the remote network device you wish to communicate with has its network interface mode set to **10 Mbps and full duplex** or **100 Mbps and full duplex**, set this parameter to be the same as the remote network interface mode. Otherwise, communication will fail.

Parameter	Description	Setting
	transmission rate is 100 Mbit/s, and data can be sent and received at the same time.	
PPPoE	Specifies whether your TE30 accesses broadband networks using dial-up connections. **NOTE** If you set this parameter to **Enable**, you must also set **Dialing mode**, **User name**, and **Password**.	The default value is **Disable**.
Dialing mode	Specifies the dial-up connection mode. The dial-up process complies with the Point-to-Point Protocol over Ethernet (PPPoE) protocol. To use a dial-up connection, in **User name** and **Password**, enter the user name and password that are provided by your broadband access service provider. • **Auto**: When your TE30 starts, it automatically sets up a dial-up connection over the IP network. If the dial-up service is not free of charge, charging starts when the dial-up connection is established. • **Manual**: Your TE30 uses the dial-up program to access the network. Choose **Advanced Settings** > **Utilities** > **PPPoE Dialing** > **Connect** and set up a PPPoE dial-up connection.	The default value is **Auto**.
Connection type	Specifies the mode for your TE30 to obtain an IP address. • **Static IP**: The network administrator assigns an IP address to your TE30. If you select this option, you must also set **Local IP address**, **Subnet mask**, and **Gateway address**. • **Dynamic IP**: When a DHCP server is available on the network, your TE30 automatically obtains an IP address using the Dynamic Host Configuration Protocol (DHCP).	The default value is **Static IP**. If you have set **NMS server**, select **Static IP** for this parameter.
Local IP address Subnet mask	Specifies the IP address and subnet mask of your TE30.	Contact the network administrator. Examples: • IPv4 address: 192.168.1.10 • IPv6 address: 2000:0:0:0:200:55:26:1

Parameter	Description	Setting
Gateway address	Specifies the gateway address that corresponds to the IP address of your TE30. This parameter is mandatory when **Connection type** is set to **Static IP**.	Contact the network administrator. Examples: • IPv4 address: 192.168.1.1 • IPv6 address: 2000:0:0:0:200:55:0:1
Subnet prefix length	Specifies the prefix length for the IPv6 address of your TE30.	The default value is **0**.

Step 2 Select **Save**.

----End

3.2 Setting H.323 Parameters

When an H.323 network gatekeeper (GK) is used on your videoconferencing system, set the H.323 parameters.

Prerequisites

A GK is used on the videoconferencing system.

Background

When a GK is used in the conference system, you can set the site number and name for your TE30. Other endpoint also registered with the GK can then use the site number or name as well as the IP address to call your TE30.

NOTE

A GK is responsible for network bandwidth management, endpoint authentication, and address translation on the videoconferencing system.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **IP** > **H.323**. Set the H.323 parameters by referring to Table 3-2.

Table 3-2 H.323 parameters

Parameter	Description	Setting
Enable GK	Specifies whether to register your TE30 with the GK. • If you select this parameter, the TE30 will register with the GK after being started. After the TE30 successfully registers with the GK, it can call endpoints defined in the address	This parameter is deselected by default.

Parameter	Description	Setting
	book by their IP addresses, numbers, and names. • If you do not select this parameter, the TE30 will not register with the GK. In this case, the TE30 can call other endpoints by their IP addresses only.	
GK registration mode	Specifies the mode for registering your TE30 with a GK. • **Auto**: Your TE30 automatically registers with an available GK on the network and obtains the GK address. • **Manual**: You must set **GK address**, which specifies the GK with which you want your TE30 to register.	The default value is **Auto**.
GK address	Specifies the IP address of the server where the desired GK is installed. This parameter is mandatory when **GK registration mode** is set to **Manual**.	Example: 192.168.1.10
Site number	Specifies the site number for your TE30. If your TE30 registers with a GK, endpoints that also register with GKs can dial this site number to call your TE30.	The site number can contain only digits. Example: 12345
H.323 ID	Specifies the name by which a GK identifies your TE30 after your TE30 registers with the GK.	The names consist of digits, letters, Chinese characters, and special characters such as @ # %. Example: ab3@Joe
Authentication user name	Specifies the user name used for H.323 authentication.	Obtain the user name from your network service provider. Ensure that this user name is the same as that predefined on the GK.
Password	Specifies the password your TE30 uses to register with a GK. The GK uses this password to authenticate your TE30.	Obtain the password from your network service provider. Ensure that this password is the same as that predefined on the GK
Huawei GK	Specifies whether your TE30 uses a Huawei GK. If the Huawei GK is disabled, some functions, such as **Conference Control**, are unavailable on your TE30.	This parameter is selected by default. Select this parameter when a Huawei GK is used.

Parameter	Description	Setting
HTTPS mode	Specifies whether to upload information about conferences initiated from your TE30 in HTTPS encryption mode. • This parameter is available when **Huawei GK** is selected. • If you do not select this parameter, the TE30 will use the Transfer Control Protocol (TCP) to upload conference information, which may be insecure.	This parameter is selected by default. To improve communication security, select this parameter.
Multipoint conference authentication	Specifies whether a certificate for authentication is required to initiate a SiteCall conference. For details about how to import a certificate, see 11.4.8 Importing a Certificate. This parameter is available only when **HTTPS mode** is selected.	This parameter is deselected by default. To improve communication security, select this parameter.
Use VoIP gateway VoIP gateway address	Specifies whether to use a VoIP gateway and the address of the VoIP gateway. If you set these two parameters, your TE30 can place calls to PSTN endpoints connected to the VoIP gateway. If you select **Use VoIP gateway**, you must also set **VoIP gateway address**.	This parameter is deselected by default.

Step 2 Select **Save**.

----End

3.3 Setting SIP Parameters

To prepare your TE30 for video communication using SIP, set SIP parameters, which includes whether to register with a SIP server.

Prerequisites

All involved parties in the conference support SIP.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **IP** > **SIP**. Set the SIP parameters by referring to Table 3-3.

Table 3-3 SIP parameters

Parameter	Description	Setting
Register with server	Specifies whether to register your TE30 with a SIP server. • If you select this parameter and the TE30 successfully registers with the SIP server, the TE30 can call endpoints defined in the address book by their IP addresses, numbers, and names. • If you dot not select this parameter, the TE30 will not register with any SIP server and can call other endpoints by their IP addresses only. **NOTE** If you select this parameter, you must also set **Server address**, **Conference service number**, **Site number**, **User name**, and **Password**.	This parameter is deselected by default.
Server address	Specifies the IP address or domain name of the SIP server with which you want your TE30 to register.	Example: 192.168.1.10
Conference service number	Specifies the conference service number for your TE30 to initiate conferences over an IP multimedia subsystem (IMS) network. Set this parameter to the conference service number obtained from the administrator of the IMS network. **NOTE** Born of the standard IP, the IP Multimedia Subsystem (IMS) uses VoIP applications based on the 3rd Generation Partnership Project (3GPP) SIP to provide fixed and mobile multimedia services for operators. Integrating MCUs can enhance the functionality of the Huawei IMS HD videoconferencing solution.	No default value is set for this parameter.
Enable proxy server	Specifies whether to enable the proxy server. If you set **Server address** to the SIP server domain name, select this parameter.	This parameter is deselected by default.
Proxy server address	Specifies the address of the proxy server. If you set **Server address** to the SIP server domain name, set this parameter to the IP address bound to that domain name.	Example: 192.168.1.10
Site number	Specifies the site number for your TE30. If your TE30 registers with a SIP server,	The site number can contain only digits.

Parameter	Description	Setting
	endpoints that also register with the SIP server can dial this site number to call your TE30.	Example: 12345
User name Password	Specifies the name by which the SIP server identifies your TE30 after it registers with the SIP server.	The value can consist of numbers, letters, Chinese characters, and special symbols such as @ # %. Example: ab3@Joe
Server type	Specifies the SIP server type. • **OCS**: Select this option if your TE30 registers with the Microsoft Office Communications Server (OCS) or Microsoft Lync Server. • **CISCO VCS**: Select this option if your TE30 registers with the Cisco TelePresence Video Communication Server (VCS). • **Standard**: Select this option if your TE30 registers with other SIP servers.	The default value is **Standard**.
Transmission type	Specifies the protocol used for SIP signaling transmission. • **TCP**: Use the Transmission Control Protocol (TCP) to implement transmission reliability. • **UDP**: Use the User Datagram Protocol (UDP) to implement transmission with reduced latency. • **TLS**: Use Transport Layer Security (TLS) to implement transmission security. If you select this option, you must import a certificate when your endpoint registers with a SIP server. For details, see 11.4.8 Importing a Certificate.	The default value is **UDP**.
Video request handling	Specifies how your TE30 handles video requests from a remote endpoint during a point-to-point SIP audio call or multipoint conference. • **Accept automatically**: Your TE30 automatically accepts video requests from the remote endpoint. • **Reject automatically**: Your TE30 automatically rejects video requests from the remote endpoint. • **Manual**: Your TE30 prompts you to accept video requests from the remote endpoint.	The default value is **Manual**.

Step 2 Select **Save**.

----End

3.4 Setting Wi-Fi Parameters

To use your TE30 to implement video communication over a Wi-Fi network, configure the Wi-Fi settings.

Setting Wi-Fi Client Parameters

After the Wi-Fi client is enabled, your TE30 functions as a Wi-Fi client and access a Wi-Fi network after connecting to a wireless router.

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **Wi-Fi** > **Wi-Fi Client** and enable the Wi-Fi client.

Your TE30 automatically scans for available wireless routers and lists the found wireless routers under **Wireless access point**.

If you need to set a static IP address for your TE30, go to Step 2. Otherwise, go to Step 4.

Step 2 Select **Advanced Settings**. On the **Advanced Wireless Settings** screen, set IP parameters by referring to 3.1 Setting IP Parameters.

Step 3 Select **Save**.

Step 4 Select **Scan**.

Your TE30 automatically scans for available wireless routers and lists the found wireless routers under **Wireless access point**.

Step 5 Under **Wireless access point**, select the wireless router to connect to.

Step 6 Press **OK** on the remote control. When prompted, enter the security key or password and select **Connect**.

When the TE30 is connected to one of the available routers, the status of that router will then change to 🔵.

----End

Setting Wi-Fi Hotspot Parameters

When the Wi-Fi hotspot is enabled, other devices can access a Wi-Fi network by connecting to the TE30.

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **Wi-Fi** > **Wi-Fi Hotspot** and enable the Wi-Fi hotspot.

Step 2 Select **Advanced Settings**. On the **Advanced Wireless Settings** screen, set the advanced wireless network parameters by referring to Table 3-4.

Table 3-4 Advanced wireless network parameters

Parameter	Description	Setting
SSID Number	Specifies the name for your endpoint's Wi-Fi network.	This parameter is mandatory. The value is a string of 31 characters or less, consisting of digits, letters, Chinese characters, and special symbols, such as @ # %.
Channel	Specifies the channel to transmit data through Wi-Fi signals. If you select **AUTO**, your TE30 automatically selects the optimal channel.	The default value is **AUTO**. Retain the default value.
Protocol	Specifies the standard used on the Wi-Fi network. • **802.11b**: This standard works in the 2.4 GHz band and delivers a maximum transmission rate of 300 Mbit/s. • **802.11g**: This standard works in the 2.4 GHz band and delivers a maximum transmission rate of 54 Mbit/s. • **802.11n**: This standard works in the 2.4 GHz band and delivers a maximum transmission rate of 300 Mbit/s. • **802.11b/g/n**: The 802.11b, 802.11g, and 802.11n are all supported.	The default value is **802.11b/g/n**.
Identity authentication mode Encryption mode	Specifies the identity authentication mode used on the Wi-Fi network. • **OPEN**: If you select this option, the value available for **Encryption mode** are **NONE** and **WEP**. • **SHARE**: If you select this option, the values available for **Encryption mode** is **WEP**. • **WPA-PSK**: If you select this option, the values available for **Encryption mode** are **TKIP** and **AES**. • **WPA2-PSK**: If you select this option, the values available for **Encryption mode** are **TKIP** and **AES**.	Default values: • The default value of **Identity authentication mode** is OPEN. • The default value of **Encryption mode** is NONE. **NOTE** When the TE30 is connected to a VPM220, you must set **Identity authentication mode** to **WPA-PSK** or **WPA2-PSK**.
Password	Specifies the password used by other devices to connect to your TE30.	The required password types vary depending on your settings of **Encryption mode**.

Parameter	Description	Setting
		If you set **Encryption mode** to **NONE**, the Wi-Fi network provided by your TE30 is open to everyone.
Local IP address Subnet mask	Specifies the IP address and subnet mask of your TE30.	Examples: • **Local IP address**: 192.168.1.10 • **Subnet mask**: 255.255.255.0
DHCP	Specifies whether your endpoint assigns IP addresses to devices connected to it. If you select this parameter, you must also set **Start IP address** and **End IP address**.	This parameter is deselected by default.
Start IP address End IP address	Specifies the IP address segment for the devices connected to your TE30.	Examples: • **Start IP address**: 192.168.1.10 • **End IP address**: 192.168.1.157

Step 3 Select **Save**.

Under **Connected devices**, you can view the MAC and IP addresses of all devices connected to your TE30.

----End

3.5 Setting QoS Parameters

The quality of service (QoS) settings determine the mode for processing IP data packets in a conference.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Security** > **QoS**. Set the QoS parameters by referring to Table 3-5.

Table 3-5 QoS parameters

Parameter	Description	Setting
QoS type	Specifies the QoS type. Available values are **Priority** and **DiffServ**. • **Priority**: If you select this option, you must also set **IP priority** and **Service type**.	The default value is **Priority**.

Parameter	Description	Setting
	• **DiffServ**: If you select this option, you must also set **DSCP**. DSCP stands for Differentiated Services Code Point.	
IP priority	Specifies the priority that a network device gives to forwarding the data packets sent by your TE30. A larger value indicates a higher priority.	Value range: 0-7 The default value is **7**.
Service type	Specifies how the data packets sent and received by your TE30 are processed on the network. Five values are available: • **Normal**: The network devices transmit the data packets without special processing. • **Minimum delay**: The data packets are transmitted at the highest rate with the minimum delay. • **Maximum throughput**: A large number of data packets can be transmitted on the network. • **Highest reliability**: The data packets can be transmitted to remote sites completely and correctly. • **Minimum cost**: The network devices transmit data packets of the same traffic at lower costs.	The default value is **Minimum delay**.
DSCP audio DSCP video DSCP data DSCP signaling	Specifies the service level of data packets sent by your TE30 during transmission. A larger value indicates a higher service level.	Value range: 0-63 The default value is **63**.
Network jitter	Adjusts network jitter settings to address: • Lip synchronization problems during conferences • Choppy audio problems, by increasing the network jitter value.	Value range: 0 ms to 1000 ms The default value is **0ms**.
Lip sync.	Fine-tunes network jitter settings if a slight lip synchronization problem persists after the network jitter settings are adjusted.	Value range: 0 ms to 300 ms The default value is **0ms**.

Step 2 Select **Save**.

        ----End

3.6 Setting Firewall Parameters

With the firewall settings correctly configured, video conferences held using your TE30 are secure.

Background

The firewall protects your IP network by separating the internal and external network communication data.

With Network Address Translation (NAT) technology, a device on a local area network (LAN) is allocated with a dedicated internal IP address and uses an external IP address to communicate with external devices. If your LAN uses NAT technology, set the IP address of the NAT wide area network (WAN) on your TE30.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **Firewall**. Set the firewall parameters by referring to Table 3-6.

Table 3-6 Firewall parameters

Parameter	Description	Setting
Enable H.460	Specifies whether to use H.460 for traversal between public and private networks after your TE30 is recognized as a private network endpoint.	This parameter is deselected by default.
Use NAT	Specifies whether NAT is enabled for traversal between public and private networks. An endpoint installed on a private network is considered as a public network endpoint after NAT is enabled on the endpoint. Even if you then enable H.460 on the endpoint, it is still considered as a public network endpoint, and H.460 is not used.	This parameter is deselected by default.
NAT address	Specifies the public IP address for your TE30. This parameter is required after you select **Use NAT**.	No default value is set for this parameter.
H.323 call port	Specifies the port used by a remote site to receive and send RAS signaling during communication with the local site.	The default value is **1720**.
RAS source port	Specifies the port used by the local site to receive and send Registration, Admission and Status (RAS) signaling during communication with remote sites.	The default value is **1719**.
RAS destination port	Specifies the port used by a remote site to receive and send RAS signaling during communication with the local	The default value is **1719**.

Parameter	Description	Setting
	site.	
Local listen port	Specifies the local SIP listening port.	The default value is **5060**.
Server listen port	Specifies the listening port in the SIP server with which your TE30 registers.	The default value is **5060**.
SIP call port	Specifies the port used by your TE30 to send SIP signaling during communication with remote sites.	The default value is **5060**.
Local SIP TLS listen port	Specifies the local SIP listening port when **Transmission type** is set to **TLS**.	The default value is **5061**. **NOTE** For details about how to set **Transmission type**, see 3.3 Setting SIP Parameters.
SIP server TLS listen port	Specifies the listening port in the SIP server with which your TE30 registers when **Transmission type** is set to **TLS**.	The default value is **5061**.
SIP TLS call port	Specifies the port used by your TE30 to send SIP signaling during communication with remote sites when **Transmission type** is set to **TLS**.	The default value is **5061**.
Port settings	• **Normal**: No port number can be changed. • **Port convergence**: The port numbers used in H.323 converge. Specifically, signals of different formats use the same port number. This efficiently saves port resources. • **Same port send/receive**: Your TE30 sends and receives data streams through the same port.	The default value is **Same port send/receive**.
Audio port	Specifies the port used by your TE30 to receive audio packets during communication with remote sites.	The default value is **10002**.
Video port	Specifies the port used by your TE30 to receive video packets during communication with remote sites.	The default value is **10004**.

Step 2 Select **Save**.

----End

3.7 Setting Network Diagnostics Parameters

Correct settings on the ports used for diagnostics enable you to use a network diagnostics tool to diagnose your TE30 using the ports.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **Diagnostics**. Set the network diagnostics parameters by referring to Table 3-7.y

Table 3-7 Network diagnostics parameters

Parameter	Description	Setting
Network diagnostics	Specifies whether to enable the H.323 call port, RAS ports, and SIP call port to be used for network diagnostics. If you select this parameter, you must also set **H.323 call port**, **RAS source port**, **RAS destination port**, and **SIP call port**.	This parameter is deselected by default.
H.323 call port	Specifies the port the network diagnostics tool uses to receive and send call signaling during communication with your TE30.	The default value is **1820**.
RAS source port	Specifies the port your TE30 uses to receive and send RAS signaling during communication with the network diagnostics tool.	The default value is **1819**.
RAS destination port	Specifies the port the network diagnostics tool uses to receive and send RAS signaling during communication with your TE30.	The default value is **1819**.
SIP call port	Specifies the port your TE30 uses to send SIP signaling during communication with the network diagnostics tool.	The default value is **5160**.
Test network after exiting conference	Specifies whether to perform the ping operation after your TE30 exits a conference. Ping results are recorded in a log.	The default value is **Enable**.

Step 2 Select **Save**.

----End

4 Display and Camera

About This Chapter

Before using the TE30, you need to connect video devices to it and set video parameters.

Video devices include video input devices, such as a camera, DVD player, and computer, and video output devices, such as displays. To enable your TE30 to deliver HD video quality, ensure the video input and output devices support 720p or higher resolutions.

4.1   Configuring Video Output

After connecting video cables, set the video output parameters, such as output mode, resolution, refresh rate, and stretch mode.

4.2   Configuring Video Input

Correct video input settings enable your TE30 to properly display video input from the built-in camera and VGA IN port.

4.4   Saving and Using Camera Presets

Camera presets are camera positions you stored ahead of time. Each camera preset stores the pan, tilt, and zoom (PTZ) settings of the camera. You can simply control the camera by switching the camera between the camera presets.

4.1 Configuring Video Output

After connecting video cables, set the video output parameters, such as output mode, resolution, refresh rate, and stretch mode.

Background

Your TE30 has two video output ports: VGA OUT and MAIN OUT HD. The MAIN OUT HD port connects to the HDMI connector of the integrated cable.

Video is clearer at a higher resolution. Select the video resolution that is the same as the resolution of the display connected to your TE30.

Table 4-1 lists the resolutions supported by the video output ports in each output mode.

Table 4-1 Available video resolutions in each output mode

Output Mode	Video Resolution
VGA OUT	
VGA	800 x 600 pixels, 1024 x 768 pixels, 1280 x 1024 pixels, 720p, 1080p
YPrPb	720p and 1080p
MAIN OUT HD	
DVI	1024 x 768 pixels, 1280 x 1024 pixels, 720p, and 1080p
HDMI	720p and 1080p

Video is smoother at a higher refresh rate. Select the refresh rate that is the same as the refresh rate of the display connected to your TE30. Table 4-2 lists the refresh rates available for each video resolution.

Table 4-2 Available refresh rates for each resolution

Video Resolution	Refresh Rate (Hz)
800 x 600 pixels	56, 60, 72, 75, or 85
1024 x 768 pixels	60, 70, 75, or 85
1280 x 1024 pixels	60, 75, or 85
720p	• 60, if the output mode is VGA • 50 or 60, if the output mode is DVI, YPrPb, or HDMI
1080p	• 60, if the output mode is VGA • 24, 25, 30, 50, or 60, if the output mode is DVI, YPrPb, or HDMI

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Video** > **Common Settings** > **Video Output**. Set the video output parameters by referring to Table 4-3.

Table 4-3 Video output parameters in common settings

Parameter	Description	Setting
GUI	Specifies the video output port for the remote controlled UI. During a conference, you can configure your TE30 to display	The default value is **MAIN OUT HD**.

Parameter	Description	Setting
	video on one display and the remote controlled UI on another display by setting this parameter to a value different from the value of **MAIN OUT HD**.	
Caption output	Specifies the video output port for captions. **NOTE** 　Settings for this parameter take effect only when the caption type is set to T.140.	The default value is **MAIN OUT HD**.
Main output interface	Specifies the main output port. Only the main output port supports combined picture output. For details about the combined picture function, see 8.4 Adjusting the Screen Layout.	The default value is **MAIN OUT HD**. To ensure video quality, retain the default value.
Dual-screen	Specifies whether the TE30 displays the video and presentation on separate displays. You can enable this function only when your TE30 is connected to two displays.	The default value is **Disable**.

