Colorlight

AX08

Playback Control Processor

Specification V1.3

Overview

The AX08 is Playback Control Processor. Equipped with 8 Gigabit Ethernet ports, it handles a maximum load of 5.2 million pixels. It supports multi-layer displays and 8K video decoding, along with LAN/WiFi network access for cloud networking management. Additionally, it supports document presentation, video playback, multi-terminal wireless screen casting, infrared touch frames, electronic whiteboards, cameras, microphones, and meeting systems.

Running on the Android 13 system, the AX08 integrates various Android applications and provides synchronous/asynchronous sending functions. Featuring robust interactivity and smart control, it can be mounted on a wall or placed on a desktop without requiring modifications to the screen structure. It is ideal for LED displays in multifunctional classrooms, conference rooms, exhibition halls, lecture halls, and banquet halls, ensuring optimal display performance.

Features

System functions

- 8-core chip with 8nm advanced process technology, delivering outstanding performance
- Up to 8K video decoding and H.264/H.265/AV1/VP9/AVS2 compliant
- Android 13 based, supporting third-party app installations
- Colorlight Infi-bit grayscale extension technology
- 8 Gigabit Ethernet port outputs, supporting up to 5.2 million pixels, with a maximum width of 7680 pixels
- 2× HDMI 2.0 signal inputs, 1x USB-C DP Alt Mode signal output and 1× HDMI 2.0 signal output
- Multiple HDMI signal layers, supporting picture-in-picture and picture-by-picture
- Annotation upon even external inputs including OPS and HDMI signals
- Support wireless display, multi-terminal wireless screen casting, reverse control
- Compatible with generic infrared touch frames for smooth electronic whiteboard
- Meeting systems compatible with meeting peripherals (Requires third party meeting apps)
- Display preset modes for various scenarios such as presentation, remote meetings, and video playback
- LAN/WiFi for network management
- Embedded file manager for easy management for on-board and USB drive files
- USB drive plug and play or store and play
- Automatic LED brightness adjustment (Optional with ambient light sensor)
- Support 4K UI display
- Powerful AI computing power, supporting AI super-resolution and AI MEMC
- Low power consumption on standby mode
- Fan-less design for ultra-quiet environment, eliminates maintenance of dust buildup and mechanical failure, leading to lower operational costs and less downtime, no wearing out moving parts.

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Smart Playback and Control

- Infrared/Bluetooth dual mode remote control for flexible and intuitive operation
- File browsing and document editing with a remote control, mouse, or keyboard
- Multi-Platform software control (WebUI, PC PlayerMaster, ColorlightCloud CMS, Mobile phone LED Assistant)
- Playlist assets including videos, images, text, time, and weather, HDMI signals, etc.
- Central control devices via serial port or network

Extensive Connectivity

- 2× HDMI 2.0 inputs
- 1× HDMI 2.0 output and 1× USB-C DP Alt Mode output
- 8× Ethernet port outputs with a maximum load capacity of 5.2 million pixels
- USB 2.0, USB 3.0, and USB-C ports for connecting peripherals like mouse, keyboard, USB-disk, and camera
- Gigabit Ethernet connection for remote intelligent control and management
- WiFi 6 wireless communication, dual-band and dual-mode (AP and STA)
- Bluetooth 5.2 for connecting Bluetooth remote controls, mice, keyboards, and speakers
- 1× SPDIF output for PCM, Dolby, and DTS audio signals
- 1× 3.5mm audio jack for HiFi audio
- Sensor port for monitoring ambient temperature, humidity, and brightness (Sensors are optional)

Appearance

Front Panel

No.	Name	Description
1	Infrared Receiver	Receive infrared remote control signals
2	Status LEDs	Solid red: Power supply normal Solid blue: Device running
3	Power Switch	Press: Sleep/Wake Press and hold: Power On/Off
4	USB Type-C	Debugging and setting display parameters. Connect to mouse, keyboard, USB-disk, 4K screen dongle, and other USB devices. Connect to USB-C display monitor.

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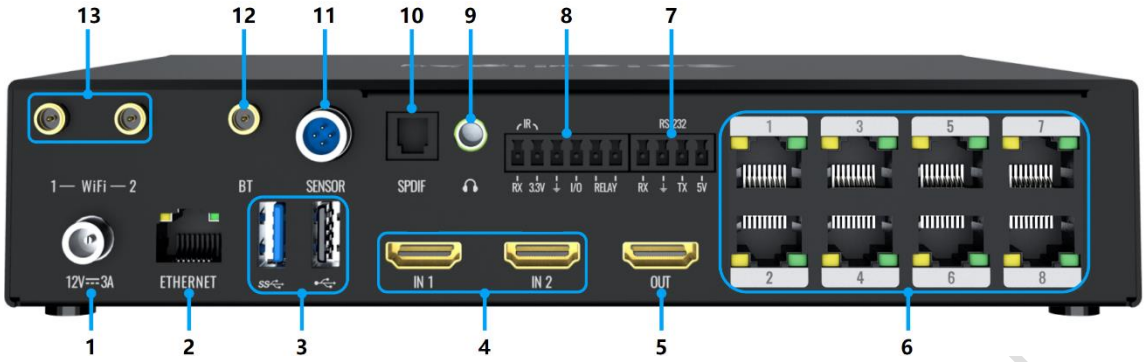
Rear Panel



