



## Description

itc HUB interactive intelligent flat panel focuses on small and medium-sized conference rooms to create a small conference center. The product integrates high-definition display, digital whiteboard, high-quality audio and other functions; equipped with Windows 10 IoT Enterprise Entry system, it meets the needs of conference presentation, writing, interaction, collaboration, sharing, video, data security, etc., covering the entire process of the meeting.

## Features

I. Product hardware/software functions:

- \*The 98-inch DLED LCD screen has a Full HD 4K system icon display and a simple business-style design. The whole body is made of all-aluminum alloy with an aurora purple color. The ultra-narrow bezel design has a screen-to-body ratio of up to 90%, an ultra-thin screen, hidden ports, and a simple and elegant shape.
- \*Built-in non-independent computer module, all conference functions are running in the computer module, the computer module uses Windows 10 IoT genuine activated operating system.
- \*The national secret SM2 and SM3 encryption algorithms are used to encrypt data files and keep them encrypted during transmission to ensure the security and reliability of data transmission and storage; it complies with national security standards and enhances the overall information security protection capabilities.
- \*It has 12 pogo pin magnetic interfaces and can be optionally equipped with a smart camera module (detachable 48MP HD camera and 8-array microphone). There is no need for separate wiring, and physical protection can be used to prevent the leakage of meeting information.
- \*Ultimate audio experience: The product adopts a 2.0-channel design with 2 sound chambers: 2×20W (mid-high) gap sound speakers; with 5 sound effects options (standard, conference, voice, music, cinema) to meet the needs of different scenarios.
- \*It has a Type-C full-function interface, which can realize screen projection, reverse control, and audio and video signal transmission functions.
- \*It has an HDMI loop-out interface and a DP input interface, and supports 4K 60Hz.
- \*It has 1 RS232, 2 IO, and 2 RELAY IoT central control interfaces, which are convenient for integration and management with other devices, realize intelligent environmental control, and improve the user experience and comfort.
- \*It has a built-in storage battery and supports abnormal power-off protection function. After an abnormal power-off, the internal battery is enabled to automatically save the meeting materials and meeting progress, and it can continue to be used after power-on.
- \*It has a high color gamut of 85% NTSC, and the image display is clear, colorful, and saturated, and the picture details are truly restored.
- \*It has a hardware-level blue light protection mechanism, with a blue light ratio of less than 25%, which can effectively filter and reduce the radiation of high-energy short-wave blue light, so as to achieve long-term viewing without fatigue and ensure the health of users' eyes.