Step 2　Select **Save**.

Step 3　Choose **Advanced Settings** > **Settings** > **Video** > **Video Output**. Set the video output parameters by referring to Table 4-4.

Table 4-4 Video output parameters

Parameter	Description	Setting
Name	Specifies the output port name to help you identify ports during a conference.	• The default value for the MAIN OUT HD port is **HDMI OUT**. • The default value for the VGA OUT port is **VGA OUT**.
Output mode	Specifies the format of the video received by the display. • **VGA**: Select this option if you use a VGA cable to connect the display to the VGA OUT port on your TE30. • **YPrPb**: Select this option if you use a VGA-YPrPb cable to connect the display to the VGA OUT port on your	• The default value for the MAIN OUT HD port is **HDMI**. • The default value for the VGA OUT port is **VGA**.

Parameter	Description	Setting
	TE30. ● **HDMI**: Select this option if you use an integrated cable to connect the HDMI port in the display to the MIC/TV/LAN/POWER port on your TE30. ● **DVI**: Select this option if you use an integrated cable to connect the DVI port in the display to the MIC/TV/LAN/POWER port on your TE30.	
Video resolution	Specifies the resolution for each video output port. The available options vary depending on your settings of **Output mode**. Table 4-1 lists the resolutions supported by the video output ports in each output mode.	The default value is **1080p**.
Refresh rate	Specifies the video refresh rate. The available options vary depending on your settings of **Video resolution**. Table 4-2 lists the refresh rates available for each video resolution.	The default value is **60Hz**.
Stretch mode	Specifies how to adjust the aspect ratio to fit the video into the screen. ● **Stretch**: The aspect ratio is changeable. ● **No stretch**: The aspect ratio is not changeable. ● **Intelligent stretch**: Your TE30 crops the video to an appropriate size and stretches the video to full screen with the original aspect ratio. For example, to change a wide-screen video to a narrow-screen video, your TE30 crops the left and right edges of the wide-screen video and stretches the video to full screen.	The default value is **Stretch**.
Automatic layout mode	Specifies the display mode for the presentation and video. **NOTE** Only the main output port supports this parameter. ● **Full screen**: Your TE30 displays the video or presentation in full screen in the following priority sequence: remote presentation, local presentation, remote video, and local video. ● **PiP**: The Picture in Picture (PiP) function is enabled to display the	The default value is **Full screen**.

Parameter	Description	Setting
	presentation and video. • **2 panes**: The presentation and video are displayed in two panes. • **3 panes (a)** or **3 panes (b)**: The presentation and video are displayed in three panes.	
Small window position	Specifies the position of the PiP window on the screen. This parameter is available only when **Automatic layout mode** is set to **PiP**. NOTE Only the main output port supports this parameter.	The default value is **Lower right corner**.

Step 4 Select **Save**.

----End

4.2 Configuring Video Input

Correct video input settings enable your TE30 to properly display video input from the built-in camera and VGA IN port.

Background

Your TE30 has a built-in camera and cannot be connected to external cameras.

Your TE30 also provides a VGA IN port, which can be connected to a VGA port of a computer.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Video** > **Video Input**. Set the video input parameters by referring to Table 4-5.

Table 4-5 Video input parameters

Parameter	Description	Setting
Name	Specifies the video input port name to help you identify ports during a conference.	This name contains 1-64 characters.
Initial position	Specifies the position of the built-in camera when you power on the TE30. • **Auto**: The camera moves to its initial position after startup. • **Preset 1**: The camera moves to the	The default value is **Auto**.

Parameter	Description	Setting
	preset after startup. **NOTE** Each camera preset stores the pan, tilt, and zoom settings of the camera. For details about how to set presets, see 4.4 Saving and Using Camera Presets.	
Moving speed	Specifies the movement and zoom speed for the camera at your site. • Select **Slow** for accurate positioning. • Select **Fast** for quick positioning. • Select **Medium** for medium paced positioning.	The default value is **Medium**.
Stretch mode	Specifies how your TE30 adjusts the input video based on the video encoding format. • **Stretch**: Stretch the video to full screen with an unfixed aspect ratio. • **No stretch**: Stretch the video to full screen with a fixed aspect ratio. Black borders may appear at the upper and lower part of the display. • **Intelligent stretch**: Crop the video to an appropriate size and stretch the video to full screen with the original aspect ratio. For example, to change a wide-screen video to a narrow-screen video, your TE30 crops the left and right edges of the wide-screen video and stretches the video to full screen.	The default value is **No stretch**.

Step 2 Select **Save**.

----End

You can also specify whether a remote site can control the local camera as follows:

Choose **Advanced Settings** > **Settings** > **Video** > **Common Settings** > **Video Input**. Set **Remote control** parameters.

4.3 Selecting and Controlling a Camera

Select local and remote video sources and control the local and remote cameras to obtain the desired view.

4.3.1 Selecting a Camera

To control a camera, first select the camera.

Background

When the TE30 is not in a conference, you can only select and control the local camera. When the TE30 is in a conference, you can select and control the local and remote cameras.

Procedure

Step 1 Press ◼◼ on the remote control to switch to the local or remote camera. If multiple local or remote cameras are available, use the following method to select a specific camera.

Step 2 Press ◼◼ on the remote control and select the desired camera from the list displayed in the lower right corner.

----End

4.3.2 Adjusting the Focal Length

You can change the magnification of distant objects by adjusting the focal length of the camera.

Step 1 Select ◼◼ .

Step 2 Select **Adjust Focus** and adjust the focal length as required.

----End

4.3.3 Controlling a Camera

You can perform pan, tilt, and zoom (PTZ) control over a local or remote camera.

Procedure

Step 1 Press ◼◼ on the remote control.

Step 2 On the camera control screen, perform any of the following:

- Press ◼◼ to switch between local and remote cameras. The text in the upper left corner indicates the camera that is currently being controlled (local or remote).
- Press navigation keys to turn the camera lens.
- Press ⊕ to zoom in or ⊖ to zoom out.

----End

Follow-up Procedure

You can restore a local or remote camera to its default location: On the camera control screen, press **OK** on the remote control and follow the onscreen instructions.

4.4 Saving and Using Camera Presets

Camera presets are camera positions you stored ahead of time. Each camera preset stores the pan, tilt, and zoom (PTZ) settings of the camera. You can simply control the camera by switching the camera between the camera presets.

The camera supports PTZ functions, you can creat and save a maximum of 30 camera presets for the camera. A camera preset remains valid until it is deleted or changed.

Table 4-6 describes the features of camera presets.

Table 4-6 Camera preset features

Endpoint	Number of Camera Presets	Whether Data Is Lost After Restart
Local	30	No
Remote	16	Yes

Saving a Camera Preset

A camera preset stores the PTZ settings of the camera.

If you select a number to save a camera preset to and another camera preset is already saved to that number, the new camera preset replaces the exiting one.

To save a camera preset:

Step 1 Set the camera lens position. For details, see 4.3 Selecting and Controlling a Camera.

Step 2 Select ▢, select **Save Preset**, select a number, and press **OK** on the remote control to save the camera preset to the selected number.

----End

Moving a Camera to a Preset

If you have saved camera presets to the TE30, you can tap a preset number to apply that preset to the camera.

To move a selected camera to a camera preset:

Step 1 Select ▢ and select **Switch Preset**.

Step 2 Select a camera preset number and press **OK** on the remote control to apply that preset to the camera.

----End

Deleting a Camera Preset

To delete a camera preset, select the preset number and press ← on the remote control.

5 Microphone and Speaker

About This Chapter

While your TE30 provides a built-in microphone, you can connect external microphone arrays or other audio devices to the TE30 as audio input sources. Before using the TE30, connect the audio input devices to the TE30 and set audio input parameters correctly.

5.2 Connecting a Speaker

You can connect your TE30 to external speakers for louder audio output and better audio quality.

5.3 Configuring Audio

Before using your TE30 to join a conference, set the audio parameters to produce the best possible audio experience.

5.1 Connecting an Audio Input Device

For better sound pickup quality, you can connect a VPM220 microphone array (VPM220 for short) or VPM220W wireless microphone array (VPM220W for short) to your TE30.

Before connecting any audio input device to your TE30, get to know each audio input port so that you can make the connections quickly and properly. Table 5-1 describes the audio input ports.

Table 5-1 Audio input ports

Port	Type	Supported Audio Feature
LINE IN	3.5 mm audio port	Stereo
MIC/TV/LAN/POWER	Proprietary port	Audio picked up by microphone arrays

5.1.1 Connecting a VPM220

The VP220 provides 180 °sound pickup and an optimal pickup range of six meters. Use the 10 m proprietary cable provided with the VPM220 to connect the HD-AI connector of the TE30 integrated cable to the IN port on a VPM220. Once the connection is set up, your TE30 automatically uses the VPM220 instead of its built-in microphone for sound pickup.

The status indicators can quickly provide information about the VPM220 working status. Table 5-2 describe the status indicators.

Table 5-2 VPM220 status indicators

Indicator Status	VPM220 Status
All red	Microphones in all the three directions are muted.
All blue	Microphones in all the three directions are unmuted or working correctly.
All blue and blinking in turn clockwise	- The VPM220 starts properly and is obtaining an ID. - The VPM220 is reconnecting to the TE30.
All off	The VPM220 is in sleep mode.

For more information, see the *HUAWEI VPM220 Microphone Array User Guide* and *HUAWEI VPM220 Microphone Array Quick Start Guide*.

5.1.2 Connecting a VPM220W

After a VPM220W connects to the TE30 over Wi-Fi, the TE30 automatically uses the VPM220W instead of its built-in microphone for sound pickup.

Prerequisites

The Wi-Fi hotspot is enabled and Wi-Fi parameters are set as follows:

- The encryption mode is set to WPA-PSK or WPA2-PSK.
- DHCP is enabled and **Start IP address** and **End IP address** are set correctly.

For details, see Setting Wi-Fi Hotspot Parameters.

Procedure

Step 1 Press the power button at the bottom of the VPM220W to power it on.

The VPM220W automatically scans for available Wi-Fi networks.

- If a VPM220W has been connected to your TE30, the connection between the two is automatically set up, and you can skip the following steps.
- If the VPM220W is used for the first time or fails to obtain an IP address, proceed to Step 2 and Step 3.

Step 2 Touch and hold the button in the center of the VPM220 top surface for 5 seconds.

A confirmation dialog box is displayed.

Step 3 Select **Confirm**.

The VPM220W sets up a WPS connection with the TE30 and attempts to obtain an IP address. After the VPM220W obtains an IP address, its indicator is steady blue.

----End

The status indicators can quickly provide information about the VPM220W working status. Table 5-3 describe the status indicator.

Table 5-3 Indicator status

Indicator Status	VPM220W Status
Microphone indicators all red	Microphones in all the three directions are muted and working correctly (not in sleep mode).
Microphone indicators all blue	Microphones in all the three directions are unmuted and working correctly (not in sleep mode).
Microphone indicators off	The VPM220 is in sleep mode or powered off.
Microphone indicators blinking blue in turn clockwise	The VPM210W starts properly and is obtaining an IP address. The VPM220W is reconnecting to the TE30.
Microphone indicators blinking blue at the same time	The VPM210W is being upgraded.
Wi-Fi indicator steady red	The Wi-Fi connection is faulty or Wi-FI signal is weak.
Wi-Fi indicator blinking red	The VPM220W cannot connect to the TE30 over Wi-Fi.
Battery level indicator off	The battery level is normal.
Battery level indicator red	The battery level is lower than 3.65 V.
Battery level indicator blinking red	The battery level is lower than 3.4 V.
Charging status indicator blinking blue slowly	The VPM220W is being charged.
Charging status indicator steady blue	Charging is complete.
Charging status indicator off	The VPM220W is not placed on the charger dock.

For details, see the *HUAWEI VPM220W Microphone Array User Guide* and *HUAWEI VPM220W Microphone Array Quick Start Guide*.

5.1.3 Connecting Other Audio Input Devices

You can connect other audio input devices, such as a computer or mobile phone to the LINE IN port on your TE30.

5.2 Connecting a Speaker

You can connect your TE30 to external speakers for louder audio output and better audio quality.

Before you connect a speaker to your TE30, get the know the available audio output ports so that you can quickly and correctly connect a speaker to the TE30.

Table 5-4 describes the TE30 audio output port.

Table 5-4 Port

Port	Type	Supported Audio Feature
LINE OUT	3.5 mm audio port	Stereo

Use an audio cable to connect an external speaker to the LINE OUT port on the TE30.

5.3 Configuring Audio

Before using your TE30 to join a conference, set the audio parameters to produce the best possible audio experience.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Audio**. Set the audio parameters by referring to Table 5-5 and Table 5-6.

Table 5-5 Audio input parameters

Parameter	Description	Setting
Built-in MIC 1 Built-in MIC 2 LINE IN 1 LINE IN 2	Specify whether to enable MIC or LINE IN ports. If a port is disabled, your TE30 will not receive audio input from the device connected to that port. You can use this parameter to specify audio sources for the left and right audio channels in stereo	These parameters are selected by default.

Parameter	Description	Setting
	mode. MIC 1 and LINE IN 1 ports are used for the left audio channel input source, and MIC 2 and LINE IN 2 are used for the right audio channel input source.	
Gain	Adjusts the volumes for the MIC 1, MIC 2, LINE IN 1, and LINE IN 2 ports.	Value range: -12 dB to +12 dB The default value is **+0dB**.
Volume indicator	Displays the volumes in real time.	No default value is set for this parameter.
Microphone array battery level	Displays the microphone array battery level in real time.	No default value is set for this parameter.
Switch controls	Controls whether audio signals collected by audio input devices, excluding the microphone array, are transmitted to your TE30 when you turn off the microphone array. • **MIC array only**: Your TE30 can receive audio signals collected by audio input devices, excluding the microphone array, when you turn off the microphone array. • **All audio inputs**: Your TE30 cannot receive audio signals collected by any audio input devices when you turn off the microphone array. To enable your TE30 to receive audio signals again, do any of the following: • Press the button on the microphone array to turn it on. • Press the microphone button on the remote control to turn on the microphone array only or all audio input devices, depending on your settings of **Switch controls**. • On the TE30 web interface, choose **Device Control** > **Audio Control** and select the audio input ports you want to enable. • On the remote controlled UI, choose **Advanced Settings** >	The default value is **All audio inputs**.

Parameter	Description	Setting
	Settings > **Audio** > **Audio Input** and select the audio input ports you want to enable.	
Turn to Mute	Specifies whether to mute the microphone at your site when the camera rotates to prevent noises caused by the rotation.	The default value is **Enable**.

Table 5-6 Volume and audio effect parameters

Parameter	Description	Setting
Speaker volume	Adjusts the speaker volume.	Press the navigation keys to move the slider. Value range: 0-15 The default value is **15**.
Left Right	Displays the current volumes of the speaker's left and right audio channels.	No default value is set for this parameter.
Alert tone volume	Adjusts the alert tone volume.	Press the navigation keys to move the slider. Value range: 0-3 The default value is **3**.
Sound Effect	For details, see Table 8-2.	-

Step 2 Select **Save**.

----End

6 Conference

About This Chapter

You can create a conference or answer a call to join a conference.

6.1   Answering an Incoming Call and Exiting a Conference

You can specify how your TE30 handles incoming calls. You can also exit a conference anytime.

6.2   Setting Conference Parameters

Your TE30 is ready for videoconferencing with its default conference settings, but you can customize the conference settings based on the site requirements.

6.3   Initiating a Conference

Your TE30 provides multiple paths to initiating a conference.

6.4   Sharing a Presentation

With the presentation sharing function, you can connect a VGA input source, such as a computer and DVD player, to your TE30 and share the VGA input source content with remote sites while those sites can still view the video of your local site.

6.5   Creating a Favorite Conference

If you need to regularly join certain conferences, you can save those conferences as favorite conferences. You can then quickly join a favorite conference without having to reset the conference parameters again.

6.6   Scheduling a Conference

On your TE30, you can schedule a conference to hold the conference at specific time.

6.7   Joining an Authentication Conference

The authentication conference allows you to, if you do not know how many sites are expected to join the conference, set the number of anonymous sites and hold an authentication conference. A site can join the authentication conference by calling the conference access number.

6.1 Answering an Incoming Call and Exiting a Conference

You can specify how your TE30 handles incoming calls. You can also exit a conference anytime.

Answering an Incoming Call

Depending on your configuration, your TE30 answers the call automatically or prompts you to answer the call manually.

- If you set **Answer Mode** to **Answer call automatically** and the TE30 is not in a conference, the TE30 answers the call automatically.
- If you set **Answer Mode** to **Manual**, your TE30 prompts you to handle the call. You can then use the remote control to answer or reject the call.

📖 NOTE

To set the answer mode, choose **Advanced Settings** > **Settings** > **Conference** > **Normal**.

Exiting a Conference

When you are in a conference, you can disconnect the local site from the conference to exit it.

Step 1 Press 📞 on the remote control.

Step 2 When prompted, select **OK**.

----End

6.2 Setting Conference Parameters

Your TE30 is ready for videoconferencing with its default conference settings, but you can customize the conference settings based on the site requirements.

Background

General conference parameters apply to the following conferences:

- Point-to-point conferences initiated by your site
- Multipoint conferences initiated by your site
- Conferences that your site joins by answering the call from a remote site

To initiate an H.239 dual stream conference, set the video and H.239 parameters. To initiate a single stream conference, just set the video parameters. For details about the H.239 dual stream mode, see 6.4 Sharing a Presentation.

Configuring General Conference Parameters

Step 1 Choose **Advanced Settings** > **Settings** > **Conference** > **Normal**. Set the general conference parameters by referring to Table 6-1.

Table 6-1 General conference parameters

Parameter	Description	Setting
Answer Mode	Specifies how your TE30 handles incoming calls. • **Manual**: Your TE30 prompts you to handle a call when the call comes in. • **Answer call automatically**: Your TE30 automatically answers incoming calls when not being used in a conference.	The default value is **Manual**.
Open do not disturb right	Specifies whether the do-not-disturb function is available to all users. If this function is enabled, common users can, under **Advanced Settings** > **Utilities**, enable or disable the do-not-disturb function, which prevents you from being disturbed by incoming calls.	This parameter is selected by default.
Mute local audio for answered calls	Specifies whether the TE30 turns off all sounds generated at your site when your TE30 joins a conference. If you enable this parameter, no remote site can hear your site.	This parameter is deselected by default.
Call parameter configuration	Specifies whether to display a dialog box for setting the call type and rate when you initiate a point-to-point call. If you do not select this parameter, your TE30 uses the default call type and rate.	This parameter is deselected by default.
Site called during startup	Specifies the site to be called automatically after the startup of your TE30. • **None**: The TE30 does not call any sites after the startup. • **Select site from address book**: The TE30 displays the address book screen, from which you can specify the site to be called automatically after the startup of your TE30.	The default value is **None**.
Wi-Fi network preferred	Specifies whether to prioritize a Wi-Fi network when both wireless and wired networks are available. This parameter is available only	This parameter is deselected by default.

Parameter	Description	Setting
	when Wi-Fi is enabled. For details, see 3.4 Setting Wi-Fi Parameters.	
Call times	Specifies the maximum number of attempts your TE30 calls a specified site after startup.	The default value is **1**. The maximum value is **10**. If you set this parameter to **0**, your TE30 does not call the specified site after startup.
Default call bandwidth	Specifies the default data transmission rate for your TE30. **NOTE** If this parameter is set incorrectly, the video quality will be affected, or the call might even fail to be set up.	The default value is **1920kbps**.

Step 2 Select **Save**.

----End

Setting Advanced Conference Parameters

Step 1 Choose **Advanced Settings** > **Settings** > **Conference** > **Advanced**. Set the advanced conference parameters by referring to Table 6-2.

Table 6-2 Advanced conference parameters

Parameter	Description	Setting
Audio protocol	Specifies the audio protocol the TE30 uses to encode audio.	The default value is **Auto**.
Audio and video protocols	Specifies the audio and video protocol capability of your TE30. Using the audio or video protocol that you select, your TE30 negotiates the audio or video capability with a remote endpoint to set up a call. If you do not select a audio or video protocol under **Audio and Video Protocols**, you cannot select that protocol for **Video protocol**, **H.239 video protocol**, or **Audio protocol**.	All protocols are selected by default.
Video protocol	Specifies the video protocol the TE30 uses to encode video. During a non-multi-stream conference, the video protocol is the video protocol the TE30 uses	The default value is **Auto**.

Parameter	Description	Setting
	at your site. • If you select **Auto**, **Video resolution** is available. • If you do not select **Auto**, you must also set **Video resolution** and **Video frame rate**.	
Video resolution	Specifies the video format. The available options vary depending on your settings of **Video protocol**. When **Video protocol** is set to **Auto**, set this parameter to either of the following: • **Smooth**: Your TE30 uses a high frame rate to ensure smooth video. • **Sharp**: Your TE30 uses a high video resolution to ensure clear video.	The default value is **Auto**.
Video frame rate	Specifies the frame rate used during video encoding. Video is smoother at a higher refresh rate. Video at a lower frame rate is clearer.	The default value is **Auto**. It is recommended that you retain the default value.
Video resolution	Specifies the video resolution. • **Smooth**: Your TE30 uses a high frame rate to ensure smooth video. • **Sharp**: Your TE30 uses a high video resolution to ensure clear video.	The default value is **Smooth**.
Prevent little packet loss	Specifies whether to prevent little packet loss to avoid artifacts.	This parameter is deselected by default. If the participant endpoints are on the same private network, select this parameter.
Enable H.239	Specifies whether you can share presentations during conferences. **NOTE** You can set **H.239 video protocol, , H.239 video bandwidth typeH.239 video resolutionH.239 video bandwidth(%)Presentation plug-and-share**.	This parameter is selected by default.
H.239 video protocol	Specifies the video protocol your TE30 uses to encode presentations.	The default value is **Auto**.

