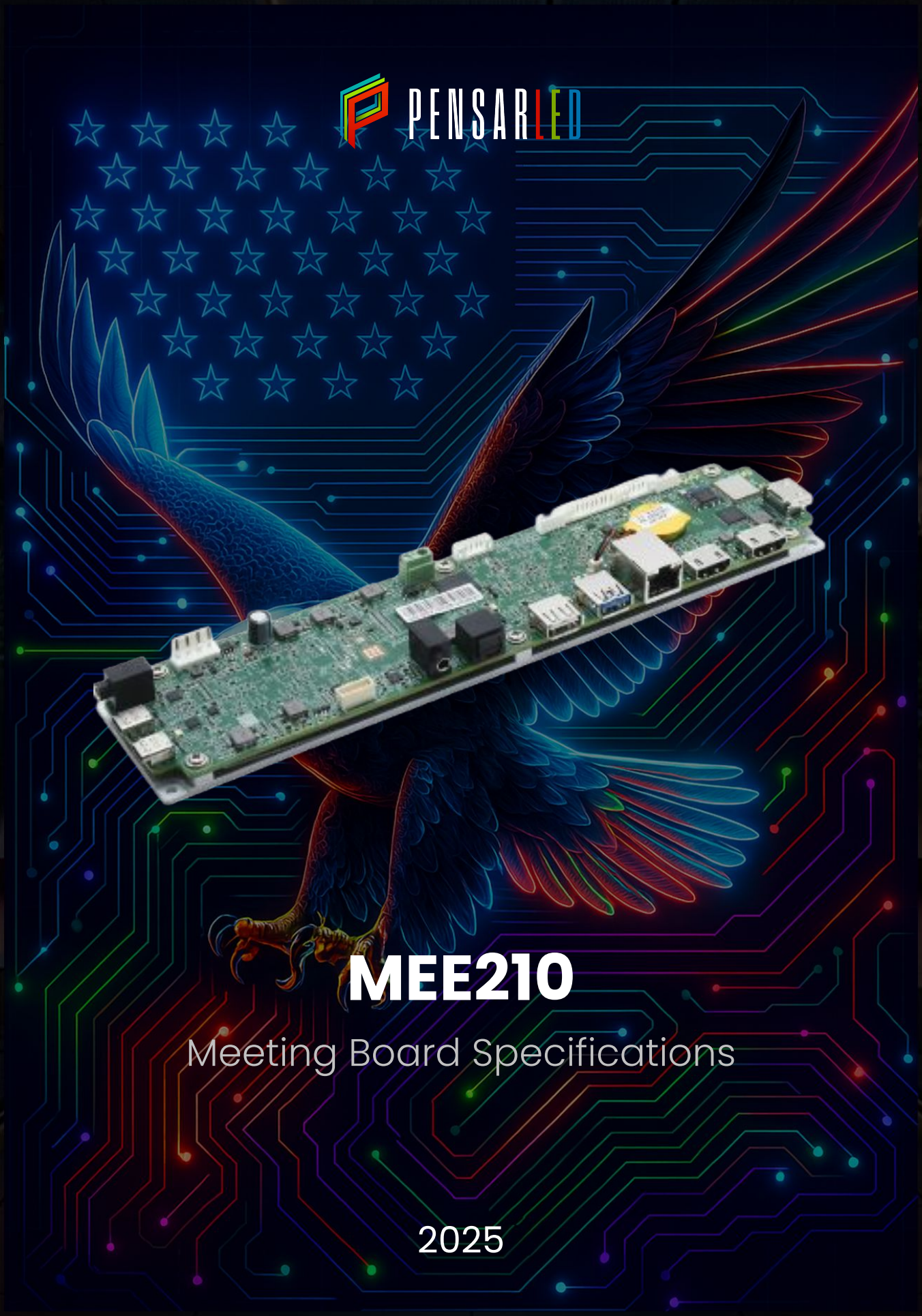
PENSARLED



MEE210

Meeting Board Specifications

2025

Introduction

The MEE210 is a meeting board specially designed by Pensar LED for the application of LED display in a meeting room. It supports wireless screen mirroring from Windows, macOS, iOS and Android terminals, and allows you to mirror up to 9 terminals (4 terminals in standard configuration) simultaneously to the LED display. For different meeting applications, it provides 4 modes to let the document presentation, video playback and remote meetings have the optimal display effect.