- \*The display screen adopts high-precision touch technology, which can accurately identify touch objects with a diameter of 1.6 mm, ensuring a delicate operation experience.
  - \*The whole screen and the screen protection layer adopt zero-fit technology to effectively prevent light reflection.
  - \*The device is made of high-grade anti-glare (AG) tempered glass, which effectively suppresses ambient light interference and screen reflection, significantly reduces visual discomfort caused by glare, ensures viewing comfort, and provides a softer visual experience.
  - \*It supports multiple wake-up methods. In the off-screen state, the device can be awakened by keeping looking, lifting the pen to wake up, double-clicking the touch screen, and pressing the button. The gaze wake-up method can customize the gaze time, and the pen wake-up can quickly use the whiteboard and annotation functions.
  - \*Supports optional smart camera module to realize voice assistant auxiliary function, and supports operation of main functions through voice assistant, such as: starting meeting, ending meeting, turning off the screen, shutting down, etc.
  - \*It has a borderless document design. When the user opens the document, it automatically enters the document presentation mode. The document content will be displayed in full screen. During the document presentation, annotations, video playback, split-screen whiteboard, and picture materials can be inserted. There is no limit to the picture stacking to meet the needs of displaying more document content.
  - \*It has a pre-meeting welcome interface function, which can add background audio, video, and pictures, and can customize the welcome interface theme.
  - \*It has a quick meeting mode to meet temporary meetings, multi-person discussions, brainstorming and other activities.
  - \*It has quick voting and custom voting/scoring functions, and has voting and satisfaction evaluation templates; the voting methods are divided into scanning code voting and raising hands voting. Scanning code voting can choose anonymous voting and real-name voting, and voting/scoring can be customized.
  - \*It has a scan code sign-in function. You can sign and watch during the meeting. After scanning the code to sign in, the name of the sign-in person will be displayed in real time.
  - \*It has a conference screen recording function, which supports the selection of 2K and 4K resolutions. It supports multiple screen recording saving methods, which can be scanned and taken away or saved locally, in the meeting, or in a USB flash drive.
  - \*Supports multiple screen projection methods such as NFC touch transmission, wireless screen projection, wired screen projection, and one-click screen projection by screen projection device; supports mixed screen projection display of mobile phones and computers, and supports up to four screens on the same screen; the computer side supports reverse operation of the projection content.
  - \*Supports application screen projection, for example, specifying browser screen projection, specifying document screen projection; other application messages do not pop up, and other tasks can be processed during the screen projection process to protect privacy.
  - \*Supports mixed split screen, and can display whiteboard, dynamic video, audio, document, annotation and other pages at the same time during the meeting. It can display any split screen in full screen or compare different solutions, and supports 4 split screens.
  - \*Supports document presentation function. During the document presentation process, annotations and video playback can be made to meet the needs of more content document presentation.
  - \*Supports scanning QR code to upload multiple file formats during the meeting, including MP4, MP3, PDF, WORD, XLSX, text, JPG, PNG, etc., which can be directly viewed and annotated.
  - \*Support whiteboard writing; support inserting image materials into the whiteboard; support multi-point writing; support gesture erasing, sliding screen clearing, circle eraser, pixel eraser and other erasing methods; with infinite canvas, two-finger zoom function; support multiple whiteboard file saving formats, which can be saved in PNG, PDF, WORD, PPT.
  - \*The whiteboard supports OCR intelligent text recognition and graphic recognition functions, which can automatically convert the written fonts and patterns into standard text and graphics.
  - \*Support full-channel annotation function, you can choose a variety of annotation saving methods, you can scan the code to take away or save to local, conference, U disk.
  - \*Support PPT speech countdown mode.
  - \*It has the function of archiving files after the meeting. The sign-in, voting results, and conference recording audio and video can be saved locally or uploaded to the comprehensive management platform.
- II. Product comprehensive management platform functions:
- \*It has a smart conference management platform. The platform adopts B/S architecture and supports Windows, Linux, MacOS, Android, IOS and other operating systems to log in to the control software to meet different needs on site.
  - \*The comprehensive management platform has multiple account permissions for ordinary users and administrators; the platform has a background data dashboard function, which can view the number of conference rooms, conference room usage, equipment online and offline status and user account status, and can count the number of daily participants, daily meeting duration, daily number of meetings, daily active users, etc. on a monthly, weekly and daily basis, which is convenient for statistical analysis and unified management without the need to configure a cloud platform separately.
  - \*It has the function of creating meetings, and can reserve meeting rooms and meeting times in advance. After the reservation is successful, the device homepage will display the meeting list of the day in real time; the meeting list can view information such as the host and meeting time; it can set whether the meeting is encrypted and whether the data is allowed to be downloaded, and the historical meeting storage time can be set, which can be selected as 6 months, 12 months, or permanent.



\*Support web-based login to the management platform, which allows you to view unit meetings and historical meetings. Historical meetings display the meeting name, meeting booker, meeting number, meeting start time, and whether the video is recorded. You can view/export pre-meeting sign-in and voting results, and meeting recordings.

\*It has a meeting setting function, which allows you to set whether the meeting file is encrypted and enable file encryption. The meeting materials cannot be saved locally on the client and cannot be shared. The post-meeting materials cannot be viewed locally and can only be viewed and downloaded through the background.

III. Product video conferencing software functions:

\*Built-in video conferencing software, supports ITU-T H.323 communication protocol, conference rate supports 128Kbps~8Mbps; supports H.264 Baseline Profile, H264 High Profile video protocol.

\*Supports 640×480 30fps, 1280×720 30fps, 1920×1080 30fps, 2560×1440 30fps, 3840×2160 30fps, 4000×3000 25fps, 6000×8000 5fps HD resolution encoding and decoding.

\*Integrated address book and call record function modules.

\*Supports common functions such as switching templates and chairman control.

\*Supports joining the corresponding meeting without registration, just enter the meeting number, and can choose to join in the meeting interactive mode or live broadcast mode.

\*One-click convening of an immediate meeting can quickly create a virtual meeting on the MCU and automatically join the meeting. The venue can be invited to join the meeting. The meeting supports electronic whiteboard, file sharing, electronic voting, meeting sign-in and other functions.

\*Supports scheduled meetings. You can select members, set meeting passwords, chairman passwords, live broadcast passwords, meeting time, etc. After submission, the MCU automatically convenes the meeting according to the meeting time. The meeting supports electronic whiteboard, file sharing, electronic voting, meeting sign-in and other functions.

\*Supports switching from live broadcast mode to conference mode or from conference mode to live broadcast mode. The conference mode supports electronic whiteboard, file sharing, electronic voting, meeting sign-in and other functions.

\*The screen layout supports automatic split screen function, automatically selects the appropriate layout according to the number of terminals joining the meeting and automatically opens the screen; supports automatic fill function, selects a fixed screen layout, and the terminal automatically opens in an idle window after joining the meeting.

\*Supports data conference functions such as meeting sign-in, electronic whiteboard, electronic voting, file sharing, etc., to meet the application needs of scenarios such as remote meetings and training.

\*Supports multi-screen layout, single screen supports 25 channels of screen display at the same time.