Parameter	Description	Setting
	• If you select **Auto**, you must also set **Presentation resolution**. • If you select **Auto**, you must also set **H.239 video resolution**.	
H.239 video resolution	Specifies the presentation format. The available options vary depending on your settings of **H.239 video protocol**.	The default value is **Auto**.
Presentation resolution	Specifies the presentation video resolution. • **Smooth**: Your TE30 uses a high frame rate to ensure smooth video. • **Sharp**: Your TE30 uses a high video resolution to ensure clear video.	The default value is **Sharp**.
H.239 video bandwidth type	Specifies the mode for setting the presentation video bandwidth. • **Auto**: Your TE30 automatically sets the presentation video bandwidth based on the bandwidth available. • **Manual**: You must manually set **H.239 video bandwidth(%)**.	The default value is **Auto**.
H.239 video bandwidth(%)	Specifies the percentage of the **Call bandwidth** presentations can occupy.	The default value is **50**.
Presentation plug-and-share	Specifies whether your site automatically shares presentations with remote sites once presentation input is detected.	The default value is **Disable**.
Conference line type	Specifies the type of line used during a conference. If you select **Auto** and your TE30 has registered with a network gatekeeper (GK), your TE30 preferentially uses H.323 to initiate a conference.	The default value is **Auto**.
Conference bandwidth	Specifies the transmission bandwidth for a conference. If your TE30 accesses an E1 network through an IP line, set this	The default value is **Normal**.

Parameter	Description	Setting
	parameter to **Limited** for better video conference quality.	
Dynamic bandwidth	Specifies whether the TE30 implements the following if the packet loss rate increases due to insufficient network bandwidth: automatically decreases the conference bandwidth until packet loss does not occur constantly or the conference bandwidth is decreased to 64 kbit/s. If constant packet loss is detected, the TE30 can dynamically adjust bandwidth to recover stable conference quality within 1 minute.	This parameter is deselected by default. • When the network is running within normal parameters, do not select this parameter. • When the network is not running within normal parameters, do not select this parameter.
reserved presentation bandwidth	Specifies whether to reserve bandwidth for presentations when no presentation is being shared. When this function is enabled, your TE30 reserves bandwidth for presentation sharing, instead of using all of the bandwidth for video transmission.	The default value is **Enable**.
Preferred IP protocol	Specifies the protocol that IP sites preferentially use. When **Line type** is set to **Auto** for IP sites, your TE30 uses this protocol to call the IP sites.	The default value is **H.323**.

Step 2 Select **Save**.

----End

6.3 Initiating a Conference

Your TE30 provides multiple paths to initiating a conference.

Your TE30 displays the conferencing screen after its startup. You can also access the conferencing screen using either of the following methods:

- Press ![phone icon] on the remote control.

- Select ![phone icon] from the option bar.

From the Call Screen

Perform any of the following:

- In the text box, enter the name or IP address of the site you wish to call. Then press **OK** or 📞 on the remote control.

- From the address book, select the site or group you wish to call. Then press **OK** or 📞 on the remote control.

📖 **NOTE**

You can configure a Lightweight Directory Access Protocol (LDAP) address book on your TE30. For details, see 6.8.2 Managing the Network Address Book.

- Select 🎤 or press and hold 📞 on the remote control. Then speak out the name of the site you wish to call.

📖 **NOTE**

- This function only applies to sites defined in the address book.
- If only one entry matches the site name you spoke out, your TE30 calls the site directly. If multiple entries are available, you must manually select the desired site and place the call.

From the Conference Schedules Screen

You can join an ongoing conference or initiate a favorite conference.

Prerequisites

Your TE30 is registered with a GK, and conference entries are available on the **Conference Schedules** screen.

Background

If your TE30 is registered with a GK, you can download the information about scheduled conferences from the ResourceManager (RM) to the conference list on the TE30. You can then check the details of the scheduled conferences.

You can also schedule conferences. For details, see 6.6 Scheduling a Conference. The scheduled conferences are displayed on the **Conference Schedules** screen.

If the local site exits a multipoint conference and the conference is still ongoing, this conference will also appear on the **Conference Schedules** screen, from which you can rejoin the conference.

Three icons are used to indicate the conference status:

- 📞: indicates that the conference is in progress.
- 📞: indicates that the conference has not yet started.
- ★: indicates that the conference is a favorite conference.

Procedure

From the **Conference Schedules** screen, select a favorite or ongoing conference and press **OK** or 📞 on the remote control.

From the Conference History Screen

The conference history contains the records of conferences your TE30 initiated or attended and sites your TE30 placed calls to or received calls from. You can select a record from the conference history and initiate the conference.

From the **Conference History** screen, select a conference and press **OK** or ☎ on the remote control to initiate the conference.

Follow-up Procedure

Choose **Advanced Settings** > **Address Book** > **Conference History**. Then perform either of the following:

- To delete a conference, select 🗑 next to the conference. To save the sites in a conference to the address book, select 🖫 next to the conference.
- To edit a conference, select the conference and press **OK** on the remote control.

6.4 Sharing a Presentation

With the presentation sharing function, you can connect a VGA input source, such as a computer and DVD player, to your TE30 and share the VGA input source content with remote sites while those sites can still view the video of your local site.

Prerequisites

- The video output port of the presentation source is connected to the TE30 VGA IN port using a VGA cable.
- H.239 is enabled on your TE30. For details, see section Table 6-2.

Background

During a dual-stream conference using H.239, two independent channels of video streams (that is, the video and the presentation) can be transmitted.

If **Presentation plug-and-share** listed in Table 6-2 is set to **Enable**, your Te30 automatically shares presentations with remote sites once presentation input is detected.

Procedure

Press 📈 on the remote control to share a presentation.

To stop presentation sharing, press 📈 on the remote control.

To select the presentation source or stop a presentation, you can also select 📈 from the option bar and choose the desired operation.

6.5 Creating a Favorite Conference

If you need to regularly join certain conferences, you can save those conferences as favorite conferences. You can then quickly join a favorite conference without having to reset the conference parameters again.

Procedure

Step 1 Choose **Advanced Settings** > **Conference Schedules** > **Conference**.

Step 2 Select **Create**.

Step 3 Select **Add Site**.

You can add sites using **Address Book**, **Others**, or **LDAP Address Book**.

Step 4 Set the conference parameters on the **Options** screen by referring to Table 6-3.

Table 6-3 Conference parameters

Parameter	Description	Setting
Rate	Specifies the transmission rate for the conference.	The default value is **1920kbps**.
Continuous presence	Specifies the maximum number of site videos that can be viewed simultaneously during the conference. After continuous presence is broadcast, the sites in the conference can view the videos of multiple sites simultaneously. If you select **OFF** for this parameter, the conference does not support continuous presence.	The default value is **OFF**.
Anonymous H.323 sites Anonymous PSTN sites Anonymous SIP sites	Specifies the number of H.323, PSTN, and SIP anonymous sites that are allowed to join the conference. Anonymous sites are the sites whose numbers are not defined. To allow five anonymous sites to join the conference, set the corresponding parameter to **5**. Not to allow anonymous sites to join the conference, set the corresponding parameter to **0**. **NOTE** If **Conference line type** is set to SIP under conference settings, set **Anonymous SIP sites**, **Conference control password**, and **SRTP conference**.	The default value is **0**.

Parameter	Description	Setting
Conference control password	Specifies the password to the conference. This password can be used in the following two ways: • The site that wants to chair the conference to obtain the chair control rights. • Anonymous sites to join the conference if the conference is an authentication one.	The endpoint alias can contain up to 32 digits.
H.235 conference	Specifies whether to use H.235 to encrypt media streams. • **Insecure conference**: No data transmitted during the conference is encrypted. • **Secure media conference**: Media streams are encrypted.	The default value is **Insecure conference**.
SRTP conference	Specifies whether to use SRTP to encrypt media streams. • **Insecure conference**: No data transmitted during the conference is encrypted. • **Secure media conference**: Media streams are encrypted.	The default value is **Insecure conference**.
Paying site	Specifies the party that pays for the conference. • **Local site**: The local site pays for the conference. • **Another site**: Another site pays for the conference. If you select this option, enter the user name and password of the account used to pay for the conference.	The default value is **Local site**.

Step 5 Enter a name for the conference and select **Save**.

----End

You can also perform the following operations on conferences:

• To schedule or initiate immediately a favorite conference, select it and press **OK** on the remote control.

- To modify a favorite conference, select it and press 🖊 next to the conference.

- To delete a favorite conference from the favorite conference list, select it and press 🗑 next to the conference.

6.6 Scheduling a Conference

On your TE30, you can schedule a conference to hold the conference at specific time.

Prerequisites

Ensure that:

- The TE30 is registered with a GK, and the Huawei GK is enabled. For details, see 3.2 Setting H.323 Parameters.

- The TE30 is not in a conference.

Background

Your TE30 supports scheduling of H.323 conferences only.

Procedure

Step 1 Choose **Advanced Settings** > **Conference Schedules** > **Conference**.

Step 2 Schedule a conference using either of the following methods:

- Select a conference from **Conference**, set **Start time** and **Conference duration** (ranging from 30 minutes to 360 minutes), and select **Schedule**.

- Select **Create**. Set site and conference parameters, set **Start time** and **Conference duration**, and select **Schedule**.

----End

When the conference is scheduled, you can find the conference information or delete the conference on the **Schedule** screen.

6.7 Joining an Authentication Conference

The authentication conference allows you to, if you do not know how many sites are expected to join the conference, set the number of anonymous sites and hold an authentication conference. A site can join the authentication conference by calling the conference access number.

Background

Figure 6-1 shows how to join an authentication conference.

Figure 6-1 Procedure for joining an authentication conference
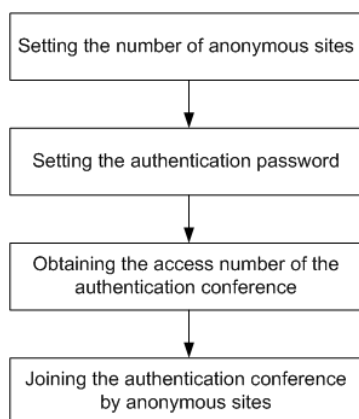
- Setting the number of anonymous sites: Set the number of anonymous sites when initiating a conference. For details, see Table 6-3.
- Setting the authentication conference password: When initiating the conference, set **Conference control password**, which serves as the authentication password. Anonymous sites must enter this password to join the conference. If the **Conference control password** is left blank, anonymous sites can join the conference without entering any password.
- Obtaining the access number of the authentication conference: You can obtain this number when requesting chair control rights after the conference starts. Alternatively, choose **Advanced Settings** > **Diagnostics** > **Status** > **Conference** to query the access number. Anonymous sites can ask the chair site for the access number and password of the authentication conference. Nevertheless, they cannot use their endpoints to call the chair site because the chair site is already in the conference.
- Joining the authentication conference by anonymous sites: Anonymous PSTN sites can join the conference by dialing the audio access number and anonymous IP sites can join the conference by dialing the video access number.

Procedure

Step 1 Check the necessary resource preparations:

- At the chair site: Check that the conference has available anonymous site resources, and you have obtained the audio or video access number of the conference as well as the authentication conference password.
- At the local site: Check that the site has been registered with the GK or SIP.

Step 2 Press 📞 on the remote control.

Step 3 Enter the access number of the authentication conference.

Step 4 Set the call type and rate.

📖 **NOTE**

Select the highest rate supported by your endpoint to increase the chance for successful calls.

Step 5 Select **Call**.

If the authentication conference is password-protected, the system plays an interactive voice response (IVR), prompting you to enter the password. If the conference is not password-protected, you can join the conference after selecting the desired language.

----End

6.8 Managing the Address Book

The address book stores site information. You can add, edit, and delete site entries.

The address book saves your time as you do not need to enter site information to initiate a conference and prevents entry of incorrect IP addresses.

⊙━ TIP

> You can save sites in the conference history to the address book. To do so, choose **Advanced Settings** >
>
> **Address Book** > **Conference History** and select ▤ next to the desired sites.

6.8.1 Managing the Local Address Book

You can add, delete, or edit site information in the local address book.

Select **Advanced Settings** > **Address Book**.

Creating a Site

After you create a site, it is saved to the local address book.

Background

The following parameters are important attributes of sites: **Name**, **Number**, **Rate**, **Type**, and **IP address**.

Procedure

Step 1 On the **Address Book** screen, select **All Sites**.

Step 2 If no sites are displayed, select **Add site**. If sites are displayed, select ➕ next to any site.

Step 3 In **Create Site**, name the site you wish to add.

The value can consist of numbers, letters, Chinese characters, and symbols.

Step 4 Set the site parameters by referring to Table 6-4.

Table 6-4 Site parameters

Parameter	Description	Setting
Category	Specifies the conferencing scenario of the site.	The default value is **Ordinary site**. • **Ordinary site**: Select this option for a traditional videoconferencing site.

Parameter	Description	Setting
		• **Telepresence site**: Select this option for a Huawei telepresence site. • **CT site**: Select this option for a Cisco TelePresence site.
Type	Specifies the line used for the site to access the videoconferencing network. • If you select **IP**, your TE30 will use the protocol set for **Preferred IP protocol** to call the site. • If you set **Category** to **CT site**, the available value for this parameter is **SIP**.	The default value is **H.323**.
Number	Specifies the site number used to place calls between sites. • The IP, E1, T1, 4E1, basic rate interface (BRI), and H.323 phone site numbers are allocated by the videoconferencing service provider. • The PSTN site numbers are telephone numbers.	No default value is set for this parameter.
IP address	Specifies the IP address of the site. **NOTE** This parameter is unavailable if you set **Category** to **IP address**.	No default value is set for this parameter.
Rate	Specifies the call rate of the line selected for the remote endpoint. The call rates supported vary depending on the type of the site you want to call.	The default value is **8Mbps**. Select the highest available call rate.
URI	Specifies the uniform resource identifier (URI) of the site, for example, **abcd@huawei.com**. **NOTE** This parameter is available only when **Type** is set to **IP**, **H.323**, or **SIP**.	No default value is set for this parameter.
Country/Region code	Specifies the country or area where your TE30 is located. This parameter is required when **Type** is set to **ISDN** or **PSTN**.	No default value is set for this parameter.

Parameter	Description	Setting
Area code	Specifies the area code for the site. Set this parameter based on your Country/Region code settings. This parameter is required when **Type** is set to **ISDN** or **PSTN**.	No default value is set for this parameter.
Line 1 #1 Line 1 #2 Line 2 #1 Line 2 #2 Line 3 #1 Line 3 #2	Specify the numbers used by your TE30 to call the site. These parameters are available only for ISDN sites. You can set two numbers for each BRI line. • When the ISDN site rate is set to a value ranging from 64 kbit/s to 512 kbit/s, set **Line 1 #1** only, because you only need to dial that number to call the site. • If the ISDN site rate is set to 2, 3, 4, 5, or 6 x 64 kbit/s, set the other required parameters as well, because you need to dial the BRI line numbers one by one to call the site. **Line 1 #2** specifies the second number of the first BRI line.	No default value is set for these parameters.

Step 5 Select **Save**.

The new site is listed in **Address Book**.

----End

Creating a Group

If certain sites regularly join the same conference, you can define these sites as a group.

Step 1 From the **Address Book** screen, select **All Groups**.

Step 2 If no groups are displayed, select **Add Group**. If groups are displayed, select next to any group.

Step 3 In **Create Group**, name the group.

Step 4 Select the sites you wish to add to the group.

A selected site has a tick (√) displayed before it and is listed in the group box.

Step 5 Select **Save**.

The new group is listed in the group list of the **Address Book** screen.

----End

Modifying, Deleting, and Searching

You can modify, delete, and search for in the address book.

Modifying a Record

Select a site or group, press **OK** on the remote control, and modify the site or group settings.

Deleting a Record

Select 🗑 next to the desired site or group to delete it from the address book.

Searching for a Record

Enter the search criteria in the **Search** text box, and the displayed query results are filtered in real time based on what your enter.

For example, after you enter W in the text box, the sites whose names start with W are displayed in the site list. To perform an exact search for a site, enter the whole name of the site in the text box.

6.8.2 Managing the Network Address Book

The network address book stores the addresses of the sites in the videoconferencing system. You can download the network address book and update the local entries in batches.

Network address books can be stored on:

- File Transfer Protocol over SSL (FTPS) or File Transfer Protocol (FTP) server
- LDAP server

Managing the FTPS or FTP Network Address Book

With FTPS or FTP server parameters set, you can use your TE30 to access the server and download the network address book.

Configuring the FTPS or FTP Network Address Book

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **Network Address Book** > **Network Address Book**. Set the network address book parameters by referring to Table 6-5.

Table 6-5 Network address book parameters

Parameter	Description	Setting
Enable network address book	Specifies whether to enable the network address book. If you enable this function, set the other parameters described in this table.	The default value is **Disable**.
Synchronize automatically	Specifies whether your TE30 automatically downloads records from the network address book to the local address book.	The default value is **Disable**.

Parameter	Description	Setting
FTPS	Specifies whether to use FTPS to encrypt data through the SSL and ensure data integrity. If FTPS is not used, the TE30 uses FTP, which is insecure.	This parameter is selected by default. To improve communication security, select this parameter.
Local records prevail if duplicates exist	Specifies whether the following function is enabled: If some records in the address book on the FPTS or FTP server already exist in the local address book, these records remain unchanged when the local address book is updated.	The default value is **Disable**.
Prompt users during update	Specifies whether a message is displayed to prompt you to update the local address book if the versions of the network and local address books are different. When you confirm the update, site information in the network address book is downloaded to the local address book.	The default value is **Enable**.
Clear local records during update	Specifies whether your TE30 automatically clears the local address book when the local address book is updated.	The default value is **Disable**.
Server address	Specifies the IP address of the server that stores the network address book.	No default value is set for this parameter.
File path	Specifies the save path of the network address book on the server.	No default value is set for this parameter.
User name Password	Specify the user name and password used by your endpoint to access the network address book.	No default value is set for this parameter.

Step 2 Select **Save**.

----End

Downloading the FTPS or FTP Network Address Book

On the **Address Book** page, select **Synchronize automatically**. The TE30 then automatically downloads the network address book after it is powered on.

If you have not selected this function, or if you need to update the network address book again, you can select **Update** on the **Address Book** screen.

📖 **NOTE**

The downloaded address book is saved in vCard format. The file name extension is vcf.

Managing the LDAP Network Address Book

With the LDAP directory server parameters set correctly, the TE30 can access the LDAP server and search sites in the LDAP network address book.

Configuring the LDAP Directory Server

Step 1 Choose **Advanced Settings** > **Settings** > **Network** > **Network Address Book** > **LDAP Server**. Set the LDAP directory server parameters by referring to Table 6-6.

Table 6-6 LDAP directory server parameters

Parameter	Description	Setting
Server address	Specifies the IP address of the LDAP directory server.	The default value is **127.0.0.1**.
Port	Specifies the port used to connect to the LDAP server.	The default value is **389**.
Base DN (distinguished name)	Specifies the distinguished name (DN) of the entry at which a specified search starts.	No default value is set for this parameter.
Authentication type	Specifies the user name and password used for LDAP server authentication. You can select between **General**, **Secured**, and **Anonymous**. • **General**: Use the user name and password for authentication. • **Secured**: Perform authentication, including authentication on digital certificates, based on the Secure Sockets Layer (SSL) protocol. • **Anonymous**: The LDAP directory server is accessible to all users.	The default value is **General**.
SSL encryption	Specifies whether the SSL protocol is used to encrypt data streams sent to and received from the LDAP directory server.	This parameter is deselected by default.
User name Password	Specifies the user name and password used for LDAP directory server authentication.	The default values are both **admin**. The value can consist of numbers, letters, Chinese characters, and special symbols, such as @ # %.
Domain name	Specifies the domain name used for LDAP directory server authentication.	No default value is set for this parameter.
Synchronize automatically	Specifies whether your TE30 regularly updates the **LDAP Address Book** entries in the local address book. If you select this parameter, you must also	This parameter is selected by default.

Parameter	Description	Setting
	set **Automatic update interval** and **Local records prevail if duplicates exist**.	
Local records prevail if duplicates exist	Specifies whether the following function is enabled: If some records in the address book on the LDAP server already exist in the local address book, these records remain unchanged when the local address book is updated.	This parameter is deselected by default.
Automatic update interval	Specifies the interval for updating the **LDAP Address Book** entries in the local address book.	The default value is **24 h**.

Step 2 Select **Save**.

----End

Searching LDAP Sites

After the LDAP server parameters are set, your TE30 can communicate with the LDAP server properly. On the **Address Book** page, you can search for sites stored in the LDAP address book. Table 6-7 lists the online status icons of the LDAP sites.

Table 6-7 Online status icons

Icon	Description
	Available.
	Busy.
	Offline.

7 Conference Control

About This Chapter

During a multipoint conference, you can control the video and audio of participant sites using conference control functions.

A conference can be chaired by only one site. Another site can chair the conference only after the current chair site releases its chair control rights.

After a site becomes the chair site, the functions to view sites, enable or disable voice activation, add sites, set continuous presence, release chair control rights, end a conference, and broadcast sites are available to the site.

7.1 Customizing the Displayed Conference Controls

You can customize the conference controls to be displayed on the **Conference control** screen to quickly access those controls.

7.2 Performing Conference Control

On the TE30, you can manage the audio and video of participant sites by performing conference control operations.

7.1 Customizing the Displayed Conference Controls

You can customize the conference controls to be displayed on the **Conference control** screen to quickly access those controls.

Background

The following conference controls are displayed by default: **Continuous Presence**, **Discussion**, **Give floor**, **Voice activation**, **Add site**, **Request floor**, **Enable Chair Control**, **Lock conference**, and **Restore Auto Continuous Presence**.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Display** > **Personalize** > **Select conference control operation**. Select the conference controls you wish to display on the **Conference control** screen.

Step 2 Select **Save**.

----End

7.2 Performing Conference Control

On the TE30, you can manage the audio and video of participant sites by performing conference control operations.

Non-chair sites have access to only four conference controls: **Request chair**, **Request floor**, **View site**, and **Revoke chair**. The chair site has access to all conference controls.

📖 **NOTE**

The **Revoke chair** function is available only to the site that initiates or pays for the conference.

View Site

On the **View Site** screen, you can view a single site or multiple sites in turn at preset intervals.

📖 **NOTE**

During multipoint conferences hosted by standalone MCUs, your TE30 supports multiple continuous presence views.

The function for viewing sites is different for the chair site and a non-chair site.

- Non-chair sites

  The function to view sites is available when no site is being broadcast and no continuous presence is displayed during a conference.

  The non-chair sites can view the sites residing on the local MCU or MCUs of the same level only.

- Chair site

  The chair site can view any of the participant sites in the conference.

  The function to view sites is available to the chair site all the time except when the chair site is broadcasting sites in turn.

Broadcast Site

The chair site can broadcast any of the sites participating in a conference (except for an audio-only site) or broadcast multiple sites (including the chair site) in turn at preset intervals.