The MEE210 has a built-in desktop UI system based on Android 11, enabling powerful functions and smooth operations. A low-power mode is also integrated, which reduces the standby power consumption to less than 0.5W.

Thanks to its small size and modular design, the MEE210 can be easily integrated into the LED display. It can be mainly used in various LED display applications for business meetings in governments and companies in many industries, such as design, health care and education.

Certifications

SRRC

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact Pensar LED to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or Pensar LED has the right to claim compensation.

Features

Inputs & Outputs

- 2x HDMI 1.3 inputs (one for OPS computer connection)
- 6x USB 2.0 inputs for multimedia playback and function extension
- 1x type-C output to connect an Ethernet module

  An Ethernet module supports 6 Gigabit Ethernet outputs. The load capacity is up to 2.6 million pixels.
- 1x HDMI output
- 3x audio outputs
  - 1x SPDIF digital audio output
  - 2× 3.5-mm audio outputs
- Output image scaling
  - Width range of 104 to 2400 pixels
  - Height range of 104 to 1280 pixels
  - Max load capacity ≤ 2.6 million pixels

System Functions

- Android 11 based desktop UI system, supporting third-party apps
- Wireless screen mirroring from multiple platforms
  Enable wireless screen mirroring across various platforms, including Windows, macOS, iOS and Android.
- Working with terminal app to control wireless screen mirroring
  - Secondary mirror: The speaker can reversely control the LED display via the terminal.
  - Wireless notes: Take snapshots wirelessly via the terminal at any time to record the meeting details.
  - Wireless speech: The participants speak directly via the terminal microphone and the voice is transmitted wirelessly to the sound system of the LED display.
- Playback of local and online high-definition videos
  Support decoding of 4K UHD videos in the HEVC, H.265, H.264 and other industry-standard coding formats.
- Dual Wi-Fi modes
  Allow for Wi-Fi and wireless hotspot connections at the same time.
- Image quality enhancement
  The display effect can be significantly enhanced through three key factors: contrast, details, and color. This results in a more nuanced and vibrant image gradation, clearer and sharper edge details, as well as brighter and more vivid colors.
- Support the standard, soft, movie and conference scenario modes
- Eye comfort mode
- Screen drawing and commenting

