HUAWEI TX50

HD Videoconferencing Endpoint

The Huawei TX50 brings state-of-the-art H.265 technology to HD video conferencing. The TX50 endpoint's 4K Ultra-HD video and AAC-LD audio deliver face-to-face communication so lifelike, you will think you are all in the same room. Multi-view images are easily transmitted for a panoramic presentation. Built-in Wi-Fi reduces the need for cables and simplifies deployment, making the TX50 ideal for large and medium-sized conference rooms.

H.265 + VME technologies provide HD experience at low bandwidth

The TX50 supports resolutions up to 4K 30fps to provide a full-HD experience.

A combination of H.265 and Huawei's Video Motion Enhancement (VME 2.0) reduces bandwidth requirements by 50%.

Intelligent face detection, frame rate doubling, and VME technologies improve clarity and smoothness.

The TX50 offers Hi-Fi audio using AAC-LD, Acoustic Echo Cancellation (AEC), and Acoustic Noise Suppression (ANS).

Feature-rich, intelligent, and easy to use

TX50 voice dialing recognizes Chinese and English. You can call or join a conference simply by saying the conference or site name.

Images from multiple cameras are transmitted in one compressed stream to minimize bandwidth and enable far-end sites to view live images from different angles.

Built-in Wi-Fi enables the TX50 to connect to networks and microphones without cables.

Multiple sites can share full HD content simultaneously, and any site can view any content as needed.

Setup data is auto-configured from a USB flash drive, providing secure and convenient plug-and-play.

A built-in VGA bypass allows local and remote conferences to share one VGA interface, keeping local data sharing active without plugging and unplugging cables even after a videoconferencing endpoint powers off.

User-friendly interface with remote control

Handheld IR&RF remote control simplifies use.

Optional wireless touch panel provides visualized remote control.

LCD display shows real-time local site information (IP address, conference number).

Innovative 3D GUI offers convenient menu access.

Outstanding network adaptability and security

Support for H.264 Scalable Video Coding (SVC) allows adaptation to different bandwidths, device capabilities, and network requirements.

Patented Super Error concealment (SEC) ensures high-quality video even with packet loss at 20%.

Standard H.460 and proprietary Super Network Passport (SNP) ensure secure firewall traversal.

The TX50 provides H.235 media stream and signaling encryption for SRTP, TLS, and HTTPS.

Thorough compatibility

The TX50 interoperates with standard endpoints and infrastructures, including seamless integration with IP Multimedia Subsystem (IMS).

Use of SiteCall makes multipoint conference setup as easy as making a phone call.

Third-party APIs simplify system integration and customization.

HUAWEI TX50 Specifications

Unit Includes

HD codec, remote control, cables, and power supply

Standards & Protocols

Multimedia framework protocol: ITU-T H.323, IETF SIP

Video standards & protocols: H.263, H.263+, H.264 BP, H.264 HP, H.264 SVC, RTV, H.265

Audio standards & protocols: G.711, G.722, G.722.1*, G.722.1C*, G.728, G.719, G.729A, AAC-LD, HWA-LD

Dual stream: ITU-T H.239, BFCP

Other standards: H.225, H.235, H.241, H.243, H.245, H.350, H.460, T.140, DTMF, H.281, H.224

Network standards & protocols: TCP/IP, FTP, FTPS, DHCP, SNMP, Telnet, SSH, HTTP, HTTPS, PPPoE, RTP, RTCP, SNTP, 802.1X, 802.1P, 802.1Q

Video Specifications and Features

Live video resolution:
H265:
- 4K 30fps from 2 Mbps (optional)
- 1080p 60 fps from 768 Kbps (optional)
- 1080p 30 fps from 384 Kbps
- 720p 30 fps from 288 Kbps

H264 HP:
- 1080p 60 fps from 1 Mbps (optional)
- 1080p 30 fps from 512 Kbps
- 720p 30 fps from 384 Kbps

Content video resolution:
- Input: VGA (640 x 480) @ 60/72/75/85 fps, SVGA (800 x 600) @ 56/60/72/75/85 fps, XGA (1,024 x 768) @ 60/70/75/85 fps, 1,152 x 864 @ 60/75/85 fps, 1,280 x 600 @ 60 fps, WXGA (1,280 x 768) @ 60/75/85 fps, WXGA (1,280 x 800) @ 60/75/85 fps, 1,280 x 960 @ 60/75/85 fps, SXGA (1,280 x 1,024) @ 60/75/85 fps, 1,360 x 768 @ 60 fps, 1,366 x 768 @ 60 fps, 1,440 x 900 @ 60 fps, XGA+ (1,400 x 1,050) @ 60 fps, 720p @ 60/75/85 fps, 1080p @ 60 fps, 1,600 x 900 @ 60 fps, 1,600 x 1,200 @ 60 fps, 1,680 x 1,050 @ 60 fps, 1,920 x 1,200 @ 60 fps
- Encoding and decoding resolution: 800 x 600, 1,024 x 768, 1,280 x 1,024, 1,280 x 720, 1,920 x 1,080, 1,600 x 1,200, 1,920 x 1,200
- Output: 800 x 600, 1,024 x 768, 1,280 x 1,024, 1,280 x 720, 1,920 x 1,080, 1,600 x 1,200, 1,920 x 1,200