When a site is broadcast, all non-chair sites are forced to view the broadcast site while the chair site can view any site present at the conference.

To stop broadcasting, perform **Stop** or **Discussion** operation.

After the chair site stops site broadcast, all the sites in the conference can view any other site. The **Stop** function is available when a site is being broadcast.

Give Floor

Using this function, the chair site can give the floor to a site and mute all the other sites.

After the chair site gives the floor to a site, the video and sound of the site are broadcast, and all the sites, except the chair site and the site given the floor, are muted. To give the floor to a site, access the **Give Floor** screen, scroll to the site, and press **OK** on the remote control.

To take back the floor, select **Discussion**.

Lock Presentation

During a conference, the chair site can lock the presentation sharing right of a single site or the entire conference.

☷ **NOTE**

> Before using this function, ensure that the MCU and service software used along with your TE30 support this function.

- To lock the presentation sharing right of a single site, select that site. After you the chair locks the presentation sharing right of a site, only the site can share its presentation. To enable the other sites to share presentations, unlock the presentation sharing right of the site.
- Locking the presentation sharing right of a conference: After you the chair locks the presentation of the conference, any site in the conference can share a presentation only when no other site is doing so.

Sites Requesting Floor

During a conference, after a non-chair requests the floor, the site is added to the floor requesting site list. The chair site can select a site from the list to give the floor to that site. The video of that site is then broadcast and the microphones of all the sites, except the chair site and the site given the floor, are muted.

Once given the floor, the site is removed from the floor requesting site list.

Call Site

You can place a call to a site that is not in the conference. The site joins the conference after answering the call.

☷ **NOTE**

> If the conference is charged, the resources of the videoconferencing system and your account balance determine whether the called site can join the conference.

To call all absent sites included in the conference site list into the conference, select **Call All** on the **Call Site**.

Disconnect Site

The chair site can disconnect a participant site from the conference. The site exits the conference automatically upon disconnection.

Delete Site

During a conference, the chair site can delete a site that is present in or absent from the conference.

After being deleted, the site is removed from the site list and not related to the conference any more. To enable the site to join the conference again, the chair site must add the site to the conference by performing the **Add Site** operation.

Mute/Unmute MIC

After you have muted the microphone of a site, the other sites in the conference cannot hear the site. To enable the site to be heard, unmute the microphone of the site.

Depending on the microphone status of a remote site, you can mute or unmute the remote microphone after selecting the site:

- : indicates that the microphone of the site is not muted. You can press **OK** to mute the microphone.

- : indicates that the microphone of the site is muted. You can press **OK** to unmute the microphone.

Mute/Unmute Speaker

After you have muted the speaker of a site, the site cannot hear the current conference. To enable the site to hear the conference, unmute the speaker.

Depending on the speaker status of a remote site, you can mute or unmute the remote speaker after selecting the site:

- : indicates that the speaker of the site is not muted. You can press **OK** to mute the speaker.

- : indicates that the speaker of the site is muted. You can press **OK** to unmute the speaker.

Request Chair

The conference chair site can use more conference control functions than other sites.

Only non-chair sites can request chair control rights when no chair site exists in a conference.

Audio-only sites cannot request chair control rights.

Request Floor

If a non-chair site wants to speak during a conference, the site can request the floor from the chair site.

The **Request Floor** operation is available when a chair site exists in the conference. After a site requests the floor, the request is submitted to the chair site. The chair site can then determine whether to give the floor to the site.

- If the chair site gives the floor to the site, the site is broadcast, and all the sites, except the chair site and the site given the floor, are muted.
- If the chair site does not give the floor to the site, the conference status remains unchanged.

Continuous Presence

The continuous presence function is used to display the videos of two or more sites on the same display simultaneously. The number of the sites to be displayed and the layout of the site videos vary according to continuous presence modes.

📖 **NOTE**

> This function is available only when the continuous presence resources have been reserved for the conference.

To set continuous presence:

Select a pane. From the drop-down list box in the displayed dialog box, select the site whose video you wish to display in the pane. Then select **OK**.

If a site already exists in the pane selected, the site will be displaced by the site you newly select.

To delete all the sites in continuous presence, select **Delete All**.

Revoke Presentation

The chair site can revoke the presentation sharing right of a site that is sharing its presentation to stop the site from sharing the presentation.

This function is used by the chair site to revoke the presentation sharing right from a site during a dual-stream conference when the presentation mode is set to **Presentation**. The site stops sharing its presentation after its presentation sharing right is revoked.

Voice Activation

Voice activation is used in discussion mode. When voice activation is enabled, the site with the loudest voice is displayed to other sites in the conference.

After you enable voice activation and set the sensitivity:

- If the volume of one or multiple sites exceeds the voice activation threshold, the video of the loudest site is broadcast.
- If the voice activation threshold is not exceeded, the conference status is not changed.

To disable voice activation, select **Disable** from the **Voice Activation** drop-down list box.

Release Chair

A non-chair site can request for chair control rights only after the chair site releases the chair control rights.

Discussion

The chair site can enable discussion to cancel certain ongoing site control or conference control operations, such as broadcasting sites.

This **Discussion** function is used to cancel the following operations performed by the chair site:

- Broadcast site
- Mute Speaker
- Mute Microphone
- Give floor

In discussion mode:

- Audio: All sites have unmuted microphones, and the sound of all the sites are mixed and broadcast to every site.
- Video: The video viewed by each site does not change and each site can view any other site.

Add Site

During a conference, the chair site can add sites to the current conference as required.

If a site is successfully added to the conference, the site becomes a participant in the conference. You can add a site that is included or not included in the address book.

Revoke Chair

After the chair control rights are revoked, no chair site exists in the conference. Sites in the conference can then request to chair the conference.

This function is available only to the site that initiates or pays for the conference.

Extend Conference

If a conference is not likely to be complete by the scheduled time, you can extend the conference using the **Extend Conference** function.

Before extending a conference, you must ensure that the videoconferencing resources and your account balance are sufficient. To increase the chances of success, extend the conference by 30 minutes at most at a time.

End Conference

If a conference is complete before the scheduled time, you can use the **End Conference** function to end the conference in advance.

To end a conference, select **End Conference** or press ☎ on the remote control from the **Conference Control** screen.

8 Video and Audio

About This Chapter

During a conference, you can control the video and audio of the sites participating in the conference.

You can adjust the audio effects by modifying the settings for the audio input, sound effect, and volume.

You can adjust the local speaker volume by pressing 🔊 or 🔈 on the remote control.

By adjusting the screen layout, you can view multiple videos on the same display.

You can specify video input ports for the local video, local presentation, and remote video.

During a conference, you can hide the local video if you do not want the video to be seen by remote sites. After this function is enabled, the local site is displayed as a blue screen at remote sites.

8.1 Adjusting Video Display Effects

You can adjust the video display effects by modifying the settings for the picture offset, sampling phase, and other picture parameters.

8.1.1 Adjusting Picture Offset

If you find the displayed video deviates from its normal position, adjust the picture offset.

Background

Picture offset may occur in video input or output, such as the computer desktop when it is displayed on the display screen. You can adjust the picture offset in this case.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Video** > **Image Offset**.

Step 2 Select VGA IN or VGA OUT.

Step 3 Select **Horizontal offset** or **Vertical offset** and move the slider.

----End

8.1.2 Adjusting the Sampling Phase

When the color of a picture displayed on the display is distorted, adjust the sampling phase.

Background

Color distortion may occur in video input when the video is displayed on the display. That is, the color seen from the computer monitor is different from the color seen from the monitor connected to your TE30. In this case, you can set the sampling phase to adjust the color.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Video** > **Sampling Phase** > **VGA IN**.

Step 2 Move the slider to adjust the sampling phase.

----End

8.1.3 Setting Video Parameters

On your TE30, you can set its video parameters, including the video mode, noise reduction, and video resolution. You can view the video result of your settings on the display connected to your endpoint.

Procedure

Choose **Advanced Settings** > **Settings** > **Video** > **Video Parameters**. Set the video parameters by referring to Table 8-1.

Table 8-1 Video parameters

Parameter	Description	Setting
Built-in camera		
Picture mode	Specifies the output video display effect. • **Standard**: reproduces video more faithfully.	The default value is **Standard**.

Parameter	Description	Setting

	• **Vivid**: delivers brighter video with cooler color.
	
	• **Natural**: delivers video with warmer colors.
	
	• **User defined**: delivers video with custom settings. After you select this option, you can set the following parameters:
	
	    – **Aperture**: Sharpens video edges and contours to preserve the impression of clarity and fine details. Over-sharpening will make video less realistic.
	
	    – **Saturation**: Adjusts	

Parameter	Description	Setting
	the gray scale of each color. The higher the saturation, the brighter a color.	
2A mode	Specifies the mode for setting the exposure and white balance parameters. **Auto**: In this mode, the built-in camera automatically selects the optimum exposure and white balance settings based on the ambient environment. **Manual**: In this mode, you must manually set the following exposure and white balance parameters: • **Brightness gain**: adjusts the video brightness. • **Shutter speed**: adjusts the shutter speed. • **Iris**: adjusts the aperture. • **Red gain**: adjusts the brightness of red signals. • **Blue gain**: adjusts the brightness of blue signals.	The default value is **Auto**.
Noise reduction	Removes noise artifacts from video. A larger value causes the video to have less noise but detail may also be lost.	The default value is **Low**.
Video resolution	Specifies the video output resolution for the camera.	The default value is **1080P 60Hz**.
Image inversion	Specifies whether the video input	The default value is **Disable**.

Parameter	Description	Setting
	from the camera is rotated by 180 degrees. If the video is displayed in an reverse direction, you can enable this function.	
VGA IN		
Brightness	Specifies the video output level that changes the brightness of the video displayed on a display. The brightness increases with the value.	Value range: 0-100 The default value is **50**.
Contrast	Adjusts color levels to facilitate the distinction between two colors. If the contrast is higher, the difference between the light and dark extremes of a color is more distinct.	Value range: 0-1000 The default value is **500**.
Saturation	Adjusts the grayscale of each color. .The higher the saturation, the brighter a color.	Value range: 0-100 The default value is **50**.
Hue	Adjusts the video color shade.	Value range: 0-360 The default value is **0**.

8.1.4 Customizing the Onscreen Status Icons

You can customize the status icons to be displayed on screens.

Packet Loss Rate Icon

Choose **Advanced Settings** > **Settings** > **Display** > **Packet Loss Threshold**.

By comparing the packet loss rate on the current network with threshold A and threshold B, the TE30 determines whether to display the packet loss rate icon on the remote controlled UI. The policy is as follows:

□ NOTE

The value range is 0.1% to 100%, and threshold A must be less than threshold B. The default values for threshold A and threshold B are **1%** and **5%** respectively.

- If the packet loss rate is less than or equal to threshold A, no packet loss rate icon is displayed.

- If the packet loss rate is between threshold A and threshold B, is displayed.

- If the packet loss rate is greater than or equal to threshold B, is displayed.

Other Icons

Status icons are displayed on screens if the following condition is met:

- You have set the icon to be displayed on screens as follows:

  Choose **Advanced Settings** > **Settings** > **Display** > **Icon** and select the icons to be displayed on screens.

- The function that corresponds to the status icon has been enabled or is available.

8.2 Adjusting Audio Effects

You can adjust the audio effects by modifying the settings for the audio input, sound effect, and volume.

Background

For details about how to adjust the audio input and volume, see 5.3 Configuring Audio. This section describes how to adjust the sound effect only.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Audio** > **Sound Effect**. Set the sound effect parameters by referring to Table 8-2.

Table 8-2 Sound effect parameters

Parameter	Description	Setting
Ringtone	Specifies the ringtone for incoming calls.	The default value is **Default**.
Locally output sound from AUDIO IN	Specifies whether to allow the audio input from the LINE IN port to be heard at the local site.	This parameter is deselected by default.
AUDIO IN remote output	Specifies whether to allow the audio input from the LINE IN port to be heard at remote sites.	This parameter is selected by default.
Bass Middle Treble	Adjusts the equalizers by moving the sliders.	Value range: -6 dB to +6 dB The default value is **+0dB**.

Step 2 Select **Save**.

----End

8.3 Adjusting the Local Volume

You can adjust the local speaker volume by pressing ![icon] or ![icon] on the remote control.

Press ![icon] to increase the volume or ![icon] to decrease the volume. Changing the volume affects only the sound you hear at your site.

8.4 Adjusting the Screen Layout

By adjusting the screen layout, you can view multiple videos on the same display.

Only the main output port supports combined picture output. For details, see Table 4-4.

To adjust the screen layout, use either of the following methods:

- Press ![icon] on the remote control to switch between the full screen, Picture in Picture (PiP), two-pane, and three-pane modes.

- Select ![icon] from the option bar and select a desired layout from:
    – Remote video in full screen
    – Local video in full screen
    – Combination of the local video, remote video, local presentation, and remote presentation in PiP, two-pane, or three-pane mode

Figure 8-1 Screen layouts
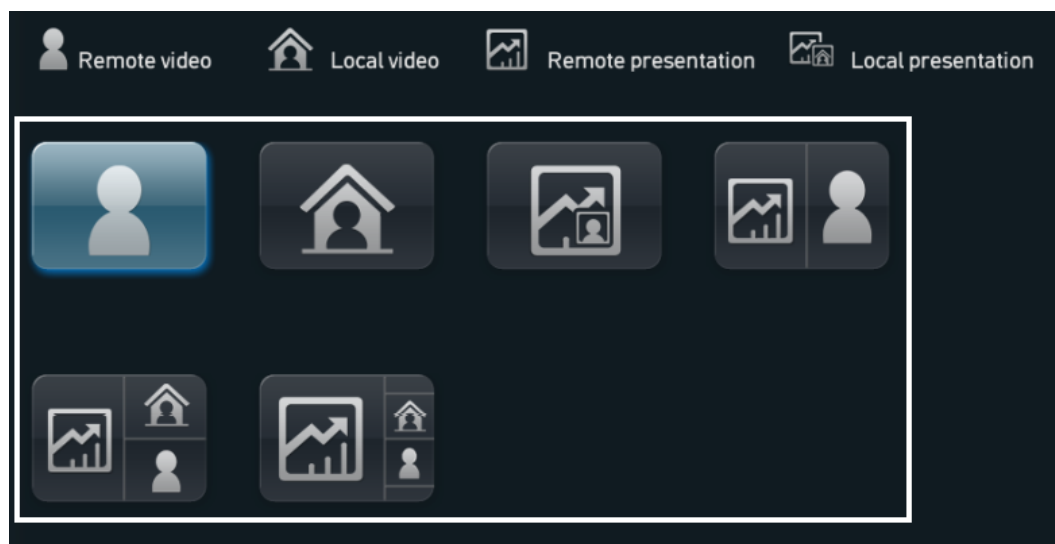
Besides the six layout icons shown in the preceding figure, you may see the icon for the local or remote presentation if:

- A presentation source is connected to the local site. In this case, the icon for the local presentation is displayed.

- The local site receives the presentation shared by a remote site. In this case, the icon for the remote presentation is displayed.

The icon for the local or remote presentation disappears once the local presentation source is disconnected from the TE30 or the sharing of the remote presentation stops.

Before a conference starts, you can set the position of the PiP window on the screen. For details, see Table 4-4.

8.5 Selecting Video Sources

You can specify video input ports for the local video, local presentation, and remote video.

Selecting the Local Video Source

Step 1 Press ▭◀ on the remote control to switch to the local video.

Step 2 Press ▭◀ on the remote control and, in the lower right corner of the screen, select a video feed as the local video source.

----End

Selecting the Local Presentation Source

Select ▨ from the option bar. Then specify a video feed as the local presentation source.

Selecting the Remote Video Source

During a conference, you can select to view a remote video source.

Step 1 Press ▭◀ on the remote control to switch to the remote video.

Step 2 Press ▭◀ on the remote control and, in the lower right corner of the screen, select a video feed as the remote video source.

----End

8.6 Hiding the Local Video

During a conference, you can hide the local video if you do not want the video to be seen by remote sites. After this function is enabled, the local site is displayed as a blue screen at remote sites.

Background

The TE30 is in a conference.

Procedure

Step 1 Choose **Advanced Settings** > **Utilities** > **Hide Video (Off)**. When prompted, confirm that you want to enable the function to hide the local video.

Step 2 Select **Save**.

After the function to hide the local video is enabled, depending on your configuration, may be displayed in the lower right corner of the video in full screen.

📖 **NOTE**

For details about how to set the presence of the preceding icon, see 8.1.4 Customizing the Onscreen Status Icons.

----End

9 Captions

About This Chapter

You can create a caption on your TE30 and, during a conference, share the caption with remote sites.

Your TE30 supports T.140 and non-T.140 captions. Table 9-1 describes the differences between these caption types.

Table 9-1 Differences between T.140 and non-T.140 captions

Non-T.140 Caption	T.140 Caption
Superimposed on the video of your site and sent with the video to remote sites	Not superimposed on the video of your site, sent to remote sites, and displayed on remote displays
Can be sent and received by SIP and H.323 endpoints	Can be sent and received by H.323 endpoints only.
Can be sent and received by all endpoints	Can be sent and received only by endpoints that support T.140 captions
Can be sent from endpoints in a conference only	Can be sent from any of the following in a conference: ● Endpoint used at the chair site ● Endpoint whose built-in MCU is in use ● ResourceManager **NOTE** Endpoint used by either party during a point-to-point call

9.1   Specifying Caption Settings

Caption settings include the caption font size, color and background.

9.2   Creating a Caption

You can create and preview a caption on your TE30.

After you create a caption, you can share the caption with remote sites.

During a conference, you can send instant messages to remote sites.

9.1 Specifying Caption Settings

Caption settings include the caption font size, color and background.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Display** > **Caption**. Set the caption parameters by referring to Table 9-2.

Table 9-2 Caption parameters

Parameter	Description	Setting
Font size	Specifies the font size for the banner or caption.	Default values: • For banners, the default value is **Largest**. • For middle and bottom captions, the default value is **Medium**.
Background color	Specifies the background color of the banner or caption in any of 64 colors.	Default values: • For banners, the default color is red. • For middle and bottom captions, the default color is grey.
Font color	Specifies the foreground color of the banner or caption in any of 64 colors.	The default color is white.
Effect	Specifies the display effect for the banner or caption.	Default value: • For banners, the default value is **Center**. • For middle captions, the default value is **Scroll upward**. • For bottom captions, the default value is **Scroll leftward**.
Scrolling speed	Specifies the scroll rate for middle and bottom captions.	Adjust the rate based on the preview. The default value is **Fast**.
Transparen	Specifies banner or caption transparency.	The default value is **Half**

Parameter	Description	Setting
cy		**transparent**.
Scrolling speed	Specifies the percentage of the banner or bottom caption height to the entire display.	The default value is **10%**.
Font Type	Specifies the font type of the caption.	The default value is **Boldface**.
Bold	Specifies whether the banner or caption is displayed in bold.	• For banners, this parameter is selected by default. • For middle and bottom captions, this parameter is deselected by default.
Line spacing	Specifies the vertical spacing between lines of a middle caption.	The default value is **Small**.
Sharing mode	Specifies the type of the caption to be shared, T.140 or non-T.140. For details about the differences between T.140 and non-T.140 captions, see Table 9-1.	The default value is **T.140**.

Step 2 Select **Save**.

----End

9.2 Creating a Caption

You can create and preview a caption on your TE30.

Procedure

Step 1 Choose **Advanced Settings** > **Utilities**.

The **Utilities** screen is displayed.

Step 2 Select **Middle Caption**, **Banner**, or **Bottom Caption**.

Step 3 Select **New** and compose the caption.

----End

After a caption is created, you can preview, send, or edit it.

9.3 Sharing a Caption

After you create a caption, you can share the caption with remote sites.

Prerequisites

The TE30 is in a conference, and a caption has been created.

Procedure

Step 1 Choose **Advanced Settings** > **Utilities**.

The **Utilities** screen is displayed.

Step 2 Select **Middle Caption**, **Banner**, or **Bottom Caption**.

Step 3 Select a caption or banner and select **Send**.

----End

9.4 Sending an Instant Message

During a conference, you can send instant messages to remote sites.

Prerequisites

The TE30 is in a conference. Both the sending party and receiving parties support T.140 captions. For details about how to configure T.140 captions, see Table 9-2.

Background

Instant messages are a type of T.140 caption. During a conference, a site can send instant messages to a desired site.

SIP and audio-only sites do not support instant messages.

Procedure

Step 1 Select .

Step 2 From the displayed **Instant Message** dialog box, select the site to which you wish to send a message.

Step 3 Enter the message.

Step 4 Select **Send**.

----End

The message is sent to the remote sites. When receiving the message, the remote sites can view or close the message.

10 Security

About This Chapter

Your TE30 provides security features and configuration.

10.1   Security Features

Your TE30 provides a variety of security features, including protocol anti-attack measures and authentication for debug users, web interface users, and web requests.

10.1 Security Features

Your TE30 provides a variety of security features, including protocol anti-attack measures and authentication for debug users, web interface users, and web requests.

Debug User Authentication

- Your TE30 allows the login with a user name and password using Telnet or Secure Shell (SSH) for debugging.

  Telnet clients use plaintext to communicate with the TE30. By default, the Telnet login function is disabled. To enable this function, see 10.2.3 Allowing Remote Login.

  SSH clients use ciphertext to communicate with the TE30. When the SSH login function is enabled, a maximum of three concurrent SSH logins are allowed. For details, see 10.2.3 Allowing Remote Login. SSH logins are recommended for users performing debugging.

- The administrator user name and password for a debug user are both **debug**. You cannot change the user name.

- The available debug module services depend on the user level.

Web Interface User Authentication

- Only users with authenticated passwords can log in to the endpoint web interface.

- Configure the endpoint to use the HTTPS to transmit the user name and password to the server during login authentication.

Web Request Authentication

- When a user requests to access a specified web page or submits a servlet request, the TE30 checks that the user's session identifier is valid and that the user is authorized to perform the operation.
- The server implements the final authentication.
- The server verifies the user-generated data. Before transmitting it to clients, the server encodes the data in the HyperText Markup Language (HTML) to prevent malicious code and cross-site scripting attacks.
- Web security software is used to scan the web server and applications to ensure that there are no high-risk vulnerabilities.

Protocol Anti-Attack Measures

- The communication port matrix is provided in the product documentation. Do not enable the services and ports not mentioned in the communication port matrix.