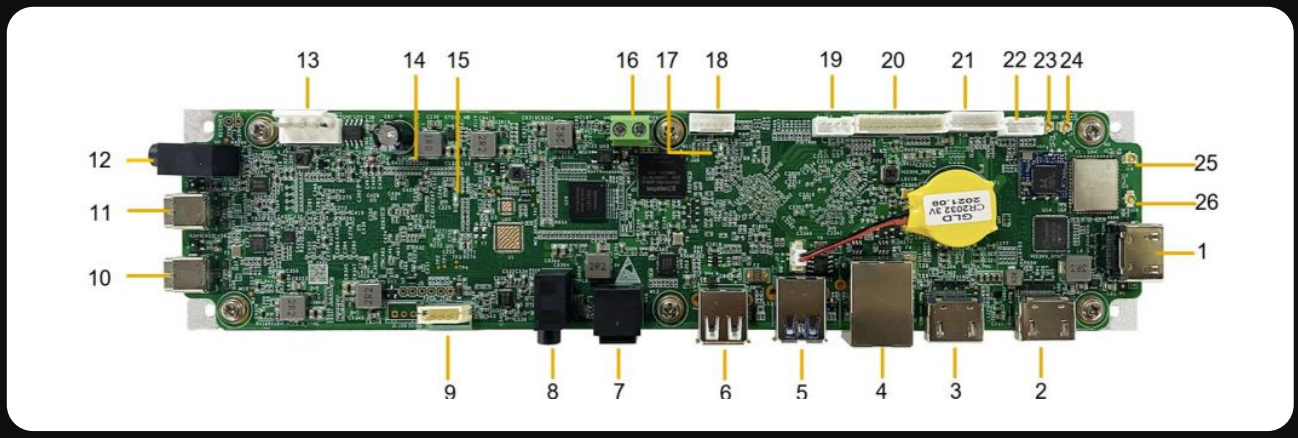
Features

Device Controls

- Gigabit Ethernet control ports. Support TCP/IP protocol.
- Wakeup from standby via Infrared remote. The MEE210 enters low-power mode during standby, reducing standby power consumption to less than 0.5W.
- Bluetooth 5.0
  It can connect to the Bluetooth remote to control the meeting system through voice. It can also connect to Bluetooth mouse, Bluetooth keyboard, Bluetooth sound system and other common peripherals.
- 4x relays for convenient power management of LED display
- 1x reserved OPS control port to control power on/off of the OPS computer
- Compatible with the peripherals commonly used in a meeting, such as camera, sound system and laser pointer

Appearance

Connectors



All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Type	No.	Connector	Description
Input	1	HDMI 1.3 (Type A)	Connect to the HDMI output of the OPS computer to allow for dual-system functions
	2	HDMI 1.3 (Type A)	• Max resolution: 2048×1152@60Hz • Min resolution: 800×600@60Hz • Custom resolutions supported -Max width: 800–3840 (Forced) -Max height: 600–3840 (Forced) • 30/50/60 Hz frame rates supported • Do NOT support interlaced signal input. • HDCP 1.4 compliant, backwards compatible
	5/6	USB 2.0	USB 2.0 input ports to support a mouse, keyboard, USB drive and other common USB devices • Supported image formats: *.jpg, *.bmp, *.png • Supported video formats: *.avi, *.mpg, *.vob, *.mov, *.mkv, *.rmvb, *.mp4, *.ts, *.flv • Support FAT32 and NTFS file systems. Do not support exFAT or FAT16 file system.

Appearance

Connectors

Type	No.	Connector	Description
Output	3	HDMI OUT	Support output of standard 1080p videos.
	7	SPDIF	For digital fiber optic audio output
	8/12	AUDIO	3.5-mm external/internal audio connectors Note Support the 3-pole headphone plug only. These connectors are used to connect the audio equipment.
	10	Type-C	Connect to an Ethernet module. • 6x RJ45 (1Gps) outputs • Load capacity up to 2.6 million pixels Note Users must use the Type-C To Type-C cable supplied with this product to connect this connector to the Ethernet module, and the side with a "T" mark must face upwards. The MEE210 comes with one Ethernet module (6 Ethernet outputs) as standard.
	11	Type-C	Reserved

Appearance

Connectors

Type	No.	Connector	Description
Control	4	Gigabit Ethernet ports	Connect to the network or to the Canvas PCS software on the control computer.
	9	RS485 port	Reserved: Sensor port.
	16	Photocoupler switch (5 V)	Control the solid-state relay switch and work with the relay to realize related power control. Pins of this connector are defined as follows: 
	19	OPS computer connector	Detect and control power on/off of the OPS computer. Pins of this connector are defined as follows: 1: GND 2: OPS-DET 3: OPS-CON 4: OPS-ON 
	22	RS232 serial port (3.3 V)	Connect to the central control device. Pins of this port are defined as follows: 1: GND 2: RS232-RX 3: RS232-TX 4: NG  Note: Baud rate: 115200 bps Data bits: 8; stop bits: 1; no parity bit; no flow control