### Specification

|                                           |                                                                                                                              |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Processor                                 | Intel i3 11th generation processor, maximum turbo frequency 4.10GHz                                                          |
| System version                            | Windows 10 IoT Enterprise Entry                                                                                              |
| Memory                                    | 8GB                                                                                                                          |
| Storage space                             | 128GB                                                                                                                        |
| Display type                              | LCD display                                                                                                                  |
| LCD panel                                 | IPS                                                                                                                          |
| Backlight mode                            | DLED                                                                                                                         |
| Display size                              | 98 inches ( 16 : 9 )                                                                                                         |
| Physical resolution                       | 3840 ( H ) ×2160 ( V )                                                                                                       |
| Color gamut NTSC                          | 85%                                                                                                                          |
| Color saturation                          | 1.07B(10bit)                                                                                                                 |
| Screen brightness                         | 350CD/m <sup>2</sup> ( min. ) 400CD/m <sup>2</sup> (typ.)                                                                    |
| Contrast ratio                            | 1200:1(typ.) 5000:1 ( max )                                                                                                  |
| Anti-blue light                           | Support                                                                                                                      |
| Anti-glare                                | Support                                                                                                                      |
| Display frame rate                        | 60Hz                                                                                                                         |
| Viewing angle                             | 178°(H/V)                                                                                                                    |
| Input interface                           | 1×LAN;1×TOUCH;1×HDMI-IN;1×DP-IN;1×VIDEO-IN ( USB-C+reverse control ) ;<br>1×LINE-IN; 1 ×MIC-IN;4×USB-A;1×RS232;2×IO;2×RELAY; |
| Output interface                          | 1×HDMI-OUT;1×LINE-OUT;                                                                                                       |
| Touch sensing technology                  | Infrared sensing recognition touch technology                                                                                |
| Touch output form                         | HID standard                                                                                                                 |
| Maximum number of input points            | 40 points                                                                                                                    |
| Response time                             | 8ms(typ.)                                                                                                                    |
| Writing method                            | Finger, stylus and other opaque objects                                                                                      |
| Writing height                            | 2.0mm                                                                                                                        |
| Touch accuracy                            | 90% of the touch area is ±1mm                                                                                                |
| Two-point recognition distance            | ≥10mm                                                                                                                        |
| Theoretical number of clicks              | Unlimited times                                                                                                              |
| Touch diameter                            | Single point ≥1.6mm, multi-point ≥2mm                                                                                        |
| Glass specifications                      | 3.2mm tempered glass                                                                                                         |
| Writing screen surface hardness           | 9H                                                                                                                           |
| Glass haze                                | 3%-8%                                                                                                                        |
| Visible light transmittance               | ≥88%                                                                                                                         |
| Optical Depth                             | 20mm                                                                                                                         |
| Color temperature (under signal source)   | Min. 8000K;Type 9500K;Max. 11500K                                                                                            |
| Interpolation resolution                  | 32768 × 32768                                                                                                                |
| Operating voltage                         | DC 5V±5%                                                                                                                     |
| Touch screen power                        | ≤2.5W                                                                                                                        |
| WiFi                                      | WiFi62.4GHz/5GHz                                                                                                             |
| Bluetooth                                 | Bluetooth 5.2                                                                                                                |
| Power supply                              | 100-240V~50/60HZ input                                                                                                       |
| Standard power consumption                | ≤460W                                                                                                                        |
| Standby power consumption                 | ≤0.5W                                                                                                                        |
| Audio channel                             | 2.0 channels                                                                                                                 |
| Maximum audio power                       | 2×20W @ 6Ω                                                                                                                   |
| Storage temperature                       | -10°C~+60°C                                                                                                                  |
| Storage humidity                          | 10%~80%RH, non-condensing                                                                                                    |
| Operating temperature                     | 0°C~+40°C                                                                                                                    |
| Operating humidity                        | 20%~80%RH, non-condensing                                                                                                    |
| Operating altitude                        | ≤5000m                                                                                                                       |
| Display size                              | 2158.85mm × 1214.4mm                                                                                                         |
| Screen size (length × thickness × height) | 2231.3mm × 103.5mm × 1302.8mm                                                                                                |



# Interactive Intelligent Flat Panel

## TV-X8198A

|                                                              |                               |
|--------------------------------------------------------------|-------------------------------|
| Complete machine size (length × thickness × height)          | 2231.3mm × 122.7mm × 1308.7mm |
| Wall-mounted installation size (length × thickness × height) | 2231.3mm × 141.4mm × 1308.7mm |
| Packaging size (length × thickness × height)                 | 2455mm × 310mm × 1485mm       |
| Thickness                                                    | 122.7mm                       |
| Net weight                                                   | 109.5kg                       |
| Gross weight                                                 | 135kg                         |
| Housing color                                                | Silver gray                   |
| Shell material                                               | Aluminum profile/sheet metal  |
| Wall mounting hole (VESA) 4-M8 screw hole                    | 800mmx400mm                   |