  The communication port matrix contains the following information:
  - Available ports   Transport layer protocols used by the ports
  - Network elements (NEs) that use the ports to communicate with peer NEs
  - Application layer protocols used by ports and description of the services at the application layer
  - Information about whether services at the application layer can be disabled
  - Authentication modes of the ports   Port functions, such as control traffic and data traffic
- The Real-time Transport Protocol (RTP) and Transport Layer Security (TLS) are supported to encrypt voice services.
- Robustness testing tools are used to scan protocols to ensure that there are no high-risk vulnerabilities.
- By default, the TE30 uses FTPS to encrypt data through the Secure Sockets Layer (SSL) and ensure data integrity.

10.2 Configuring Security Settings

The security settings on your TE30 includes the settings of the administrator password, whether to enable encryption, whether to allow remote logins, and upgrade password.

10.2.1 Setting the Administrator Password

With the administrator password set, you must enter it to access the **Advanced Settings** screen.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Secured** > **Password**. Set the administrator password parameters by referring to Table 10-1.

Table 10-1 Administrator password parameters

Parameter	Description	Setting
Current password New password Confirm password	The administrator password contains a maximum of 32 alphanumeric characters.	By default, no password is set.

Step 2 Select **Save**.

----End

10.2.2 Enabling Encryption

You can enable encryption to improve video communication security.

Background

On an IP network that is neither quality-guaranteed nor secure, encryption can be used to increase the video communication security. Both parties in communication must support encryption.

Procedure

Step 1 Choose **Advanced Settings** > **Set** > **Security** > **Encryption** and select an encryption policy.

- **Disable**: No stream is encrypted.
- **Enable**: Streams are forced to be encrypted. If you select this option, your TE30 can attend encrypted conferences only.
- **Maximum interconnectivity**: Streams are encrypted only when a call is set up. If the other party does not support encryption, no stream will be encrypted.

Step 2 Select **Save**.

----End

10.2.3 Allowing Remote Login

You can specify whether to allow remote login and management using the endpoint web interface, SSH, or Telnet.

Web-based Login

Step 1 Choose **Advanced Settings** > **Settings** > **Secured** > **Web Login**. Set the web-based login parameters by referring to Table 10-2.

Table 10-2 Web-based login parameters

Parameter	Description	Setting
Web Login	Specifies whether to allow logins using the endpoint web interface. If you select this parameter, you must also set the administrator user name and password.	This parameter is selected by default.
Administrator name Current password New password Confirm password	Specify the user name and password used to log to the endpoint web interface.	The administrator user name and password contains a maximum of 128 and 32 alphanumeric characters respectively. The user name cannot be left blank and is case sensitive. The default values are both **admin**.
SSL encryption	Specifies whether to use the Security Socket Layer (SSL) encryption to improve transmission security. When SSL encryption is enabled, the touch panel must use HHTPS to connect to the TE30.	When the security requirement of the data transferred is high, it is recommended that you select **SSL encryption**. This parameter is selected by default.
Monitor video	Specifies whether to allow remote users to log in to the endpoint web interface to view local and remote videos and presentations and take pictures. For details, see 11.4.11 Capturing Photos.	This parameter is deselected by default. **CAUTION** This function involves privacy protection. Ensure that its use complies with local laws and regulations.

Step 2 Select **Save**.

----End

SSH and Telnet Login

Step 1 Choose **Advanced Settings** > **Settings** > **Secured** > **SSH/Telnet**. Set the SSH and Telnet login parameters by referring to Table 10-3.

Table 10-3 SSH and Telnet Login

Parameter	Description	Setting
Telnet Login	Specifies whether to enable Telnet logins for system log and status query and other maintenance and configuration purposes.	This parameter is deselected by default. The default Telnet login user name and passwords are both **debug**. To protect against unauthorized access, change the password at the

Parameter	Description	Setting
		first login.
SSH	Specifies whether to enable SSH, which improves transmission security and prevents information disclosure.	This parameter is selected by default.

Step 2 Select **Save**.

----End

10.2.4 Setting the Upgrade Password

You can set the password required to upgrade the TE30 software using the upgrade tool and web interface.

Step 1 Choose **Advanced Settings** > **Settings** > **Secured** > **Upgrade password**. Set the upgrade password parameters by referring to Table 10-4.

Table 10-4 Upgrade password

Parameter	Description	Setting
Upgrade password	Specifies the password required to upgrade the terminal software using the upgrade tool and web interface.	By default, no password is set. To ensure device security, change the password when you first log in to a string comprising uppercase and lowercase letters, digits, and special characters.

Step 2 Select **Save**.

----End

11 Web-based Remote Management

About This Chapter

Your TE30 supports remote management using the web interface. From the web interface, you can set parameters, view the settings, and control the TE30.

The major features of operating the TE30 using the web interface are as follows:

- A computer is used to access the IP network where the TE30 is located.
- When you log in to the TE30 web interface, the TE30 web pages are displayed.
- A maximum of three users can log in to the TE30 web interface simultaneously. The administrator can configure the system, while common or API users can set only personal settings.
- The user who uses the remote control to operate the endpoint has a higher level of rights than the user who logs in to the endpoint using the web interface. The former can grant the control right to or revoke the control right of the latter.
- You can import and export an address book or configuration file on the web interface.
- You can import license files on the web interface.
- With regard to inputting information in quantity, such as adding sites to the address book, using the web interface is more convenient than using the remote control.

11.1　Enabling Web-based Login

After web-based login is enabled, you can log in to the TE30 using its web interface.

11.2　Configuring the Web Browser

Before using the web interface for TE30 remote management, configure the web browser on your computer.

11.3　Logging In to the Endpoint Web Interface

Before using the web interface for TE30 remote management, log in to its web interface.

11.1 Enabling Web-based Login

After web-based login is enabled, you can log in to the TE30 using its web interface.

The web-based login can be enabled or disabled on the remote controlled UI. For details, see
10.2.3 Allowing Remote Login.

11.2 Configuring the Web Browser

Before using the web interface for TE30 remote management, configure the web browser on
your computer.

Background

The following procedure uses Internet Explorer 8.0 as an example of how to configure a
browser. The method for configuring other browser versions is similar to that for Internet
Explorer 8.0.

Procedure

Step 1 Open Internet Explorer 8.0.

Step 2 Choose **Tools** > **Internet Options** and select the **Security** tab.

Step 3 Select **Custom level**. Then select **Enable** for all options under **Scripting** and **Downloads**.

Step 4 Select **OK**.

Step 5 Select **Trusted sites** and then **Sites**.

The **Trusted sites** dialog box is displayed.

Step 6 In the **Add this website to the zone** text box, enter the IP address of your endpoint. Then
select **Add**.

Step 7 Select **Close**.

Step 8 Select the **Privacy** tab. Then move the slider to **Medium**.

Step 9 Select **OK**.

The configuration is complete.

▣ NOTE

If you choose to skip Step 5 through Step 7, from the menu bar of Internet Explorer, choose **Tools** >
Pop-up Blocker > **Turn Off Pop-up Blocker**.

----End

To set Firefox, do the following:

Start the Firefox. On the menu bar, choose **Tools** > **Options**. On the **Main** tab, enable **Show
the Downloads window when downloading a file** and on the **Privacy** tab, enable **Accept
cookies from sites**. Then select **OK**.

11.3 Logging In to the Endpoint Web Interface

Before using the web interface for TE30 remote management, log in to its web interface.

Procedure

Step 1 Open Internet Explorer.

Step 2 In the address box, enter your TE30 IP address, such as **10.10.10.10**.

Step 3 Press **Enter**.

The login page is displayed.

Step 4 Fill in **User name** and **Password**.

☐ **NOTE**

● The default user name and password are **admin**.

Step 5 From the **Language** drop-down list, select a language.

Step 6 Select **Log In**.

The home page is displayed, as shown in Figure 11-1.

Figure 11-1 Home page of the web interface
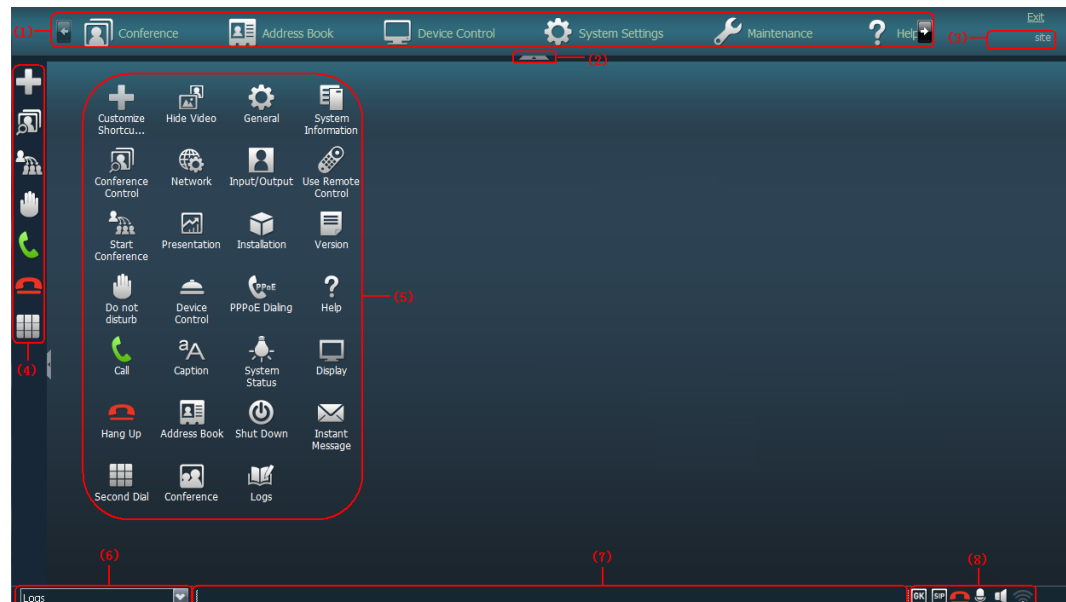
| 1 Menu bar | 2 Expand/Collapse button | 3 Area for displaying the site name | 4 Shortcut bar |
| 5 Desktop icons | 6 Area for displaying logs | 7 Area for displaying messages | 8 Status icons |

----End

11.4 Getting to Know the Web Interface Functions

The functions provided by your TE30 are reorganized on the web interface so that you can conveniently use these function using a web browser.

The following are the functions unique to the web interface:

- Importing and exporting the address book
- Importing and exporting settings
- Importing a license file
- Customizing the shortcut bar and desktop icons
- Site map
- Conference control page, site list, and site template
- Conference controls
- Importing a certificate
- Recording
- Backing up settings
- Capturing photos

11.4.1 Importing and Exporting the Address Book

From the endpoint web interface, you can export the local address book to the local computer or a server. This export facilitates site information editing. You can also import the modified address book to the endpoint, after which the records in the address book are displayed on the address book page.

Background

The exported address book is saved to a file in vCard format. The file name extension is vcf.

For example, you can export records from the address book of endpoint A, modify the records, and then import these records to the address book of endpoint B.

The exported contacts file may contain personal information. Keep the file in a safe location.

Exporting the Address Book

To export the address book:

Step 1 Log in to the web interface of endpoint A. Choose **Address Book** > **Address Book**.

Step 2 Select **Export from Local Address Book**.

Step 3 Save the records to file A.

   ----End

Modifying Records in the Address Book

After exporting the address book, you can modify the records wherein.

Use a text editor to open file A. Based on the notes of the parameters in the file, modify file A so that the file is applicable to endpoint B. Save the modified file as file B.

Importing the Address Book

To import the address book to endpoint B:

Step 1 Log in to the web interface of endpoint B. Choose **Address Book** > **Address Book**.

Step 2 Select **Import to Local Address Book** and select file B to import.

Step 3 Select **Import**.

----End

11.4.2 Importing and Exporting Settings

From the endpoint web interface, you can import or export settings. After your endpoint is restored to its default settings, you can import previously exported settings.

Procedure

Step 1 Log in to the endpoint web interface. Choose **System Settings** > **Installation**.

The **Installation** page is displayed.

Step 2 Select **Import/Export Settings**.

The **Import/Export Settings** page is displayed.

Step 3 Select **Export Settings** to export or **Import Settings** to import settings.

----End

11.4.3 Importing License Files

Some functions, such as Wi-Fi and recording, on your TE30 require license files.

Prerequisites

You have obtain the latest license files.

📖 **NOTE**

Using your contract number and device serial number, you can download license files at http://enterprise.huawei.com.

Background

Your TE30 can start properly even if no license file is loaded on it or the loaded license file expires. After the startup, you can set parameters, import license files, upgrade software, or place calls at a rate of up to 768 kbit/s.

If a license file is updated, the original license file expires. For example, after you purchase an official license, the trial license will expire.

Procedure

Step 1 Log in to the endpoint web interface. Choose **System Settings** > **Installation**.

The **Installation** page is displayed.

Step 2 Click **Import License**.

The **File Upload** dialog box is displayed.

Step 3 Select the license file to be imported and click **Import**.

Step 4 Click **Back** when **OK** is displayed.

📖 **NOTE**

> The new license file takes effect after the TE30 is restarted.

----End

11.4.4 Customizing Shortcut and Desktop Icons

You can customize the shortcut icons and desktop icons on the web interface so that you can perform desired operations more conveniently.

Background

The following procedure takes the customization of shortcut icons as an example.

Procedure

Step 1 Log in to the endpoint web interface. Choose **System Settings** > **Display**.

Step 2 Click the **User defined** tab.

Step 3 Click **Shortcut Bar Icons**.

The **Shortcut Bar Icons** dialog box is displayed.

Step 4 Add or delete shortcut icons.

Step 5 Click **Save**.

----End

11.4.5 Accessing the Site Map

The site map can quickly navigates you to a desired page.

To access the site map:

Log in to the endpoint web interface. Choose **Help** > **Site Map**.

11.4.6 Using the Site List

If there are multiple sites on the address book page, conference-related pages, or other pages, you can sort the sites based on their properties, such as by name, number, line type, and start time.

From the site lists on certain pages, you can click a letter range, such as A-E, to display the sites whose names start with letters within that range[a].

📖 **NOTE**

> a: If a site name starts with a Chinese character, the initial letter is the first letter of the Pinyin of the character.

11.4.7 Conference Control Page

The conference control page of the web interface is a user-friendly page on which you can perform conference control functions, select a site group, and sort the sites.

CAUTION

If the TE30 is connected to an IMS network and the conference is managed by the portal provided by the IMS, this section does not apply.

Template Used to View Sites In Turn

You can preset and save a viewing order of sites in a template. Afterward, you can conveniently view the sites in the order saved in the template without additional configuration.

To configure a template to view sites in turn:

Step 1 Log in to the endpoint web interface. Obtain the chair control rights and choose **Conference** > **Conference Control**.

The conference control page for the chair site is displayed.

Step 2 Enable **View in Turn** and set the viewing order of sites.

----End

To view the sites in the order saved in a template, click **Use Template** and select the desired template from the drop-down list box.

Site Template

With the site template function, you can easily group sites based on their regions and types. In this template, the sites are identified by their site names, and you can easily find a site.

To configure a site template:

Step 1 Choose **Address Book** > **Site Template**.

The page for defining a site template is displayed.

Step 2 Create a site template, add groups to the template, and add sites to the groups.

Step 3 Click **Save**.

When being save successfully, a site template is displayed under **Template Name**.

When one of the sites in the site template is in a conference, the site template name is listed in the No group drop-down list box on the **Conference Control** page.

----End

Video Monitoring

On the conference control page for the chair site, you can view the video and presentation of a remote site. You can also adjust the sizes of the video and presentation. In this way, you can monitor the status and video quality of the remote site.

11.4.8 Importing a Certificate

You can import client, server, and SiteCall certificates into the TE30. These certificates can be used to identify users, certificate authorities, and servers to improve communication security.

Prerequisites

You have downloaded the required certificate from a SIP server or certificate authority.

Procedure

Step 1 Log in to the endpoint web interface. Choose **System Settings** > **Installation**.

The **Installation** page is displayed.

Step 2 Click **Import Certificate**.

The **File Upload** dialog box is displayed.

Step 3 Select the desired certificate type.

◻ NOTE
- To import a certificateused for registration using the Transport Layer Security (TLS), select **Client certificate**.
- To import an HTTPS security certificate, select **Server certificate**.
- To import a certificate used for SiteCall security, select **Multipoint conference certificate**.

Step 4 Select the certificate to be imported, and click **Import**.

Step 5 Click **Back** when **OK** is displayed.

----End

11.4.9 Recording a Conference

Your TE30 can record conferences where the local site is the chair site.

Prerequisites

- The recording server is online.

◻ NOTE
Check the recording server's online status from ResourceManager (RM).

- Your TE30 is in a multipoint conference hosted by a standalone MCU, such as the HUAWEI VP8660.
- The ongoing multipoint conference supports recording.
- The local site is chairing the conference.

Background

When you are using a standalone MCU to schedule or initiate a conference, set the following on your endpoint:

- Set **Conference line type** in advanced conference settings to **H.323**, **SIP**, or **Auto**. For details about the settings, see 6.2 Setting Conference Parameters.

- When you are scheduling or initiating a conference on an MCU, select **Support recording** under conference settings.

Procedure

Step 1 Log in to the endpoint web interface. Choose **Conference** > **Control Recording**.

Step 2 Click **Start**.

The recording starts.

----End

Follow-up Procedure

To stop recording, click **Stop**.

11.4.10 Backing Up Settings

The administrator can use the **One-Click Backup** function to create a configuration backup file for your endpoint. If some parameter settings under **System Settings** are inadvertently deleted or changed, you can use this backup file to restore all settings under **System Settings** to the pre-backup settings.

Background

If a configuration backup file is already stored on your endpoint, the new configuration backup file will replace the original one.

Procedure

Step 1 Log in to the endpoint web interface. Choose **System Settings** > **Installation**.

The **Installation** page is displayed.

Step 2 Click **One-Click Backup**.

Step 3 On the **One-Click Backup** page, click **Back Up Settings**.

Your endpoint then starts to create a configuration backup file. You will be notified when the backup is complete.

----End

Follow-up Procedure

To restore all settings under **System Settings** to the latest pre-backup settings, select **Restore Settings**. Your endpoint will then restart and restore the settings.

11.4.11 Capturing Photos

To ensure that a conference runs smoothly, you may need to monitor how the endpoint operates and whether the local and remote videos are displayed properly in the conference room. From the endpoint web interface, you can capture photos and view local and remote videos and presentations.

Prerequisites

The web login and video monitoring functions are enabled. For details, see 10.2.3 Allowing Remote Login.

Procedure

Step 1 Log in to the endpoint web interface. Choose **Device Control** > **Video Control**.

📖 **NOTE**

When you are on the **Video Control** page, appears on the endpoint display to indicate that video monitoring is enabled.

Step 2 Select the source you want to take a photo of and click **Capture**.

Step 3 In the displayed window, right-click the captured picture.

Step 4 Choose **Save Picture As** and save the picture.

----End

12 Troubleshooting

About This Chapter

This chapter describes the problems you might encounter when using your TE30 and provides corresponding solutions.

To adopt certain solutions described in this chapter, access the **Advanced Settings** > **Settings** and **Advanced Settings** > **Diagnostics** screens. If the **Advanced Settings** screen is password protected, you must enter the password for access. For details, see 10.2.1 Setting the Administrator Password.

12.1　Web Interface

12.2　Network

12.3　Video

12.4　Audio

12.5　Conference Initiation

12.6　Conference Control

12.7　Viewing Help on the User Interface

12.8　Obtaining Technical Support

12.1 Web Interface

Table 12-1 describes the troubleshooting methods for the problems arising on the web interface.

Table 12-1 Troubleshooting methods for the problems arising on the web interface

Problem	Possible Cause	Solution
A message is displayed to indicate that your endpoint failed to connect to the Internet or failed	The latest patches of the operating system or Internet Explorer are not installed.	Install the latest patches for the operating system and Internet Explorer.
	The security level of Internet Explorer is too high, or the IP	1. From the Internet Explorer menu bar, choose **Tools** >

Problem	Possible Cause	Solution
to download images.	address of your endpoint has not been added to the list of trusted sites.	**Internet Options**. 2. Click the **Security** tab, **Trusted sites**, and then **Sites**. 3. In **Add this Web site to the zone**, enter your TE30 IP address. Then click **Add**. 4. Click **OK**.
Button text is not displayed completely.	Internet Explorer is set to ignore font styles specified on web pages. Therefore, the font specified by your TE30 is not recognized.	1. From the Internet Explorer menu bar, choose **Tools** > **Internet Options**. 2. Under **Appearance** on the **General** tab, click **Accessibility**. 3. In the **Accessibility** dialog box, deselect all options. 4. Click **OK**.
Using Internet Explorer 6, the endpoint web interface responds to operations slowly.	The JavaScript engine of Internet Explorer 6 is not upgraded, or the required patches are not installed.	• Install the patches. • Install the Microsoft Windows Script 5.7 (recommended).
The records of the local address book cannot be exported.	The pop-up blocker is enabled on the browser.	• On the Internet Explorer menu bar, choose **Tools** > **Pop-up Blocker** > **Turn Off Pop-up Blocker**. • If the Firefox is used, choose **Tools** > **Options**. On the **General** tab, select **Show the Downloads window** when downloading a file. On the **Privacy** tab, select **Accept cookies from sites**. Then click **OK** to save the settings.

12.2 Network

Table 12-2 describes the troubleshooting methods for the problems arising on the network.

Table 12-2 Methods for troubleshooting common network problems

Problem	Possible Cause	Solution
When you attempt to use Telnet to access the TE30, a	The number of connections to the system has reached 7.	Disconnect some Telnet connections.
	If the interval between two	If no data is transmitted through a

Problem	Possible Cause	Solution
message is displayed to indicate that the number of connections to the TE30 has reached the limit.	connection attempts is less than 10 minutes, the TE30 counts these two attempts as separate connections. When connection attempts are frequent, the connections limit is easily reached. For example, when network faults are rectified immediately after they occur, Telnet connections will be reestablished while the Telnet resources remain occupied.	Telnet connection for 10 minutes, the connection breaks automatically. Wait 10 minutes or longer to allow some Telnet connections to break, before you try to access the system by Telnet.

12.3 Video

Table 12-3 describes the troubleshooting methods for the problems with videos.