Appearance

Connectors

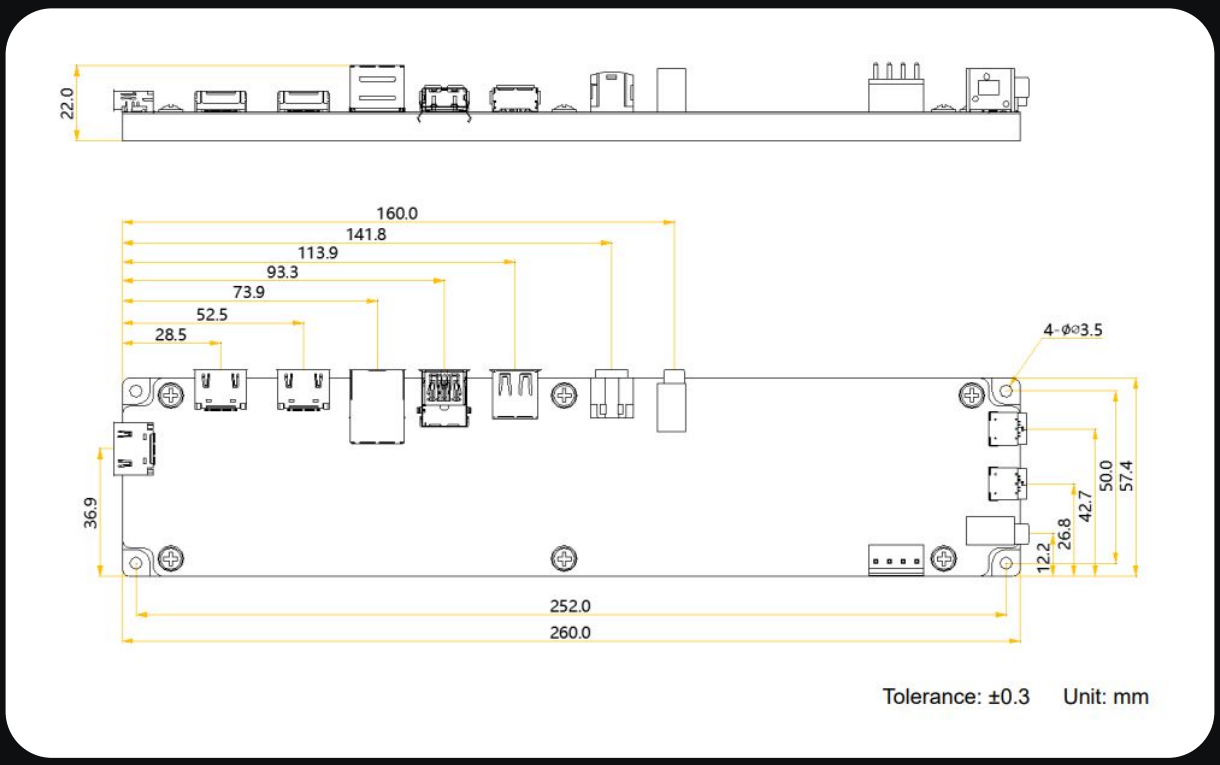
Type	No.	Connector	Description
Antenna	23	WiFi-STA (1T1R)	Connect to the Wi-Fi antenna.
	24/25	WiFi-AP (2T2R)/BT	Connect to the Wi-Fi antenna and Bluetooth antenna.
	26	Reserved	
Accessory	21	Relay module connector	Connect to the relay module for cabinet power management
	18	Button module connector	Connect to the button module for volume adjustment, brightness adjustment and input source switching.
	20	USB module connector	Connect to the USB module for convenient USB port arrangement.
Power	13	DC 12 V ± 10%	