Power		
1	DC12V/3A	Connect to the power adapter
Control		
2	ETHERNET	Gigabit Ethernet port for wired network connection
3	USB-A	USB 2.0 and USB 3.0 ports for connecting USB devices like USB-disks, mice, and keyboards. Supported USB-disk formats: NTFS, FAT32, and exFAT
7	4-pin Phoenix	RS232: Connect to central control devices
8	6-pin Phoenix	1× IR IN: Connect to the infrared receiver for remote control signals 1× I/O: Input/output for programmable control functions 1× RELAY: Connect to the relay to control device switch 1× GND: For ground connection
11	SENSOR	Connect to the sensor to monitor environmental parameters (brightness, smoke, temperature, and humidity)
Input		
4	IN 1 & IN 2	2× HDMI 2.0 Support 3840x2160@60Hz and YUV444 HDCP1.4 and HDCP2.2 compliant
Output		
5	HDMI2.0	1× HDMI 2.0, supporting 3840x2160@60Hz and YUV444
6	1~8	8× RJ45 Gigabit Ethernet ports for connecting the screen receivers
9	AUDIO	1× 3.5mm Jack, supporting HiFi audio
10	SPDIF	1× SPDIF, supporting PCM, Dolby, and DTS audio signals
Antenna		
12	BT	Connect to Bluetooth antenna
13	WiFi1/2	Connect to WiFi antennas

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Specifications

Physical	
Dimensions (W×H×D)	220mm(8.66")×186mm(7.32")×45mm(1.77") (w/o antennas and mounting bracket)
Storage	
DDR	4GB
EMMC	64GB
Electrical	
Power Supply	DC 12V/3A
Power Consumption	28W
Operating Environment	
Temperature	-20℃(-4℉)~60℃(140℉)
Humidity	0%RH-85%RH, non-condensing
Packing Information	
Packing List	1× AX08 1× Dual Mode Remote controller (IR & BT) 1× HDMI cable 1× Type-C cable 3× Antennas 1× Mounting bracket 1× Power adapter