Table 12-3 Troubleshooting of the problems with videos

Problem	Possible Cause	Solution
While the TE30 is powered on and not in a conference, the display does not show the remote controlled UI or the local video.	The display is powered off.	Power on the display.
	The video channel of the display is selected incorrectly.	Set the video channel correctly using the remote control.
	The video settings of the TE30 or the display are incorrect. For example, the brightness is set to 0.	Retain the default values for video parameters on the TE30 and display.
	The video cable is not connected securely.	Secure the video cable between the TE30 and display.
While the TE30 is powered on and not in a conference, the display shows the local video but not the remote controlled UI.	No display is connected to the output port of the remote controlled UI or the connected display is faulty.	Connect a display to the output port of the remote controlled UI and verify video settings on the display.
	The TE30 does not respond to remote control operations.	Telnet to the TE30. If you fail to operate the TE30, the endpoint is malfunctioning. In this case, restart the TE30. If the problem persists, contact the local distributor for maintenance.
While the TE30 is in a conference, the display shows the	A local or remote loopback test is being performed.	Stop all local and remote loopback tests.
	Check the call statistics. If the	Contact the remote site

Problem	Possible Cause	Solution
local video but not the remote video.	value of **Video bandwidth[frame rate]** is 0, no video is sent from the remote site.	administrator to solve this problem.
	If the remote video is displayed as a blue screen, the remote site hides its video by sending a blue screen.	Contact the remote site administrator to solve this problem.
	The video output port is set to display the local video.	Set the video output port to display the remote video.
The local video is in black and white or blinks in black and white.	The mode of the video output port is set incorrectly.	• Ensure that the mode of the video output port and the cable in use match each other. • Check that the cable is connected correctly. Replace the cable if necessary.
While the TE30 is in a conference, the remote video is not clear. For example, there is artifacts, frozen image, or discontinuity in the video output.	Faults exist on the local video module: Perform a local video loopback test. If the video quality is poor, faults exist on the local video module.	Send the TE30 to the local distributor for maintenance.
	The remote camera is set to focus on a near or far scene: When the remote camera is not set to focus automatically and the scene captured by a remote camera is changed, the captured video is of poor quality.	Set the remote camera to focus automatically.
	When the conference rate is lower than 256 kbit/s, the audio protocol is set incorrectly. For example, you can access the **Status** screen. If the conference rate is 256 kbit/s and the audio bandwidth is 64 kbit/s, the video bandwidth will be only 196 kbit/s. In this case, the video quality is poor.	If the conference rate is lower than 256 kbit/s, set the audio protocol to G.728 to reduce the bandwidth used for audio transmission.
	Low video bandwidth is available for the local site because the network is busy.	Do not initiate conferences in busy hours of the network.
	Certain data is lost during transmission, because the quality of a network connection device such as an	Replace the relevant network connection device.

Problem	Possible Cause	Solution
	optical fiber transceiver is poor.	
While the TE30 is in a conference, the remote video can be displayed continuously but the video quality is not satisfactory.	Ask the remote site administrator to perform a local video loopback test. If the video quality is good, the video frame rate set at the remote site is too high.	Ask the administrator of the remote site to disconnect from the conference, reduce the video frame rate, and join the conference again.
While the TE30 is not in a conference, the local video is too bright or too dark.	The video settings of the endpoint are inappropriate.	Retain the default values for video parameters on the TE30 and display.
	The video settings of the display are inappropriate.	Retain the default values for video parameters on the TE30 and display.
	The camera is faulty.	Send the TE30 to the local distributor for maintenance.
While the TE30 is in a conference, when a remote site is sharing its computer desktop, the local VGA display cannot display the shared computer desktop.	The resolution of the remote computer exceeds the maximum resolution supported by the TE30.	Ask the remote site administrator to change the resolution and refresh rate of the computer to those supported by the TE30.
	The local VGA display is not supported.	Replace the VGA display.
A computer is connected to the TE30, but the local VGA display does not show the computer desktop.	The capability of the VGA display is limited. The resolution or refresh rate of the local SXGA output is too high to be supported by the VGA display.	Set the resolution and refresh rate of the local output to those supported by the VGA display.
	The TE30 supports only certain combinations of resolutions and refresh rates. The combination of the resolution and refresh rate set on the computer, however, is not supported by the TE30. In this case, the local site cannot display or properly display the computer desktop.	Set the resolution and refresh rate of the computer used for VGA input to those supported by the TE30.
On the camera control screen, ⊕, ⊖, and navigation keys on the remote control cannot be	The camera to be controlled is selected incorrectly.	Access the camera control screen and select the camera to be controlled.
	Camera settings are incorrect.	Verify camera settings.

Problem	Possible Cause	Solution
used to control the camera.		
While the TE30 is in a conference and the displays shows the remote video, after you press ⊕, ⊖, or navigation keys on the remote control, the remote video remains unchanged. That is, you cannot control the remote camera.	Remote control is disabled on the remote camera.	Ask the remote site administrator to enable the remote camera control at the remote site.
	The camera settings are incorrect.	Ask the remote site administrator to verify the camera settings.

12.4 Audio

Table 12-4 describes the troubleshooting methods for the problems with audio.

Table 12-4 Troubleshooting methods for problems with audio

Problem	Possible Cause	Solution
While the TE30 is in a conference, no audio is delivered from the local display.	Perform an audio test to check whether the problem arise at the local site or a remote site. If no audio is output from the display when the audio test is performed, the problem exists at the local site.	• The chair site has muted the speaker of the local site. • If the volume of the display is adjusted to the lowest, restore the volume to its default value. • If the volume of the TE30 is adjusted to the lowest, restore the volume to its default value. • If the audio cable is connected incorrectly or insecurely, reconnect the audio cable from the TE30 to the display.
	If audio is output from the display properly when the audio test is performed, the problem exists at the remote site.	The microphone at the remote site has been muted or the chair site has muted the microphone of the remote site. No sound pickup device, such as a microphone, is connected to the audio source input port. In this case, set the audio source again or connect a sound pickup device to the corresponding port. The relevant sound pickup device

Problem	Possible Cause	Solution
		is powered off. In this case, power on the device. The audio cable is connected insecurely. In this case, reconnect the audio cable to the TE30.
While the TE30 is in a conference, only the sound from the local site can be output from the display and you cannot hear the other sites.	A loopback test is being performed at the local site.	Stop all local and remote loopback tests.

12.5 Conference Initiation

Table 12-5 describes how to troubleshoot common problems you may encounter during conference initiation.

Table 12-5 Methods for troubleshooting common problems with conference initiation

Problem	Possible Cause	Solution
The local and remote sites cannot call each other using site numbers.	The local or remote site is not registered with a GK. A GK is responsible for resolving site numbers to IP addresses. If the local or remote site is not registered with a GK, the resolution is not implemented, and you cannot place a call to the remote site using the site number. If a remote site places a call to the local site by site number, it will receive a message from the GK to indicate that the local site has not been registered with the GK, and the call cannot be set up.	Verify the GK registration settings.
	The local or remote endpoint is not connected to an IP network.	Verify the IP network settings. Ensure that the IP network cable is connected properly.
The local site cannot place a call to a remote site	The local or remote endpoint is not connected to an IP network.	Verify the IP network settings. Ensure that the IP network cable is connected properly.

Problem	Possible Cause	Solution
using the IP address.	The local endpoint is on a private network while the remote endpoint is on a public or different private network, and the NAT settings are incorrect. Check whether your TE30 can communicate with a public network. If it cannot, the NAT settings are incorrect.	Choose **Advanced Settings** > **Settings** > **Network** > **Firewall** and verify the NAT settings.
	The GK with which the local or remote endpoint is registered does not support the function to place calls using the IP address.	Choose **Advanced Settings** > **Settings** > **Network** > **IP** > **H.323** at the local and remote sites respectively, and disable the GK.
After the startup, the TE30 fails to register with the GK.	The parameters (GK address, encryption password, and user name) used for GK registration are incorrect.	On the endpoint web interface, choose **Advanced Settings** > **Settings** > **Network** > **IP** > **H.323** and correct the settings.
	Another site with the same number as the local site has already been registered with the GK.	Contact the videoconferencing system administrator to check whether another site with the same number as the local site has already been registered with the GK. If such a site exists, change the user name of the local site.
	The TE30 is disconnected from a network.	Access the **Line Status** screen and check whether the IP network connection is broken. If it is broken, verify the IP network settings. Ensure that the IP network cable is connected properly.
	The local endpoint is on a private network while the GK is on a public network, and the NAT settings are incorrect. Check whether your TE30 can communicate with the public network. If the TE30 cannot, the NAT settings are incorrect.	Choose **Advanced Settings** > **Settings** > **Network** > **Firewall** and verify the NAT settings.
	The listening port of the GK, such as port 1719, is restricted by the network firewall.	Contact the videoconferencing system administrator to solve the problem.
A predefine conference fails to be initiated on the	The TE30 is disconnected from the videoconferencing network.	Check the network and rectify relevant faults.

Problem	Possible Cause	Solution
TE30.	• The local site is set to pay for the conference, but the account balance of the local site is insufficient. • Another site is to pay for the conference, but the corresponding account number or password is incorrect or the account balance of the site is insufficient.	Enter the account number and the password correctly and top up the relevant account.
	Multiple conferences were currently being held and port resources on the videoconferencing system are insufficient.	If the port resources are insufficient, you need to wait until the resources are available or you can reduce the number of sites attending the conference and then add sites as required after the conference is held successfully.

12.6 Conference Control

Table 12-6 describes how to troubleshoot common problems you may encounter during conference control.

Table 12-6 Troubleshooting methods for conference control problems

Problem	Possible Cause	Solution
While the TE30 is in a conference, you cannot view a specific site.	A site in the conference is being broadcast, and all the sites except the chair site and broadcast site must view that site.	Ask the chair site to stop site broadcast.
	A site is having the floor, and non-chair sites cannot view specific sites.	Ask the chair site to perform the discussion operation.
	The chair site has performed the **Voice Activation** operation.	Ask the chair site to disable the voice activation function.
	No video is sent from the site you wish to view.	Ask the relevant site administrator to troubleshoot the site video.
	The **View Site** function is restricted on the RM.	Contact the videoconferencing system administrator to solve the problem.

12.7 Viewing Help on the User Interface

The endpoint user interface includes context-sensitive help and operation guide.

Context-sensitive help includes status icons and configuration verification messages that are displayed in context on the user interface web pages. For example, if certain settings on the system settings screen are incorrect, a message will be displayed to indicate where the error exists and how to rectify the error.

The operation guide describes how to operate the user interface. When you are using the TE30 and the provided user guide is not available, you can press **?** to display this operation guide on the user interface.

12.8 Obtaining Technical Support

- Enterprise.Huawei.com

  This Huawei support website provides an efficient and real-time communication platform where you can obtain technical documents; submit technical questions, service requests, and troubleshooting questions; and provide your feedback about improvements to Huawei products. To seek technical help over the Internet, please visit http://enterprise.huawei.com.

  Provide the following information to help Huawei engineers answer your questions:
  - Serial number of your TE30 (To view the serial number, choose **Advanced Settings** > **Diagnostics** > **System Information** > **Version**.)
  - Software version (To view the version, choose **Advanced Settings** > **Diagnostics** > **System Information** > **Version**.)
  - Network information (To view the information, choose **Advanced Settings** > **Diagnostics** > **Status** > **Line Status**.)
  - Diagnostic and troubleshooting measures that have been taken
- Technical support hotline: 4008229999

  In case of emergency, you can call the technical support hotline. Before you make the call, power on the TE30 so that you can access the relevant pages during the call and get the following information available:
  - Problem description and associated information
  - Serial number of your TE30 (To view the serial number, choose **Advanced Settings** > **Diagnostics** > **System Information** > **Version**.)

13 Maintenance

About This Chapter

This chapter describes maintenance and troubleshooting methods to help you maintain and troubleshoot the TE30 during use.

13.3　Restoring Default Settings

If software update fails and your TE30 malfunctions, use the **Restore Default** function to restore your TE30 to its default settings.

13.4　Configuring the NTP server.

The Network Time Protocol (NTP) server is used for system synchronization and provide time accuracy.

13.5　Setting the Sleep and Wakeup Mode

Your TE30 supports the sleep mode. You can set the sleep time, automatic startup, and automatic shutdown time.

13.6　Setting the Number Key Functions

You can configure the number keys on the remote control for two-stage dialing or camera preset control.

13.7　Using Diagnostics Methods

On the TE30, you can perform the following diagnostic tests: sound and color bar tests, network tests, loopback tests, and remote control tests.

13.1 Preventive Maintenance

You must check the working environment, cable connection, communication network connection, and audio-visual input and output of your TE30 periodically, to ensure that the TE30 and its peripheral equipment work properly.

13.1.1 Checking the Working Environment Periodically

To ensure that your TE30 can be used properly, check the working environment periodically.

Table 13-1 lists the items that need to be checked.

⚠ **CAUTION**

If any of the items does meet the requirement, power off the TE30 and take measures to improve the environment. Ensure that the TE30 is used only when all the listed items meet the requirements.

Table 13-1 Checking the working environment

Item	Requirement
Operating temperature	0 C to 40 C
Operating humidity	10% to 80% RH

13.1.2 Checking the Cables Periodically

Preventive maintenance purposes, you need to check the audio, video, and communication cables periodically.

Audio and Video Cables

Periodically (once a week is recommended) check that the cables connecting the TE30 to the peripheral equipment and the power supply are securely connected.

Power on the TE30 test the cable connections. If any of the cables are loose, reconnect the cables securely.

Communication Cables

Periodically (once a week is recommended) check whether the communication cables connected to the TE30 work properly.

Power on the TE30 and call some other endpoints using different methods, such as calling over a broadband network.

- If a call is set up successfully, the communication cable works properly in the corresponding mode.
- If a call cannot be set up, check whether the cables are connected correctly and securely and whether the communication parameters are set correctly. If the problem persists, contact the videoconferencing network administrator to check the network.

13.1.3 Viewing the System Status

To perform diagnostics against line connection, view the network connection status.

Use any of the following methods to access the **Status** screen and check the information:

- Press **?** on the remote control and select **Status**.

- Select 🛈 from the option bar.

- Choose **Advanced Settings** > **Diagnostics** > **Status**.

The following information is displayed on the **Status** screen:

- Line status: includes the IP address, GK status, site number, SIP information, and running duration
- Call status: includes the line rate, video rate (frame rate), presentation rate (frame rate), audio rate, video packet loss rate, presentation packet loss rate, audio packet loss rate, conference participating duration, and presentation token. The call status is displayed only when your TE30 is in a conference.
- Conference parameters: includes the call bandwidth, video protocol, video bandwidth (frame rate), audio protocol, audio bandwidth, presentation protocol, presentation bandwidth (frame rate), remote number, H.235 encryption status, conference ID for video access, conference ID for audio access, ISDN trunk number, conference ID for ISDN access, and password for conference authentication. The conference parameters are displayed only when your TE30 is in a conference.
- Input port status: includes the video information about the built-in camera and VGA IN port. For example, **DVI 1080p 60Hz** indicates that the input mode, video resolution, and refresh rate of the built-in camera are DVI, 1080p, and 60 Hz respectively.

13.1.4 Viewing the System Information

System information helps you maintain your endpoint.

Procedure

Choose **Advanced Settings** > **Diagnostics** > **System Information**.

The following information is displayed on the **System Information** screen:

- Version information: includes the endpoint model, serial number, software version, hardware information, logical version, and microphone array version.
- Specification information: includes audio, video, ports, bandwidth, SIP, built-in MCU, dual stream, security, and other main features of the TE30.

13.1.5 Querying Logs

Your TE30 logs all non-query events when the terminal is operating in real time, including user activities and commands. The logs help with device maintenance, fault identification, and auditing.

Background

Your TE30 can store a maximum of 100000 log records. When the memory for recording the logs is full, new logs can still be recorded. The latest log will replace the oldest one.

The logs are sorted by time. You can turn pages to view more entries. To display the details of a log, scroll to the log and select **Details**.

A log records the following information:

- Event time
- Event level
- Endpoint-defined event type
- Event details

To search for a log, select **Query** and specify the search criteria.

Procedure

Choose **Advanced Settings** > **Diagnostics** > **Logs**. Then select the log you want to view.

13.2 Software Upgrade

Your TE30 supports the following software upgrade methods: automatic, locally, using the bootrom system, and from the web interface.

⚠ **CAUTION**

During the upgrade, do not power off the TE30 to prevent faults that cannot be rectified.

Table 13-2 describes the differences between the four upgrade methods.

Table 13-2 TE30 upgrade methods

Upgrade Method	Description
Automatic upgrade	With the automatic upgrade function enabled and automatic upgrade settings configured, the TE3 obtains upgrade files from the specified server and installs the upgrade files when the upgrade interval arrives. For details, see 13.2.1 Automatic Upgrade.
Local upgrade	Download the upgrade software to a computer, connect the computer to the TE30 directly or over the LAN, and upgrade the TE30. For details, see 13.2.2 Upgrading the TE30 Locally.
Upgrade using the bootroom system	If upgrading the endpoint using its normal system fails because of power failure or other causes, you can use the bootrom system for the upgrade For details, see 13.2.3 Upgrading the TE30 Using the Bootroom System.
Upgrade from the web interface	From the web interface, manually upgrade the TE30 or enable it to upgrade automatically. For details, see 13.2.4 Upgrading the TE30 from the Web Interface.

Before the upgrade, note the following:

- Read the Release Notes to understand the contents to be upgraded and precautions required to be taken during the upgrade.
- Check the current software version.
- Back up the settings on the TE30, such as the communication settings and the address book.

13.2.1 Automatic Upgrade

With the automatic upgrade enabled, your TE30 obtains upgrade files from the specified server and installs the upgrade files when the upgrade interval arrives.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Installation** > **Auto Upgrade Settings**.

Step 2 Set the automatic upgrade parameters by referring to Table 13-3.

Table 13-3 Automatic upgrade parameters

Parameter	Description	Setting
Auto upgrade	Specifies whether the automatic upgrade function is enabled. If you select this parameter, you must also set **Upgrade interval**, **Server address**, **User name**, and **Password**. Your TE30 will obtain upgrade files from the specified server and install the upgrade files when the specified upgrade interval is reached.	This parameter is deselected by default.
Enable wireless MIC auto update	Specifies whether to automatically update the wireless microphone after it is connected to the TE30.	This parameter is selected by default.
Upgrade interval	Specifies the upgrade interval.	The default value is **0.5 h**. Value range: 0.5 h to 24 h.
Server address	Specifies the IP address of the server used to store the upgrade files for your TE30.	This parameter cannot be left blank. Example: http://200.55.55.100/
User name Password	Specify the user name and password used by your TE30 to access the server that store the upgrade files.	No default value is set for this parameter.

Step 3 Select **Save**.

----End

13.2.2 Upgrading the TE30 Locally

You can use a computer to upgrade the TE30 locally.

Before the upgrade, note the following prerequisites:

- The target software is saved to the computer.

● The computer is connected to the TE30 using a straight-through cable, crossover cable, or switch.

Upgrading One TE30

You can upgrade a single TE30 using the upgrade program installed on a computer.

Procedure

Step 1 Power on the computer and the TE30.

Step 2 Extract the compressed software upgrade package on the computer.

Step 3 Run **UpgMaster.exe** to display the window shown in Figure 13-1.

Figure 13-1 Upgrading the TE30 locally
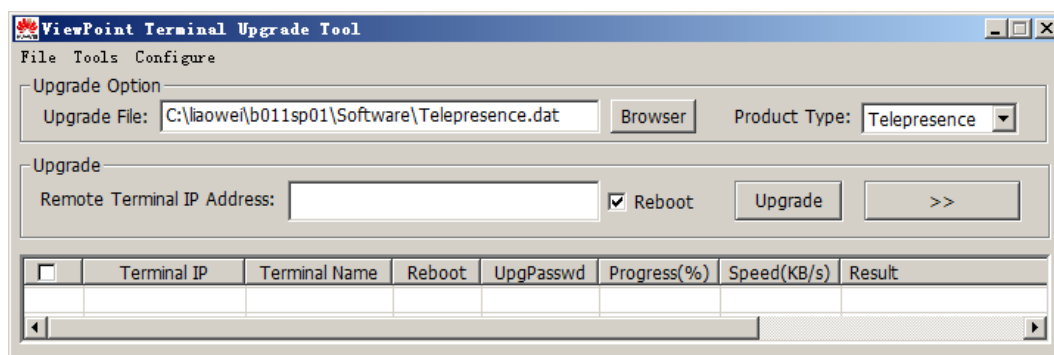
Step 4 Click **Browser** and select the **Telepresence.dat** file.

Step 5 Enter your TE30 IP address, such as 10.10.10.10.

📖 NOTE

If **Reboot** is selected during the upgrade, the TE30 will automatically restart after the upgrade.

Step 6 Click **Upgrade**.

Step 7 In the displayed dialog box, enter the upgrade password and click **OK**.

----End

Upgrading Multiple TE30s at a Time

You can upgrade multiple TE30s using the upgrade program installed on a computer.

Procedure

Step 1 Power on the computer and the TE30.

Step 2 Extract the compressed software upgrade package on the computer.

Step 3 Run **UpgMaster.exe** to display the window shown in Figure 13-2.

Step 4 Click **Browser** and select the **Telepresence.dat** file.

Step 5 Click [>>] to display the window as shown in Figure 13-2.

Figure 13-2 Upgrading multiple TE30s at a time
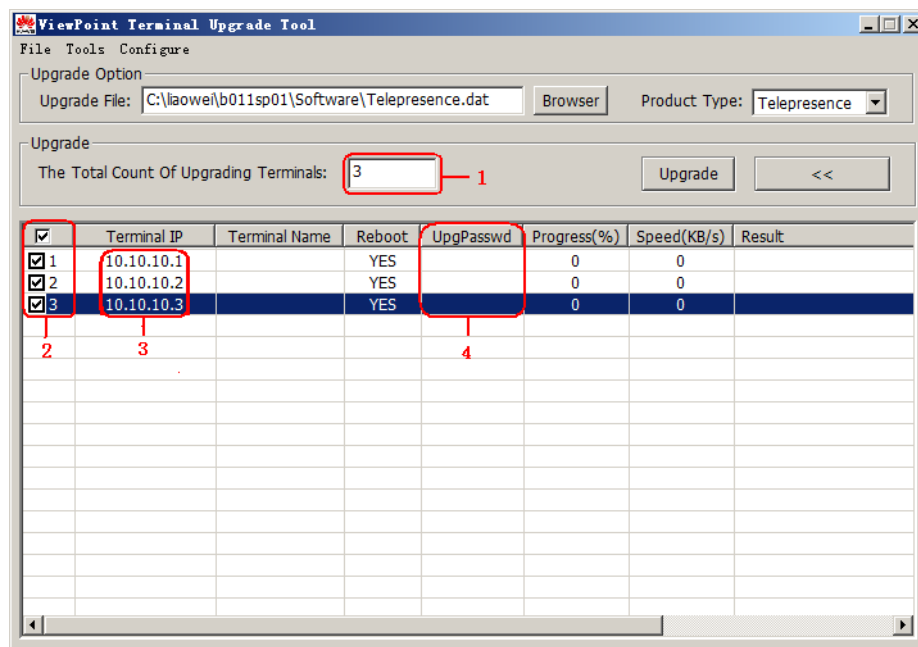
Step 6 In the area circled in red and marked as **1**, enter the number of the TE30sto be upgraded, for example, **3**.