Appearance

Indicator Status

Indicator		No.	Status	Description
Power indicator (Red)		14	WiFi-STA (1T1R)	Connect to the Wi-Fi antenna.
FPGA indicator (Green)		15	Flashing 2 times in 1s	The video input is available.
			Flashing once in 4s	The video input is unavailable.
			Breathing	The Ethernet port redundancy has taken effect.
ARM indicator (Green)		17	Flashing once in 1s	The Android system is functioning normally.
Ethernet port indicators	Speed indicator (Green)	4	Always on	Communication (LINK) with the peer Ethernet port has been established.
	Active indicator (Yellow)		Fast flashing	There is data transmission

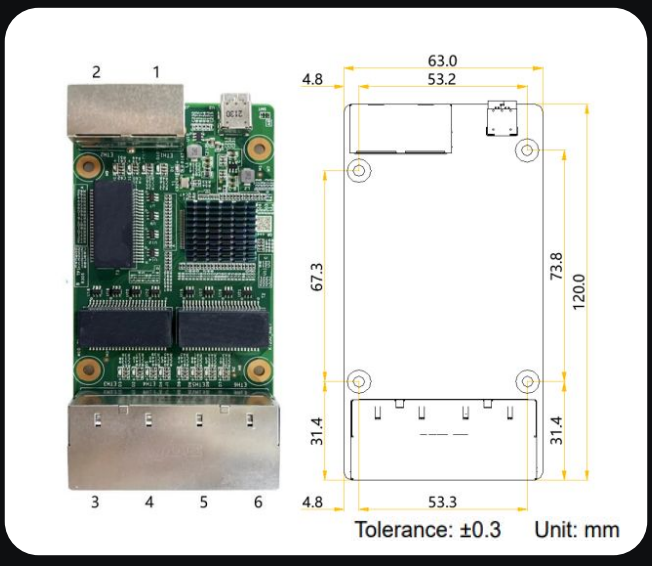
Dimensions



Accessories

Ethernet Module

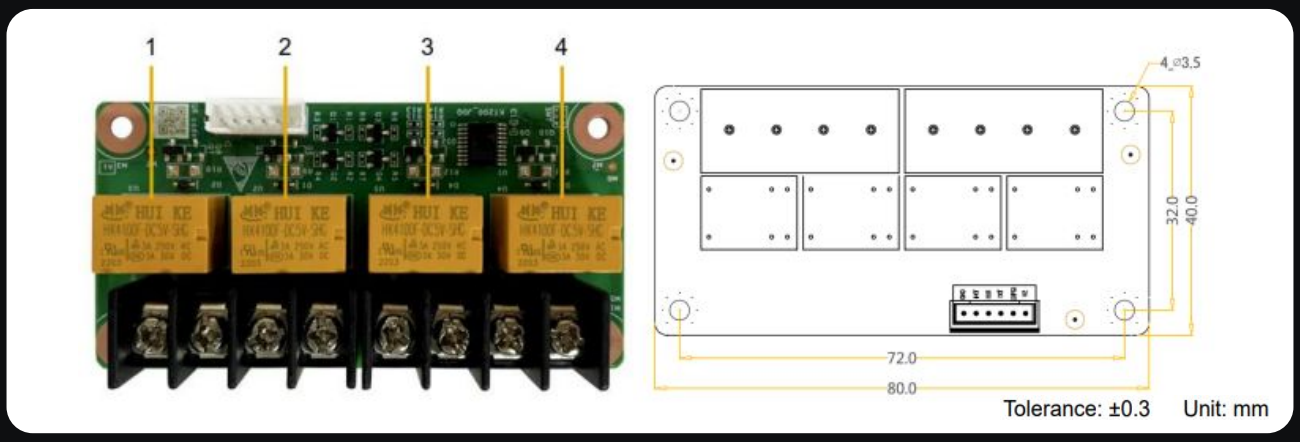
A MEE210 is equipped with an Ethernet module that has 6 Gigabit Ethernet ports. The Ethernet port order is marked in the figure below