Dual stream:
Support presentation mode only
- H.264: dual 1080p 60 fps (optional), dual 1080p 30 fps
- H.265: 4K 30 fps + 1080p 5 fps (optional) , dual 1080p 60 fps (optional) , dual 1080p 30 fps
Combined mode(Point-to-point): H.265 4K 30 fps + H.264 1080p 60 fps , H.264 1080p 60 fps + H.265 4K 30 fps

Other video features:
- Intelligent face detection
- Picture-in-picture
- Picture-outside-picture
- Video Motion Enhancement (VME)
- Video intensifier
- View processing

Audio Features

AAC-LD, HWA-LD
Acoustic Echo Cancellation (AEC), Automatic Noise Suppression(ANS), Automatic Gain Control (AGC),
VoiceClear, Audio Enhancer
Lip synchronization

Stability and Security

Network:
- Dual-stack IPv6 and IPv4
- IP Precedence, Diffserv
- Uniform resource identifier dialing
- Super Error concealment (SEC), Intelligent Rate Control (IRC)
- Automatic Repeat reQuest (ARQ), Forward Error Correction (FEC), PLC

Security:
- H.235 signaling and media stream encryption
- AES media stream encryption, TLS and SRTP
- SSH/HTTPS, dual-stream encryption
- Conference access password, conference control password, administrator's password

Firewall traversal: H.460, static NAT, SNP

Bandwidth

IP: 64 Kbps to 8 Mbps

Interfaces

Audio Inputs: 2 x XLR, 2 x RCA, 1 x HD-AI serial MIC interface; 1 x HDMI , 1 x Display Port

Audio outputs: 4 x RCA, 3 x HDMI , 1 x DVI

Video inputs:
- 1 x HD-VI/DVI(supports 4K 30 fps), 1 x CVBS,
- 1 x DVI-I (HDMI/VGA/YPbPr), 1 x HDMI (HDMI supports audio input, support 4K 30 fps), 1 x 3G-SDI

Video outputs:
- 3 x HDMI (HDMI supports audio input, port1 and port3 support 4K 30 fps), 1 x DVI-I (HDMI/VGA/YPbPr),
- 1 x 3G-SDI, 1 x CVBS/S-Video (DVI-I converted to CVBS/S-Video)

*: G.722.1/G.722.1C, licensed from Polycom®

USB Interfaces: 2 x USB 2.0 host

Network Interfaces:
- IP: 10/100/1000 Base-T, 2 x RJ45
- Wireless: Wi-Fi

Serial ports: 2 x RS232 COM ports

Microphone cascading: 2 x VPM220 or 2 x VPM220W

Application Features

Languages: Simplified Chinese, Traditional Chinese, English, Japanese, Russian , French, Spanish, Portuguese, German, Finnish, Polish, Hungarian, Italian, Norwegian, Arabic, Swedish, Romanian, Czech, Turkish, Greek, Thai, Dutch, Malay, and Indonesian

Special features:
- Voice dialing in English and Chinese
- USB auto data configuration
- VGA bypass
- Wi-Fi access
- Air content sharing
- Wireless MIC VPM220W access
- Multi-view: dual-view, triple-view
- Integration with IMS network
- Live dual stream, content lock
- Web-based conference management
- SiteCall
- Web-based image monitoring and HD picture snapshot
- 16:9 and 4:3 mixed display
- Picture-in-picture: 1/16 picture size, optional position
- Split output: bi-screen and tri-screen display
- LDAP/network address book
- API for integration

Digital caption:
- Caption banner, body text, and information bar
- Rolling display mode of a speech draft
- Modifiable front background color, caption size and transparency
- 64 optional colors
- Editable caption and auto zone adjustment
- Caption rolling mode setting
- Site name display and position shift
- Text input through remote control
- External character generator
- T.140 SMS function

Optional

- HD camera
- Omni-array microphone or wireless microphone
- 1080p 60 fps function module
- 4K 30 fps function module

Maintenance

Maintenance methods:
- Remote control: 3D effects & GUI animation, 1080p full screen
- Command line mode: Telnet/SSH
- Endpoint network management: SNMP
- Embedded Web server, GUI interface
- Wireless touch panel (optional)

Maintenance functions:
- Endpoint IP and number are displayed on the front panel
- Auto sleep, wake-up by remote control or remote module
- Local and remote loopback
- Event log record, query, and display, and export query results
- IP network test, default settings restoration
- Embedded loopback function: local and remote loopback
- Test signals: sound test and standard test stripes

Physical Characteristics

Dimensions:
- Codec dimensions: 442 mm x 310 mm x 58 mm
- Package dimensions: 580 mm x 450 mm x 215 mm
- Net weight: 6.1 kg
- Package weight: 9.9 kg

Electrical:
- Operating voltage: 100V to 240V AC
- Operating frequency: 50 Hz to 60 Hz
- Power consumption: 170W
- Embedded AC/DC power module

Environmental:
- Operating temperature: -5°C to 45°C
- Operating humidity: 10% to 95%
- Non-operating temperature: -40°C to 70°C
- Peripheral noise: < 46 dBA SPL
- Lowest luminance: 7 lux
- Recommended luminance: > 300 lux

Approval and Compliance:
- CCC, CE, RoHS, REACH, and WEEE