Step 7 In the area circled in red and marked as **3**, enter the IP addresses of the TE30s to be upgraded.

Step 8 In the area circled in red and marked as **4**, enter the upgrade passwords of the TE30s to be upgraded.

Step 9 In the area circled in red and marked as **2**, select the TE30s to be upgraded and click **Upgrade**.

NOTE

To increase upgrade efficiency when the network bandwidth is insufficient, you can press **Ctrl+ALT+C** in the window shown in Figure 13-2, and then set the upgrade policy in the displayed window.

Step 10 In the displayed dialog box, enter the upgrade password and click **OK**.

----End

Upgrading Certain Selected Software Modules

You can upgrade certain selected software modules using the upgrade program installed on the computer.

Procedure

Step 1 Power on the computer and the TE30.

Step 2 Extract the compressed software upgrade package on the computer.

Step 3 Run **UpgMaster.exe** to display the window shown in Figure 13-2.

Step 4 Click **Browser** and select the **Telepresence.dat** file.

Step 5 Press **Ctrl**+**ALT**+**P** to display the window shown in Figure 13-3.

Figure 13-3 Selecting the software modules to be upgraded
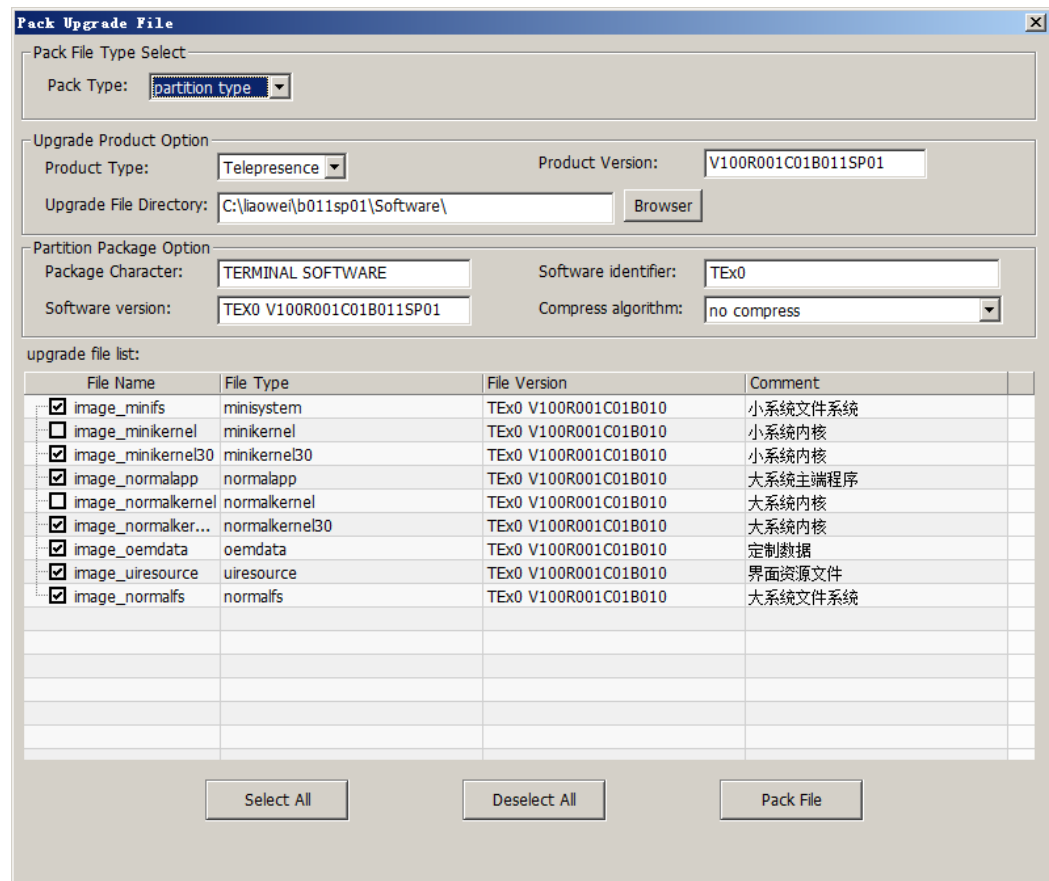
Step 6 Select the software modules to be upgraded.

Step 7 Click **Pack File** to pack the software modules to be upgraded into a .dat file, and save the file to the computer.

Step 8 Close the window shown in Figure 13-3.

Step 9 In the window shown in Figure 13-2, click **Browser,** and select the .dat file created and saved in Step 7.

Step 10 Click **Upgrade**.

Step 11 In the displayed dialog box, enter the upgrade password and click **OK**.

----End

13.2.3 Upgrading the TE30 Using the Bootroom System

If upgrading the endpoint using its normal system fails, you can use the bootrom system for the upgrade

Prerequisites

Before the upgrade, note the following prerequisites:

- A copy of the target software is available on the computer.
- The computer is connected to the TE30 using a crossover cable or a switch.

Context

The bootroom system is used for upgrades when the endpoint software malfunctions. This method can be repeatedly used, and can ensure successful software upgrade when there are no hardware failures.

Procedure

Step 1 While the TE30 is restarting or powering on, press and hold the MODE button for 3 seconds.

The TE30 enters the bootrom system.

◻ **NOTE**

At this time, the TE30 has two IP addresses available: the static IP address of the normal system and the default IP address (192.168.1.1). If the normal system IP address cannot be used for connection setup or the TE30 fails to obtain any IP address because of the dynamic IP address or other causes, you can use the default IP address for upgrades.

Step 2 Use Telnet to log in to the TE30 and run **mnt upgswitch on** to enable the bootrom system upgrade function.

◻ **NOTE**

By default, the bootrom system upgrade function is disabled by default.

Step 3 Extract the compressed software upgrade package on the computer.

Step 4 Run the upgrade program **UpgradeTool.exe**.

The upgrade dialog box is displayed.

Step 5 Select **Browser** and select the .dat file.

Step 6 Enter your TE30 IP address, for example, 192.168.1.1. Then click **Upgrade**.

Step 7 In the displayed dialog box, click **OK** to start the upgrade.

Step 8 Restart the TE30.

----End

13.2.4 Upgrading the TE30 from the Web Interface

You can configure your TE30 to be upgraded online automatically or manually. You can also upgrade it using a local upgrade file.

Upgrading the TE30 Online

Step 1 Log in to the endpoint web interface. Choose **System Settings** > **Installation**.

The **Installation** page is displayed.

Step 2 Click **Auto Upgrade Settings**.

The **Auto Upgrade Settings** page is displayed.

Step 3 Set the upgrade parameters by referring to Table 13-3.

Step 4 Perform any of the following:

- If you did not enable automatic upgrade, click **Manual upgrade** to manually upgrade the TE30.
- If you enabled automatic upgrade, click **Save**. To upgrade the TE30 immediately, you can also click **Manual upgrade**.

----End

Upgrading the TE30 Using a Local Upgrade File

Step 1 Choose **Maintenance** > **Upgrade**.

The **File upload dialog** dialog box is displayed.

Step 2 Find and select the **Select File** file on your computer.

Step 3 Click **Import**.

The TE30 starts the upgrade.

----End

The TE30 will restart after the upgrade is complete.

13.3 Restoring Default Settings

If software update fails and your TE30 malfunctions, use the **Restore Default** function to restore your TE30 to its default settings.

After **Restore Default** is used, only system settings are restored to default settings. Other information stored on the TE30 will not be lost. For example, site information in the address book remains unchanged.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **Installation** > **Restore Default**.

Step 2 In the displayed dialog box, enter the TE30 serial number and select **OK**.

 NOTE

- To view the serial number of your TE30, choose **Advanced Settings** > **Diagnostics** > **System Information** > **Version**.
- Press and hold the MODE button for 10 seconds or more, and the TE30 will be restored to its default settings and restart. After the endpoint is restored to its default settings, its IP address is reset to 192.168.1.1.

----End

13.4 Configuring the NTP server.

The Network Time Protocol (NTP) server is used for system synchronization and provide time accuracy.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **General** > **Date and time**. Set the NTP parameters by referring to Table 2-4.

Step 2 Select **Save**.

----End

13.5 Setting the Sleep and Wakeup Mode

Your TE30 supports the sleep mode. You can set the sleep time, automatic startup, and automatic shutdown time.

To reduce power consumption, you can configure your TE30 to enter sleep mode after it has been in the idle state for a defined period of time.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **General** > **Power supply**. Set the sleep and automatic startup and shutdown parameters by referring to Table 13-4.

Table 13-4 Sleep and automatic startup and shutdown parameters

Parameter	Description	Setting
Enter sleep mode	Specifies the period after which the TE30 enters sleep mode if you do not perform any operations. If you set this parameter to **Never**, the TE30 will never enter sleep mode.	The default value is **After 10 min**.
Wake-on-LAN	Specifies whether you can use an encapsulation tool to remotely power on or wake the TE30.	The default value is **Disable**.

Parameter	Description	Setting
Scheduled power-on	Specifies whether the TE30 automatically powers on at the specified time. If you enable this function, you must also set **Scheduled power-on time**.	The default value is **Disable**.
Scheduled power-on time	Specifies the time when the TE30 is automatically powered on. The value format depends on the value set for **Time format**.	The default value is **0:0** corresponding to **24-hour**.
Scheduled power-off	Specifies whether the TE30 automatically powers off at the specified time. If you enable this function, you must also set **Scheduled power-off time**.	The default value is **Disable**.
Scheduled power-off time	Specifies the time when the TE30 automatically powers off. The value format depends on the value set for **Time format**.	The default value is **0:0** corresponding to **24-hour**.

Step 2 Select **Save**.

When the TE30 is in sleep mode, the status indicator is still steady on.

----End

◎⸺ TIP

To directly place the TE30 in sleep mode, press ⏻ on the remote control and select **Sleep**.

Follow-up Procedure

The TE30 wakes up from the sleep mode once any operation is performed on it. For example, the TE30 wakes up if there is an incoming call, you perform an operation on the remote control, or you connect to the TE30 from the web interface.

When the automatic shutdown time arrives, the TE30 displays a dialog box and begins a 10-second countdown. If you select **No**, the TE30 will not power off. If you select **Yes**, or does not select any option within 10 seconds, the TE30 powers off automatically.

13.6 Setting the Number Key Functions

You can configure the number keys on the remote control for two-stage dialing or camera preset control.

When your TE30 is not in a conference, and the display is in full screen mode, the number keys on the remote control do not support two-stage dialing and can only be used to control camera presets.

Procedure

Step 1 Choose **Advanced Settings** > **Settings** > **General** > **Select number key function** and set the number key function.

- **Second Dial**: Follow the instructions to press number keys to perform two-stage dialing.
- **Control camera preset**: Press a number key to move the camera to the preset bound to that key.

📖 **NOTE**

To toggle between these two options, press ▣ on the remote control.

Step 2 Select **Save**.

----End

13.7 Using Diagnostics Methods

On the TE30, you can perform the following diagnostic tests: sound and color bar tests, network tests, loopback tests, and remote control tests.

Choose **Advanced Settings** > **Diagnostics**. Use the diagnostics methods provided on the displayed **Diagnostics** screen.

Figure 13-4 shows the TE30 diagnostics model.

Figure 13-4 TE30 diagnostics model
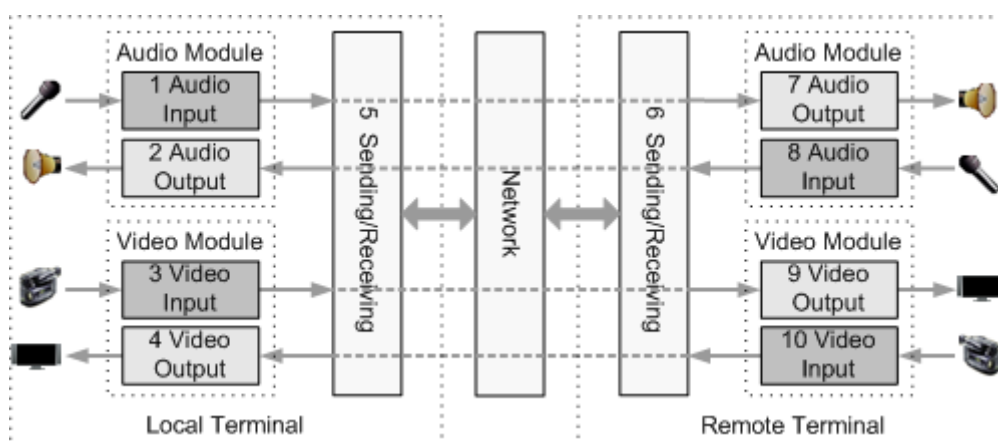
Figure 13-4 shows the diagnostics of three modules: audio module, video module, and network transception module.

Audio signals are transmitted in the following signal path:

- Local microphone → 1 → 5 → Communication network → 6 → 7 → Remote speaker
- Local speaker ← 2 ← 5 ← Communication network ← 6 ← 8 ← Remote microphone

Video signals are transmitted in the following signal path:

- Local camera → 3 → 5 → Communications network → 6 → 9 → Remote monitor
- Local monitor ← 4 ← 5 ← Communications network ← 6 ← 10 ← Remote camera

Sound and Color Bar Tests

Table 13-5 describes the sound and color bar tests.

Table 13-5 Sound and color bar tests

Test	Item to Be Tested	Signal Stream
Sound	2 audio output	2 → Speaker
Color bar	4 video output	4 → Monitor

- To perform a sound test, choose **Sound & Color Bar Test** > **Sound Test**. While the test audio stored on your TE30 plays, check the sound quality.
- To perform a color bar test, choose **Sound & Color Bar Test** > **Color Bar Test**. While seven color bars are displayed on the display, check the color display quality.

Loopback Tests

Your TE30 can transmit audio or video data on a channel to simulate an actual application and test whether the output is satisfactory. You can perform a local loopback test to check the local network connection or a remote loopback test to check the remote network connection. If a remote loopback test is performed, data is transmitted from the local site to a remote site, and then back to the local site. Table 13-6 describes the loopback tests.

![WARNING]

- To enable your TE30 to communicate with other endpoints, stop the loopback test.
- You cannot perform a loopback test on remote video if you are in a dual-stream conference.

Table 13-6 Loopback tests

Test	Item to Be Tested	Signal Stream
Audio loopback	Local audio module	Microphone → 1 → 2 → Speaker
Video loopback	Local video module	Camera → 3 → 4 → Monitor
Digital loopback	Local audio and video	The endpoint performs local audio and

Test	Item to Be Tested	Signal Stream
	modules	video loopback tests simultaneously.
Remote audio loopback	• Remote audio module • Network transmission	Microphone → 1 → 5 → 6 → 7 → 8 → 6 → 5 → 2 → Speaker
Remote video loopback	• Remote video module • Network transmission	Camera → 3 → 5 → 6 → 9 → 10 → 6 → 5 → 4 → Monitor
Remote digital loopback	• Remote audiovisual modules • Network transmission	The endpoint performs remote audio and video loopback tests simultaneously.

Network

Table 13-7 Network test

Test	Item to Be Tested	Signal Stream
Network	IP access	Endpoint→ LAN or public network

Before a test, ensure that your TE30 is connected to an IP network and the IP parameters are set correctly.

- In **IP address**, enter an IP address that is in a different network segment from your TE30 IP address. Then select **Start**. If the test succeeds, the gateway settings and IP address of your TE30 are correct.

- If your TE30 is on a private network: In **IP address**, enter a public IP address. Then select **Start**. If the test succeeds, the gateway settings, NAT address, and IP address of your TE30 are correct.

Remote Control Tests

Test keys on the remote control to check whether they function properly. If you test only part of the keys, you can exit the **Remote Control Test** screen by pressing and holding the ↰ on the remote control.

After completing testing all the keys, you exit the **Remote Control Test** screen automatically.

The maximum operating distance of the remote control is 15 meters, and its performance may be affected under bright light.

If the remote control does not work, check that:

- The TE30 is powered on.
- The positive and negative charges of the battery are connected correctly.
- The battery has sufficient power left.
- There are no special fluorescent or neon signs nearby.

A Safety Precautions

For safety purposes, carefully read through these safety precautions and observe them during operation.

Basic Requirements

- Keep the device dry and secure from collision during storage, transportation, and operation of the device.
- Do not attempt to dismantle the device by yourself. In case of any fault, contact the appointed maintenance center for assistance or repair.
- Without prior written consent, no organization or individual is permitted to make any change to the structure or safety and performance design of the device.
- While using the device, observe all applicable laws, directives, and regulations, and respect the legal rights of others.

Environmental Requirements

- Place the device in a well-ventilated place. Do not expose the device to direct sunlight.
- Install the device strictly according to the requirements of the manufacturer.
- Do not place any object on the top of the device. Reserve a minimum space of 10 cm at the four sides of the device for heat dissipation.
- Do not place the device on or near inflammable materials such as foam.
- Keep the device away from heat source or fire, such as a radiator or a candle.
- Keep the device away from any household appliances with strong electromagnetic fields, such as a microwave oven, refrigerator, or mobile phone.

Operating Requirements

- Do not allow children to play with the device or accessories. Swallowing the accessories may be fatal.
- Use the accessories such as the power adapter and battery provided or authorized only by the manufacturer.
- Ensure that the device does not get wet. If water gets into the device, disconnect the power supply immediately and unplug all the cables connected to the device, such as the power cable, telephone cable, and RF cable, and then contact the appointed maintenance center.

- Before plugging or unplugging any cable, shut down the device and disconnect the power supply. While plugging or unplugging any cable, ensure that your hands are dry.
- Do not step on, pull, or overbend any cable. Otherwise, the cable may be damaged, leading to malfunction of the device.
- Do not use old or damaged cables.
- In lightning weather, disconnect the device from the power supply and unplug all the cables connected to the device.
- Keep the power plug clean and dry, to prevent electric shock or other dangers.
- If the device is not used for a long time, disconnect the power supply and unplug the power plug.
- If smoke, sound, or smell is emitted from the device, stop using the device immediately, disconnect the power supply, unplug the power plug and other cables, and remove the batteries. Then, contact the appointed maintenance center for repair.
- Ensure that no object (such as metal shavings) enters the device through the heat dissipation vent.
- Before connecting any other cable, connect the ground cable of the device. Do not disconnect the ground cable until you have disconnected all the other cables.
- Ensure that the three-phase power socket is grounded properly. The neutral line and the live line cannot be connected inversely.
- Do not scratch or abrade the shell of the device. The shed painting may lead to skin allergy or malfunction of the device. If the shed painting material drops into the host, a short circuit may occur.

Cleaning Requirements

- Before cleaning the device, stop using it, disconnect the power supply, and unplug all the cables connected to the device, such as the power cable, telephone cable, and RF cable.
- Do not clean the device shell with any cleaning solution or cleanser spray. Use a piece of soft cloth to clean the device shell.

Battery Usage Requirements of the Remote Control

- Use only the recommended battery. Pay attention to the polarity of the batteries while installing them.
- If a battery does not fit in the device, do not apply force. Otherwise, the battery may leak or explode.
- To reduce the risk of explosion, do not use batteries of different types together. For example, do not use an alkaline battery and a Mn-Zn battery together. It is recommended that you use batteries provided or recommended by the manufacturer.
- Do not use a new battery with an old battery. When you replace batteries, replace all of them at the same time.
- If you are not going to use the device for a long time, remove all the batteries.
- If any battery leaks, emits smoke, or emits abnormal smell, stop using it immediately.
- If the battery fluid comes in contact with your skin or clothes, rinse with water immediately and seek medical assistance.
- If the battery fluid goes into your eyes, do not rub your eyes. Rinse your eyes with water immediately and seek medical assistance.

LCD Usage Requirements

- Do not expose the LCD to direct sunlight.
- Do not press, scratch, or beat the LCD, or place heavy objects on top of it.
- Do not watch the LCD screen for a long time. This may harm your eyes or blur your vision.

LCD Cleaning Requirements

- According to the instructions in the attached manual, use a piece of soft cloth to remove dust from the surface of the LCD.
- Do not clean the LCD with volatile solvent, such as alcohol, benzene, or a dilution agent. Do not contact the LCD with a rubber or plastic material for a long time. This will deteriorate the surface gloss of the LCD.

Wireless Product Usage Requirements

- Keep the wireless device away from magnetic storage devices, such as a magnetic card or a floppy disk to prevent loss of the stored information.
- Stop using the wireless device and disconnect it from the power supply in places where using of wireless devices is prohibited or using of a wireless device may lead to interference or danger.
- Unplug the wireless device from the terminal and turn off the terminal close to a high-precision controlled electronic device, such as an audiphone, a pacemaker, fire alarm, or an automatic gate. Otherwise, this will lead to malfunction of the electronic device.
- The user who uses an electronic assistant medical-treatment device needs to confirm with the service center regarding the effects of the radio wave on this device.
- Do not take the wireless device to the operation theater, Intensive Care Unit (ICU), or the Coronary Care Unit (CCU).
- When using the device, ensure that the antenna of the device is at least 20 cm away from all parts of your body.
- In the area with inflammable or explosive materials, turn off your wireless device and follow the relevant instructions given on the label to prevent an explosion or fire.
- Use your wireless device and its accessories in a clean and dust-free environment. Ensure that the wireless device does not come in contact with flame or a lit cigarette.
- Ensure that the wireless device and its accessories are dry.
- Do not drop, throw, or bend your wireless device.
- Do not place the wireless device and its accessories in areas with extreme temperatures.