Accessories

Relay Module

A relay module is connected for convenient power management of the LED display. The relay module supports the power on delay function, which can effectively protect the circuitry. The delay interval is 250 ms and the delay sequence is 1--->2--->3--->4, as shown in the figure below

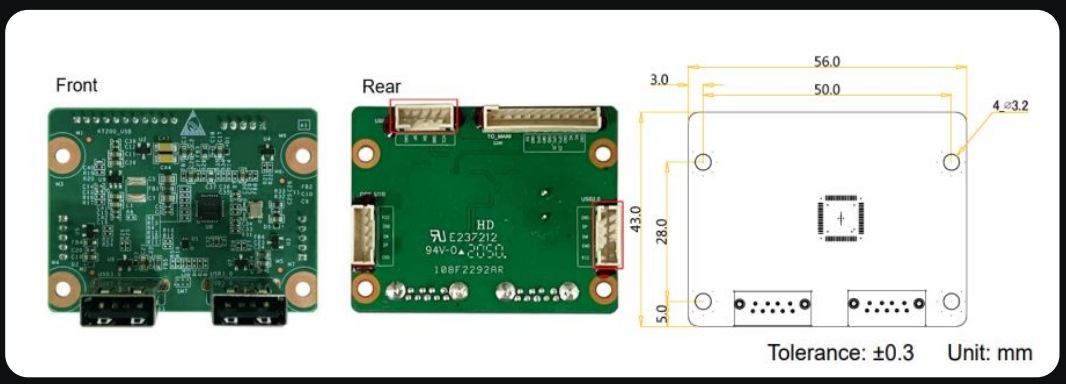


Note

- The relay cannot be connected to strong electricity and it is necessary to ensure that the switched-mode power supply is within DC 30V 3A.
- The delay function is enabled by default.

USB Module

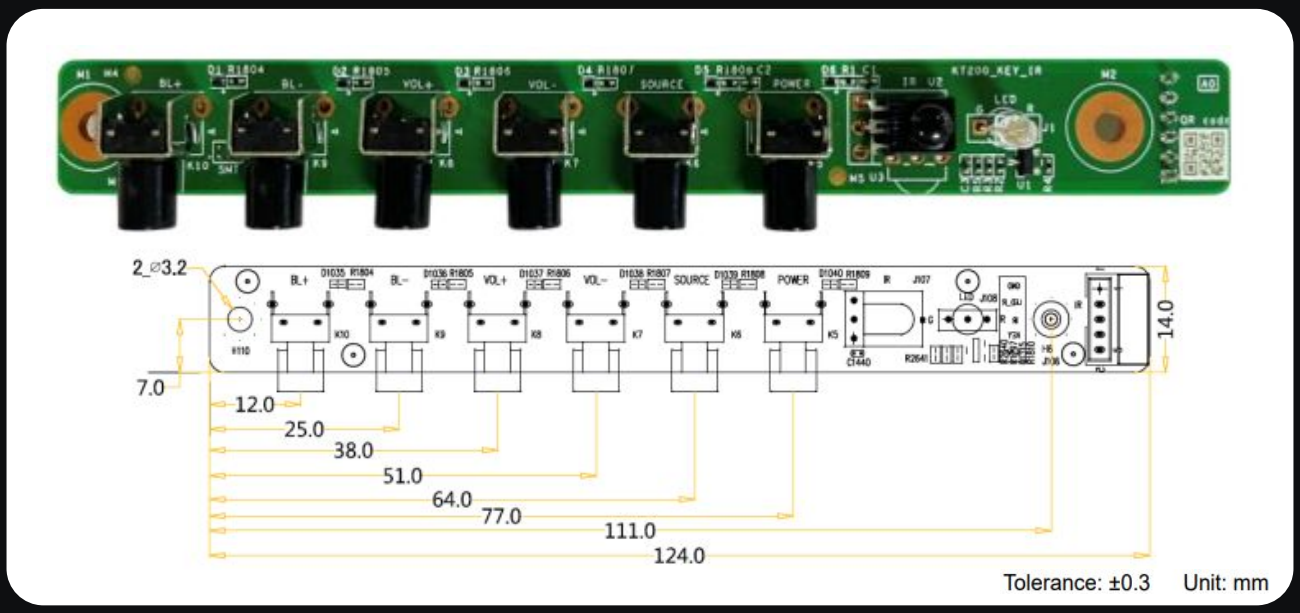
A USB module has four USB 2.0 ports (two of which are in the form of pins). For the USB module connector description.