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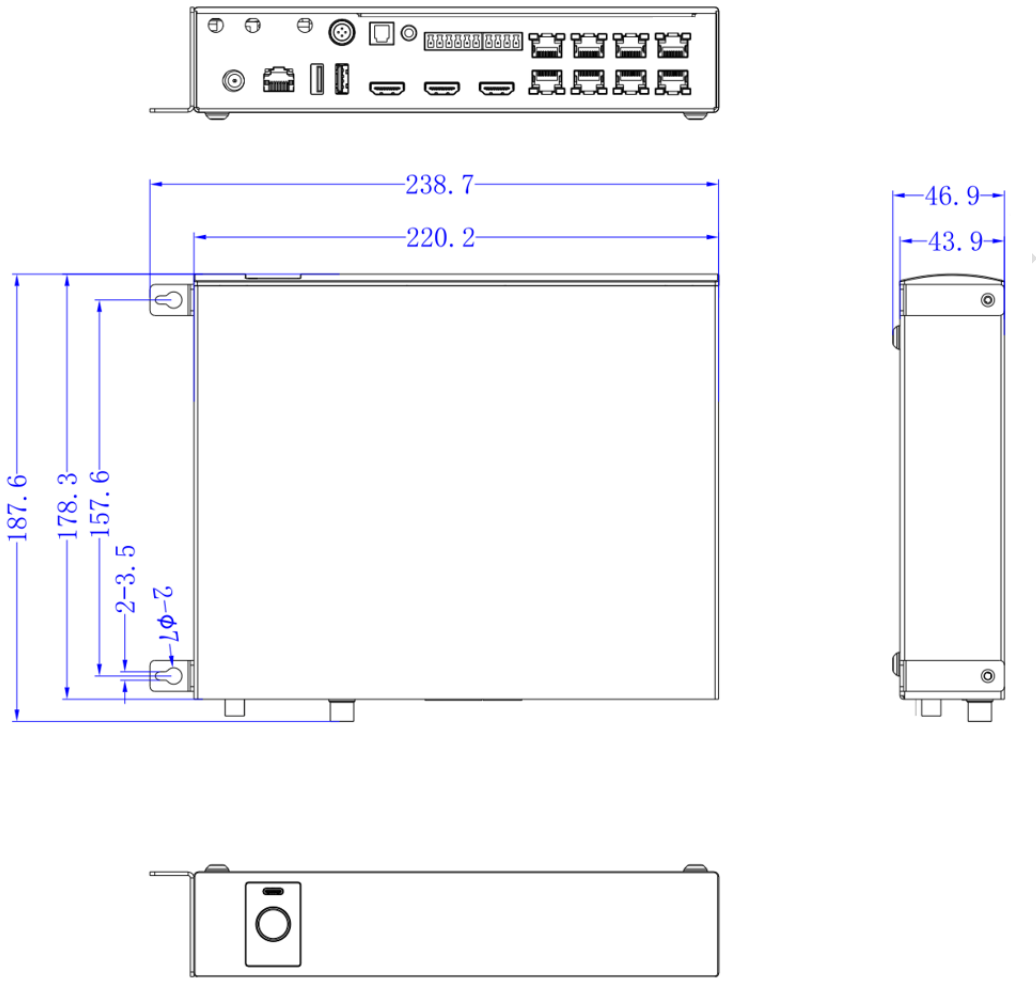
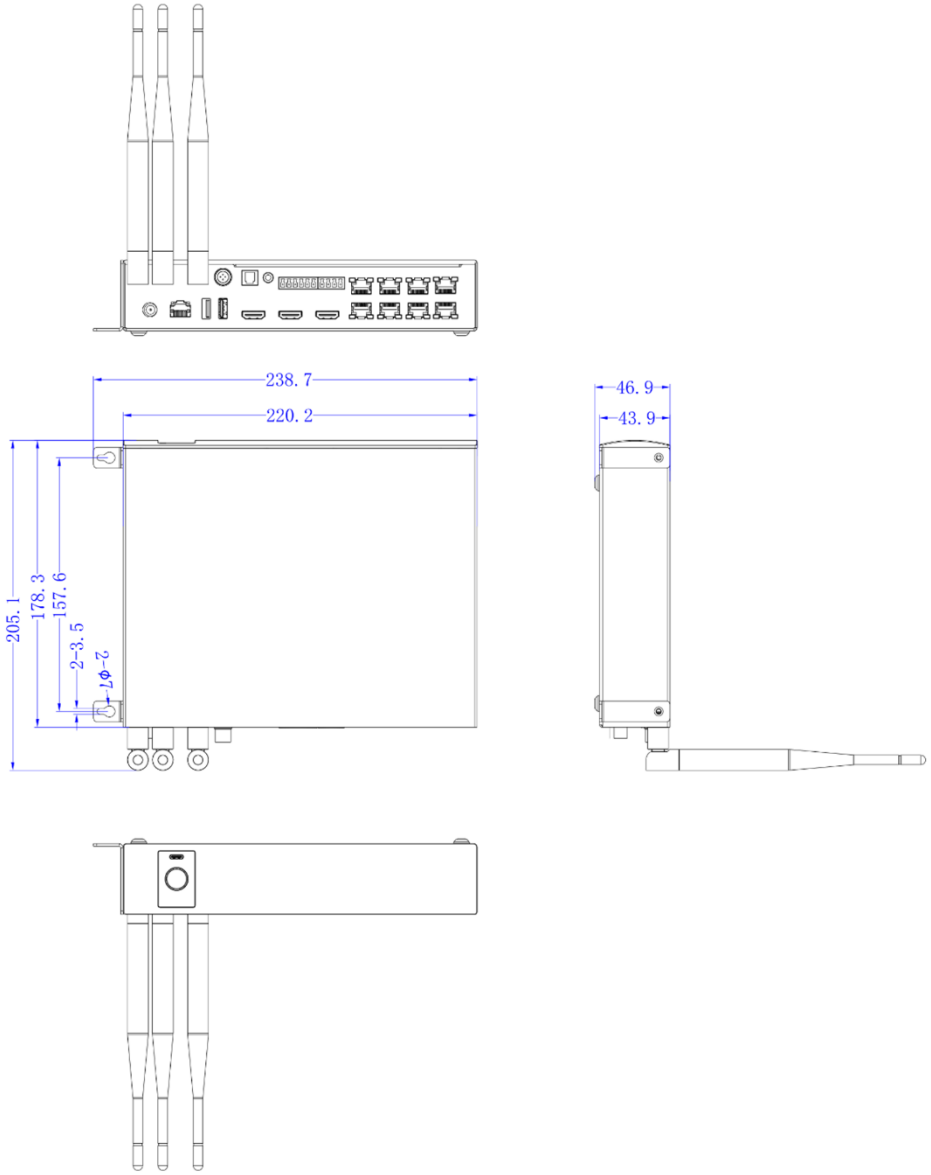
Reference Dimensions

Unit: mm

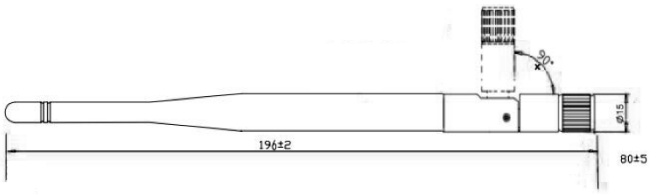
AX08



AX08 with Antennas and Mounting Bracket



WiFi Antenna



*Dimension and weight might vary by configuration and manufacturing process.

Statement

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