Reduction of Hazardous Substances

This device is compliant with the EU Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation (Regulation No 1907/2006/EC of the European Parliament and of the Council) and the EU Restriction of Hazardous Substances (RoHS) Directive (Directive 2002/95/EC of the European Parliament and of the Council). For more information about the REACH compliance of the device, visit the website www.huaweidevice.com/certification. You are recommended to visit the website regularly for up-to-date information.

Statement on a Class A Product

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Regulatory Compliance

TE30 complies with the following European directives and regulations.

- 1999/5/EC (R&TTE)
- 2002/95/EC & 2011/65/EU (RoHS)
- EC NO. 1907/2006 (REACH)
- 2002/96/EC (WEEE)

TE30 complies with Directive 2002/95/EC, 2011/65/EU and other similar regulations from the countries outside the European Union, on the RoHS in electrical and electronic equipment. The device does not contain lead, mercury, cadmium, and hexavalent chromium and brominated flame retardants (Polybrominated Biphenyls (PBB) or Polybrominated Diphenyl Ethers (PBDE)) except for those exempted applications allowed by RoHS directive for technical reasons.

TE30 complies with Regulation EC NO. 1907/2006 (REACH) and other similar regulations from the countries outside the European Union. Huawei will notify to the European Chemical Agency (ECHA) or the customer when necessary and regulation requires.

TE30 complies with Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). Huawei is responsible for recycling its end-of-life devices, and please contact Huawei local service center when recycling is required. Huawei strictly complies with the EU Waste Electrical and Electronic Equipment Directive (WEEE Directive) and electronic waste management regulations enacted by different countries worldwide. In addition, Huawei has established a system for recycling and reuse of electronic wastes, and it can provide service of dismantling and recycling for WEEE. By Huawei recycling system, the waste can be handled environmentally and the resource can be recycled and reused fully, which is also Huawei WEEE stratagem in the word. Most of the materials in TE30 are recyclable, and our packaging is designed to be recycled and should be handled in accordance with your local recycling policies.

In accordance with Article 11(2) in Directive 2002/96/EC (WEEE), TE30 were marked with the following symbol: a cross-out wheeled waste bin with a bar beneath as below:
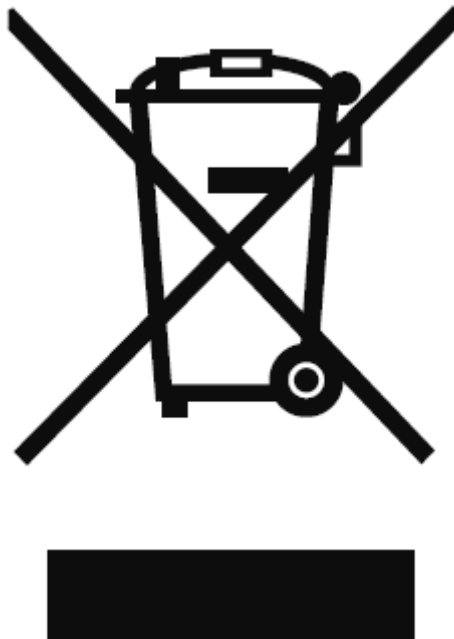
FCC Part 15

TE30 complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device does not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

If this device is modified without authorization from Huawei, the device may no longer comply with FCC requirements for Class B digital devices. In that a case, your right to use the device may be limited by FCC regulations. Moreover, you may be required to correct any interference to radio or television communications at your own expense.

This device has been tested and found to comply 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 device generates, uses and radiates radio frequency energy. If it is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user may take one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Reinforce the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for assistance.

WARNING

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

CAUTION

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

B Technical Specifications

To better use your TE30, knowing technical specifications of the TE30 is important.

Table B-1 lists the technical specifications of the TE30.

Table B-1 Technical specifications

Category	Item	Specifications
Standards compliance	Multimedia frame protocol	ITU-T H.323 and IETF SIP
	Video standard	H.264 SVC, H.264 HP, H.264 BP, H.263, and H.263+
	Audio standard	G.711, G.722, G.728, G.722.1*, G.722.1C*, AAC-LD, HWA-LD, G.711A, and G.711U Mono or stereo mode
	Dual-stream standard	ITU-T H.239 and SIP
	Network standard	TCP/IP, FTP, FTPS, DHCP, SNMP, Telnet, SSH, HTTP, HTTPS, PPPoE, RTP, RTCP, and SNTP
	Communication standard	H.221, H.225, H.230, H.231, H.233, H.234, H.235, H.241, H.242, H.243, H.245, H.281, H.283, H.350, H.460, and T.140
	Protocol for signaling and media stream encryption	H.235
Conference bandwidth	IP	64 kbit/s to 4 Mbit/s
Video	Input	VGA and Built-in Camera
	Output	VGA/YPrPb and HDMI

Category	Item	Specifications
	Video resolution	1080p30 with a minimum bandwidth of 512 kbit/s (Optional) 720p60 with a minimum bandwidth of 512 kbit/s (Optional) 720p30 with a minimum bandwidth of 384 kbit/s 4SIF/4CIF with a minimum bandwidth of 128 kbit/s - SIF/CIF with a minimum bandwidth of 64 kbit/s - SQSIF/SQCIF/QSIF/QCIF with a minimum bandwidth of 64 kbit/s
	Presentation resolution	- Input: 1920 x 1200, 1080p (1920 x 1080), 1600 x 1200, 1680 x 1050, 1600 x 900, XGA+ (1400 x 1050), 1440 x 900, WXGA (1366 x 768), 1360 x 768, SXGA (1280 x 1024), 1280 x 960, WXGA (1280 x 800), 1280 x 600, WXGA (1280 x 768), 720p (1280 x 720), 1152 x 864, XGA (1024 x 768), SVGA (800 x 600), and VGA(640 x 480) - Output: 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768, 800 x 600 - Coding/Decoding resolution: 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768, 800 x 600
	Other video features	VideoIntensifier, ViewProcessing, and Super Error concealment
Audio	Input	Microphone array and 3.5 mm LINE IN port
	Output	HDMI and 3.5 mm LINE

Category	Item	Specifications
		OUT port
	Audio processing	Acoustic echo cancellation (AEC), acoustic noise suppression (ANS), automatic gain control (AGC), VoiceClear, and AudioEnhancer
MIC/TV/LAN/POWER port	Functions as an HDMI, Ethernet, microphone, or power port using the integrated cable.	
USB port	USB	USB2.0
Power and power supply	Operating voltage and frequency	100-240 V AC, 50-60 Hz; 12 V DC
	Power consumption	Maximum: 60 W
Physical specifications	Codec dimensions (L×W×H)	157 mm x 235 mm x 167 mm
	Package dimensions (L×W×H)	232mm x 402mm x 237mm
	Weight	2.1 kg
	Package Weight	3.3 kg
Infrared remote control port	Infrared signal reception	NEC
Built-in camera	Imaging component	2-megapixel and 1/3 type CMOS imaging chip
	Resolution	1080p60 (1920 x 1080 pixels) and 720p (1280 x 720 pixels)
	Lens	Zoom: 12x optical Focal length: f = 3.9-46.8 Aperture: F1.8 to F2.8 Maximum horizontal angle: 72 ° Panning angle: ±100 °; tilting angle: ±30 ° Camera presets: 30 for the local camera and 16 for a remote camera Automatic white balance (AWB), automatic exposure (AE), and autofocus (AF) Three picture modes: standard, vivid, and natural

Category	Item	Specifications
	Exposure mode	Automatic and manual
	White balance	Automatic and manual

📖 NOTE

The dimensions may vary according to the actual product. The dimensions provided in the preceding table is for your reference only.

C Videoconferencing Room Layout

When using the TE30, pay attention to your sitting posture to avoid problems associated with the spinal cord. Do not stare at the display screen for a long time. This may harm your eyes or blur your vision.

Layout Precautions

- Ensure that there are no large or moving objects behind you. Otherwise, the video cannot be viewed clearly.
- Do not use striped patterns as the background.
- Do not hold a conference in a room that has echo problems.
- Do not place the TE30 near a sound source.

Lighting Precautions

To ensure video quality, do not turn the lens towards bright light.

D Default Settings

To better use your TE30, get to know the default values of common user names and passwords.

Table D-1 lists the default user name and passwords of the TE30.

Table D-1 Default user names and passwords

Item	Default Setting
Administrator password for the remote controlled UI	By default, no password is set.
Administrator user name and password for the web interface	The default values are both **admin**.
Upgrade password	By default, no password is set.
User name and password for Telnet login to the TE30	- Debug user: The default user name and password are both **debug**. - Administrator user: The default user name and password are both **admin**. - Test user: The default user name and password are **test** and **testviewpoint** respectively. - Common user: The default user name and password are both **user**. - Touch panel user: The default user name is **apiuser**, and password is empty.
User name and password for connecting your TE30 to a web-based diagnostics tools	The user name and password are the same as the user name and password of the web interface administrator. They are **admin** by default.
Default IP address after the TE30 is restored to its default settings	192.168.1.1

E Terminology

Numerics

1080i
1080i is the shorthand name for a format of high-definition video modes. 1080 denotes the number of horizontal scan lines - also known as vertical resolution - and the letter i stands for interlaced. In the alternate format of high-definition video mode, known as 1080p, the p would stand for progressive scan. 1080i is generally used in place of 1440x1080, at a frame rate of 29.97 (30000/1001), while 1080p is usually used in place of 1920x1080 (full HD), at a frame rate of 23.976 fps (24000/1001).

1080p
1080p is the shorthand name for a category of HDTV video modes. The number 1080 represents 1,080 lines of vertical resolution (1,080 horizontal scan lines), while the letter p stands for progressive scan (meaning the image is not interlaced). 1080p can be referred to as full HD or full high definition although 1080i is also "Full HD" (1920x1080 pixels). The term usually assumes a widescreen aspect ratio of 16:9, implying a horizontal resolution of 1920 pixels. This creates a frame resolution of 1920×1080, or 2,073,600 pixels in total. The frame rate in hertz can be either implied by the context or specified after the letter p (or i), such as 1080p30, meaning 30 Hz.

2 panes
Users see two sites on one monitor in two panes. The two panes are of the same size. Each pane is about 1/4 of the screen. Use 2-pane as an adjective.

2CIF
2CIF defines a video with a resolution of 352×576 pixels and using progressive scanning.

2SIF
2SIF defines a video with a resolution of 352×480 pixels and using progressive scanning.

3 panes
Users see three sites on one monitor in three panes. Each pane is about 1/3 of the screen. Use 3-pane as an adjective.

4CIF
4CIF defines a video resolution of 704×576 pixels.

4SIF
4SIF defines a video with a resolution of 704×480 pixels and using progressive scanning.

720p
720p is the shorthand name for a category of HDTV video modes. The number 720 stands for the 720 horizontal scan lines of display

resolution (also known as 720 pixels of vertical resolution), while the letter p stands for progressive scan or non-interlaced. When broadcast at 60 frames per second, 720p features the highest temporal (motion) resolution possible under the ATSC standard. Progressive scanning reduces the need to prevent flicker by filtering out fine details, so sharpness is much closer to 1080i than the number of scan lines would suggest.

B

broadcast (site)	All sites, except for the site being broadcast, view the site that is broadcast. On the Broadcast Site screen, users can choose between Broadcast Single and Broadcast in Turn.
broadcast single (site)	Broadcast one specified site.
built-in MCU	An built-in unit of an endpoint, using the built-in MCU, the endpoint can hold a multipoint conference that supports multiple functions, such as site access, video exchange, audio mixing, data processing, and signaling interaction.

C

call absent (sites)	Place calls to all the sites that are on the site list but are absent from the conference.
call site	Place a call to a site to add the site to the conference.
cascading	Multiple MCUs are connected in series at different layers to allow the number of participants to expand beyond what a single MCU can support. In cascading mode, an MCU in an upper layer can control an MCU in a lower layer.
camera preset	Users can control a camera by zooming, panning, and tilting the camera or changing the focus. Then, users can store this camera position and assign a number to this position. This preset position is a camera preset. During a conference, users can move the camera to a camera preset by selecting the relevant number.
CIF	CIF (Common Intermediate Format), also known as FCIF (Full Common Intermediate Format), is a format used to standardize the horizontal and vertical resolutions in pixels of YCbCr sequences in video signals, commonly used in video teleconferencing systems. It was first proposed in the H.261 standard.
continuous presence	A feature in multi-point conferencing that allows the video endpoint to see images from multiple video endpoints at the same time. All parties remain continuously visible or 'present' for the duration of the call and the user can have control over the screen layout. Continuous presence is better suited for team collaboration since it allows participants to see the reactions (body language) of all participants, not just the speaker.

D

delete site	Remove a site from the site list.
dual stream	During a conference, two channels of video streams can be sent or received simultaneously. For example, one channel is used for transmitting video (such as video captured by a camera) and the other channel is used for transmitting presentation (such as a computer desktop). The two channels of videos can be displayed on two displays.

E

end conference	End a conference. In this case, all sites leave the conference.

F

full-duplex	A full-duplex, or sometimes double-duplex system, allows communication in both directions, and, unlike half-duplex, allows this to happen simultaneously. Land-line telephone networks are full-duplex, since they allow both callers to speak and be heard at the same time. A good analogy for a full-duplex system would be a two-lane road with one lane for each direction.

G

G.711	G.711, also known as Pulse Code Modulation (PCM), is a very commonly used waveform codec. G.711 uses a sampling rate of 8,000 samples per second, with the tolerance on that rate 50 parts per million (ppm). Non-uniform quantization (logarithmic) with 8 bits is used to represent each sample, resulting in a 64 kbit/s bit rate. There are two slightly different versions; μ-law, which is used primarily in North America, and A-law, which is in use in most other countries outside North America.
G.722	G.722 is a ITU-T standard 7 kHz wideband speech codec operating at 48, 56 and 64 kbit/s. It was approved by ITU-T in November 1988. Technology of the codec is based on sub-band ADPCM (SB-ADPCM).
G.728	G.728 is an ITU-T standard for speech coding operating at 16 kbit/s. It is officially described as Coding of speech at 16 kbit/s using low-delay code excited linear prediction.
give floor	After the chair site gives floor to a site, the other sites view and hear the site. All the sites, except the chair site and the site that is given the floor, are muted.

H

H.239	H.239 is an ITU-T recommendation from the H.32x Multimedia Communications' macrofamily of standards for multimedia communications over various networks. The H.239 recommendation is titled "Role management and additional media channels for

H.3xx-series terminals". Practical importance of this recommendation is its setting forth a way to have multiple video channels (for example, one for conferencing, another for presentation) within a single session (call).

H.261	H.261 is a 1990 ITU-T video coding standard originally designed for transmission over ISDN lines on which data rates are multiples of 64 kbit/s. It is one member of the H.26x family of video coding standards in the domain of the ITU-T Video Coding Experts Group (VCEG). The coding algorithm was designed to be able to operate at video bit rates between 40 kbit/s and 2 Mbit/s. The standard supports two video frame sizes: CIF (352x288 luma with 176x144 chroma) and QCIF (176x144 with 88x72 chroma) using a 4:2:0 sampling scheme. It also has a backward-compatible trick for sending still picture graphics with 704x576 luma resolution and 352x288 chroma resolution (which was added in a later revision in 1993).
H.263	H.263 is a video codec standard originally designed as a low-bitrate compressed format for videoconferencing. It was developed by the ITU-T Video Coding Experts Group (VCEG) in a project ending in 1995/1996 as one member of the H.26x family of video coding standards in the domain of the ITU-T. H.263v2 (H.263+) added support for flexible customized picture formats and custom picture clock frequencies. Previously the only picture formats supported in H.263 had been Sub-QCIF, QCIF, CIF, 4CIF, and 16CIF, and the only picture clock frequency had been 30000/1001 (approximately 29.97) clock ticks per second.
H.264	H.264/AVC/MPEG-4 Part 10 (Advanced Video Coding) is a standard for video compression. The final drafting work on the first version of the standard was completed in May 2003. H.264/AVC is the latest block-oriented motion-compensation-based codec standard developed by the ITU-T Video Coding Experts Group (VCEG) together with the ISO/IEC Moving Picture Experts Group (MPEG), and it was the product of a partnership effort known as the Joint Video Team (JVT). The ITU-T H.264 standard and the ISO/IEC MPEG-4 AVC standard (formally, ISO/IEC 14496-10 - MPEG-4 Part 10, Advanced Video Coding) are jointly maintained so that they have identical technical content. H.264 is used in such applications as Blu-ray Disc, videos from YouTube and the iTunes Store, DVB broadcast, direct-broadcast satellite television service, cable television services, and real-time videoconferencing.
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.
half-duplex	A transmitting mode in which a half-duplex system provides for communication in both directions, but only one direction at a time (not simultaneously). Typically, once a party begins receiving a signal, it must wait for the transmitter to stop transmitting, before replying.
hang up (site)	Hang up a remote site and remove the site from the conference.

HD	Refers to a video system of higher resolution than standard-definition (SD) video, most commonly at display resolutions of 1280×720 (720p) or 1920×1080 (1080i or 1080p, full HD). High definition (HD) refers to an the increase in display or visual resolution of television formats (HDTV), high definition video (used in HDTV broadcasting, digital film and computer HD video film formats), high definition multimedia interface (HDMI), an all-digital audio and video interface capable of transmitting uncompressed streams and other formats for recording and transmitting visual and audio communications.
hide video	During a conference, a site can hide its video to prevent other sites from viewing the video of the site.

I

intelligent mode	A video transforming mode, in this mode, cut the video first and then stretch the video. Ensure that the aspect ratio of the video remains unchanged. For example, to change wide-screen video to narrow-screen video, cut the left and right sides of the wide-screen video, and then stretch the video to full screen.

L

lock conference (presentation)	After the chair site locks a conference and if site A is sharing presentation, the other sites in the conference cannot share presentation until site A stops sharing presentation.
lock site (presentation)	After the chair site locks the presentation, only the site that is currently sharing the presentation can continue sharing presentation. Other sites cannot share presentation.

P

presentation	During a conference, the local site can share the content input by a computer with remote sites, such as an excel file, a diagram, or a presentation.

R

release chair	Pass the chair control to another site.
request chair	Request chair rights and become the chair site.
request floor	Request to speak. During a conference, users can request the floor from the chair site.
revoke chair	After the chair rights are revoked, there is no chair site in the conference. If the site that revokes the chair rights wants to become the chair site, the site needs to request chair rights.
revoke presentation	After the chair site revokes the presentation token, the relevant site stop sharing the presentation.

S

S-Video	Separate Video[1], more commonly known as S-Video, also called Y/C, and sometimes incorrectly [2] referred to as Super Video[3], is an analog video signal that carries video data as two separate signals: luma (luminance) and chroma (color). This differs from composite video, which carries picture information as a single lower-quality signal, and component video, which carries picture information as three separate higher-quality signals. S-Video carries standard definition video (typically at 480i or 576i resolution), but does not carry audio on the same cable.
SIF	Source Input Format (SIF) defined in MPEG-1, is a video format that was developed to allow the storage and transmission of digital video. 625/50 SIF format (PAL/SECAM) has a resolution of (360 or) 352 x 288 active pixels and a refresh rate of 25 frames per second. 525/59.94 SIF Format (NTSC) has a resolution of (360 or) 352 x 240 active pixels and a refresh rate of 29.97 frames per second.
site group	A group of conference sites. If certain sites attend a conference frequently, users can define these sites as a group to facilitate site management.
start presentation	Start sharing local-site presentation with remote sites.
stop broadcasting (site)	Stop broadcasting a site. The other sites stop viewing the site.
stop presentation	Stop sharing local-site presentation with remote sites.
SVGA	Super Video Graphics Array or Ultra Video Graphics Array, almost always abbreviated to Super VGA, Ultra VGA or just SVGA or UVGA is a broad term that covers a wide range of computer display standards. Originally, it was an extension to the VGA standard first released by IBM in 1987. Unlike VGA—a purely IBM-defined standard—Super VGA was defined by the Video Electronics Standards Association (VESA), an open consortium set up to promote interoperability and define standards. When used as a resolution specification, in contrast to VGA or XGA for example, the term SVGA normally refers to a resolution of 800×600 pixels.

V

video	The video is generally output from the HD OUT 1 interface of an HD video terminal and is captured by a camera.
view single (site)	View any site.
view site	View any site. On the View Site screen, users can choose between View Single and View in Turn.
voice activation	This function is used for discussion or arguing scenarios. The site with the loudest voice is broadcast.

X

XGA	XGA, the Extended Graphics Array, is an IBM display standard

introduced in 1990. Today, it is the most common appellation of the 1024$\times$768 pixels display resolution, but the official definition is broader than that.

F Acronyms and Abbreviations

Numerics

3G   Third Generation Mobile Telephony

4CIF   4 x Common Intermediate Format

A

AAC-LD   Advanced Audio Coding-Low Delay

ADSL   Asymmetric Digital Subscriber Line

AES   Advanced Encryption Standard

B

BNC   Bayonet Neill-Concelman connector

BRI   Basic Rate Interface

C

CAS   Channel Associated Signaling

CCD   Charge Coupled Device

CCS   Common Channel Signaling

CDMA   Code Division Multiple Access

CIF   Common Intermediate Format

CRC   Cyclic Redundancy Check

CVBS   Composite Video Base Signal

D

DES   Data Encryption Standard

DNS	Domain Name Server
DSCP	Differentiated Services Code Point
DVI	Digital Visual Interface
F	
FTP	File Transfer Protocol
G	
GK	Gatekeeper
GMT	Greenwich Mean Time
H	
HD	High Definition
HDMI	High Definition Multimedia Interface
I	
IMS	IP multimedia subsystem
L	
LDAP	Lightweight Directory Access Protocol
M	
MCU	Multipoint Control Unit
N	
NAT	Network Address Translation
NTSC	National Television Standards Committee
P	
PAL	Phase Alternating Line
PPPoE	PPP Over Ethernet
PRI	Primary Rate Interface
PsF	Progressive segmented Frame

PSTN	Public Switched Telephone Network	
PTZ	Pan/Tilt/Zoom	
Q		
QoS	Quality of Service	
R		
RM	ResourceManager	
S		
SDI	Serial Digital Interface	
SIP	Session Initiation Protocol	
SMB	SubMiniature version B connector	
SXGA	Super Extended Graphics Array	
U		
USB	Universal Serial Bus	
V		
VGA	Video Graphics Array	
W		
WCDMA	Wideband Code Division Multiple Access	
Wi-Fi	Wireless Fidelity	
WOL	Wake on LAN	
X		
XGA	Extended Graphics Array	
Y		
YPrPb		