Accessories

Button Module

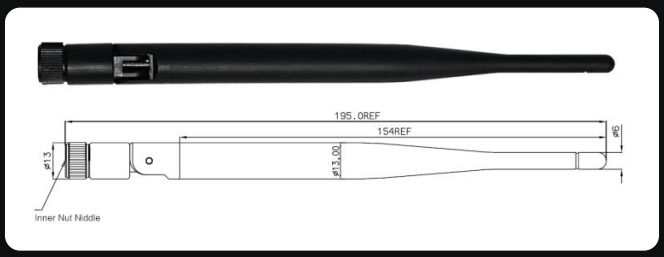
A button module is used to control the meeting system via hardware, such as brightness adjustment and volume adjustment.



Name	BL+	BL-	VOL+	VOL-	SOURCE	POWER	Status LED	
Description	Brightness up	Brightness down	Volume up	Volume down	Input source switching	Low-power standby	Always on in blue after power on	Always on in red in standby mode

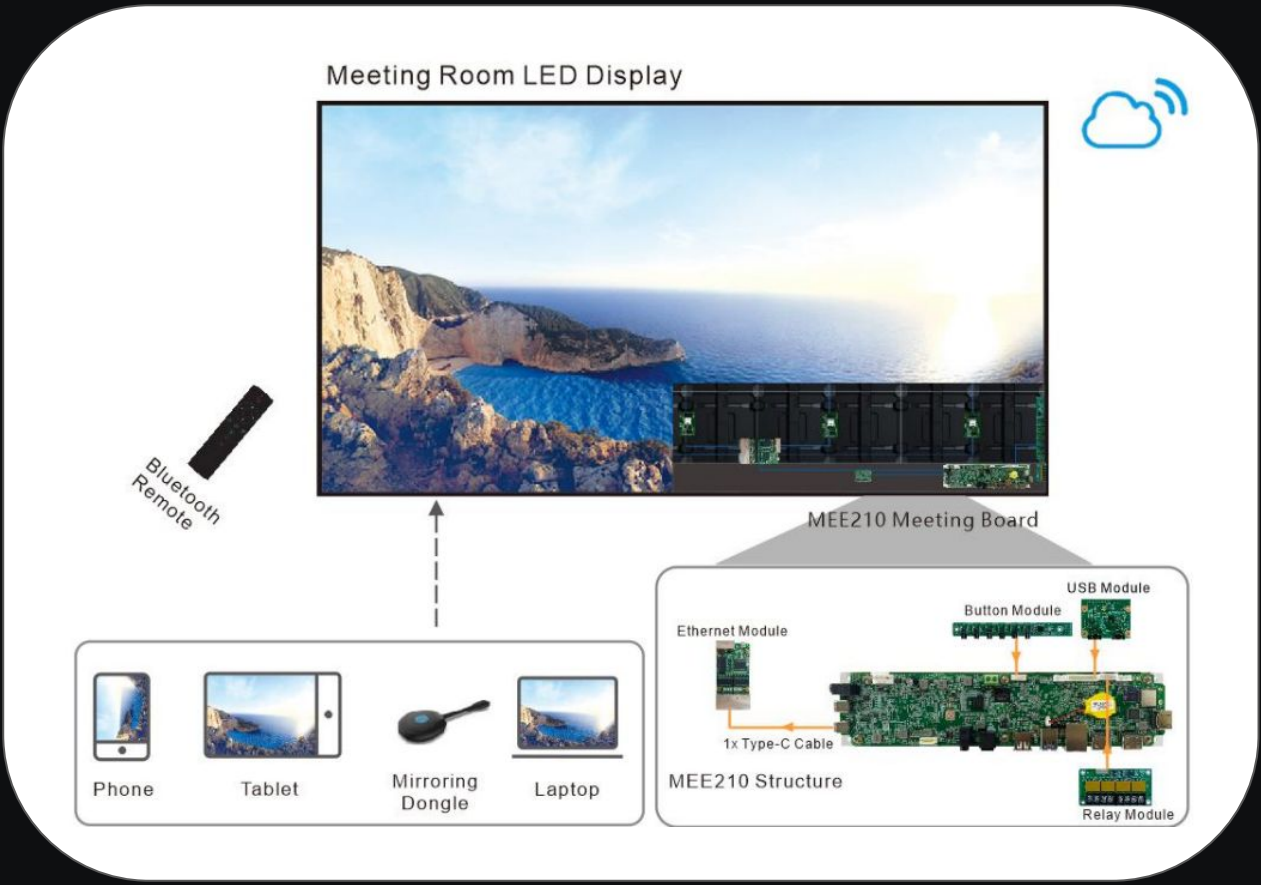
Glue Stick Antenna

The antenna feeder can connect to the meeting system to enhance the Wi-Fi or Bluetooth signal strength



The end of the feeder connects to the glue stick antenna and the other end connects to the meeting board.

Applications



Note:

- The MEE210 product package in this diagram is described in the packaging list in the specifications table.
- The mirroring dongle (Type-C connector: TB1304) is not included in the MEE210 product package. Customers can place another order to purchase it. When using the TB1304 mirroring dongle, users need to use a Type-C to USB adapter to connect the meeting card for pairing.

Specifications

Hardware Configuration	CPU	64-bit quad-core 1.8 GHz CPU
	GPU	Mali G52
	RAM/ROM	Standard: 2G (LPDDR4) / 32GB
Electrical Specifications	Input Voltage	DC 12 V ± 10%
	Maximum Transient Current	1.4 A
	Peak power consumption	16 W Note: -A switched-mode power supply of 60 W is recommended. -The peak power consumption depends on the dynamic load of the Android SoC.
Operating Environmen	Temperature	–20°C to +60°C (An aluminum cooling plate must be installed on the chassis housing.)
	Humidity	10% RH to 75% RH, non-condensing
Storage Environment	Temperature	–25°C to +125°C
Physical Specifications	Motherboard dimensions (L×W×H)	260.0 mm × 57.4 mm × 22.0 mm
	Motherboard net weight	268.7 g
Packing Information	Packing box dimensions (L×W×H)	355 mm × 275 mm × 85 mm
	List	-1x MEE210 -1x Bluetooth remote -1x Ethernet module, -1x Relay module, 1x Button module, -1x USB module -1x Type-C To Type-C cable (1 m) -3x Glue stick antennas, -3x Antenna feeders (50 cm) -1x 4-pin power cable (50 cm), 2x 6-pin flat cable (30 cm), 1x 11-pin flat cable (30 cm) -1x Certificate of Approval

Specifications

The current and power consumption are measured under the following conditions. The data may vary depending on the product settings, usage environment and measuring status.

- The MEE210 uses two HDMI inputs, one for video source connection (the Android startup image is displayed by default and it does not change upon startup) and the other for OPS computer connection.
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- The MEE210 is equipped with 1x Ethernet module, 1x relay module, 1x button module, and 1x USB module.
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- The MEE210 is connected with a USB drive containing a video that can be played and a Bluetooth remote. Three glue stick antennas are used and Wi-Fi is connected. The hotspot for screen mirroring is turned on.

Statement

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