

AP11 Cloud-based Media Player

Specification V1.1



Update Log

| Document Version | Update time | Update content |
|------------------|-------------|---|
| V1. 1 | 2025/7/14 | 1.Product name and model changed; 2. Video decoding specifications updated |
| V1. 0 | 2025/4/22 | New document published |

Foreword

Thank you very much for purchasing our product, please read this specification sheet carefully before use.

All product information in this specification is for reference only, please refer to the actual product.

This specification may not correspond exactly to the products or accessories you purchase. Our company reserves the right to modify any information in this specification at any time and will periodically improve or update its content based on product feature enhancements. Updated content will be added to new versions of this specification without prior notice. Thank you for your understanding.

Safety Precautions

To ensure personal and equipment safety, please follow the safety instructions on the equipment and in the manual when installing, operating, and maintaining the equipment to ensure optimal equipment performance and avoid dangerous or illegal situations.

1. Equipment Introduction

The AP11 Cloud-based Media Player is an LED display controller that integrates multimedia playback and video transmission. It can be used for program editing, publishing and display control through various user terminals such as PC, mobile(phone, tablet) and cloud.

The AP11 Cloud-based Media Player can be widely used in LED commercial displays and smart display fields, such as fixed screens, light pole screens, chain store screens, retail store screens, shelf screens, advertising machines, poster screens, storefront screens, vehicle screens, etc.

2. Features

1.Supports multiple outputs

- Loading capacity: Up to 650, 000 pixels, maximum width or height: 1920 pixels.
- 1 × LED Gigabit Ethernet port: Designed for LED applications, capable of driving LED displays via compatible receiving cards.
- 1× Channel stereo audio output.

2.Supports multiple input methods

- 1× HDMI 1.3 input port: Connect a video source to this port for synchronous operation.
- 1× USB 2.0 port: Support a USB flash drive and playback of programs.
- 1× Sensor interface: For brightness, temperature, and humidity sensors.

3.Excellent processing performance

Processing capacity

- CPU: Quad-core ARM Cortex- A35
- Decoding: H.264, H.265, MPEG4, VP8, VC-1 1080P@60Hz
- RAM: 1GB
- ROM: 32GB

Playback performance

- 1 Channel 1080P or 2 Channel 720P or 4 Channel 480P or 4 Channel 360P

4.Synchronous/Asynchronous Dual-Mode Switching

- Asynchronous mode: Uses an internal video source;
- Synchronous mode: Uses the HDMI input interface as the video source.

5.Multi-screen synchronized playback

Time-sync options: NTP, GPS (with designated 4G module), or RF (with designated RF module), enabling frame-accurate, simultaneous playback across multiple displays.

6.A wide variety of control methods

- 1× USB (Type A) port:
 - DEVICE mode: Connects to the host computer to update programs and control the display screen;
 - HOST mode: USB flash drive playback.
- 1× 100Mbps Ethernet port: Allows for direct connection to a PC via Ethernet cable or connection to a local area network for program distribution and display control;
- With a built-in WiFi module, PCs, tablets, and mobile phones can log in to the device via wireless network to publish programs and control the display screen;
- Remote program publishing and display screen control based on the information messaging system cloud platform;
- Remote display screen status monitoring based on the information messaging system cloud platform.

7.WiFi dual-mode switching

Supports WIFI AP and WIFI STA modes. AP for direct terminal connection; STA for connection via router.

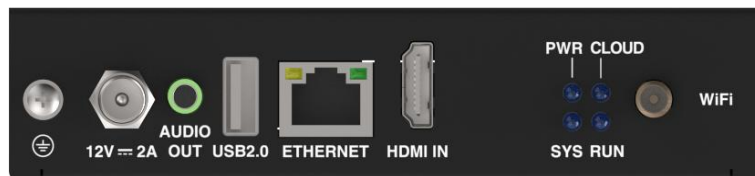
8.4G module installation

4G module (Optional) , once installed, provides Internet connectivity and follows the fixed network-priority order: Ethernet first, Wi-Fi second, 4G last.

3. Equipment appearance

The following are schematic diagrams of the front and back panels of the device. The actual product appearance shall prevail.

3.1. Front panel



| Name | Description |
|------------------|--|
| 12V 2A | DC power adapter input interface |
| AUDIO OUT | 3. 5mm audio output interface |
| USB 2. 0 | USB 2. 0 (Type A) interface, supports two working modes: <ul style="list-style-type: none"> • DEVICE mode connects to the host computer to publish programs and control the display screen; • HOST mode, USB flash drive playback. |
| ETHERNET | A 100Mbps Ethernet port: Connected to Ethernet (LAN or public network) or directly connected to control a PC for program publishing and display control. |
| HDMI IN | <ul style="list-style-type: none"> • HDMI 1. 3 standard, synchronous mode input video source • Supported resolutions: 480P: 640 × 480@30Hz/60Hz 720P: 1280 × 720@30Hz/60Hz 900P: 1600× 900@30Hz/60Hz 1080P: 1920× 1080@30Hz/60Hz |
| INDICATOR LIGHTS | PWR: Power indicator light, stays on after the device has started up. SYS: System status indicator light <ul style="list-style-type: none"> • The flashes once every 2 seconds, indicating that the operating system is running normally and the USB is in DEVICE mode; • The flashes once every 0. 5 seconds, indicating that the operating system is running normally and the USB is in HOST mode; • If the light is constantly on or off, it indicates an operating system malfunction. CLOUD: Cloud status indicator light |

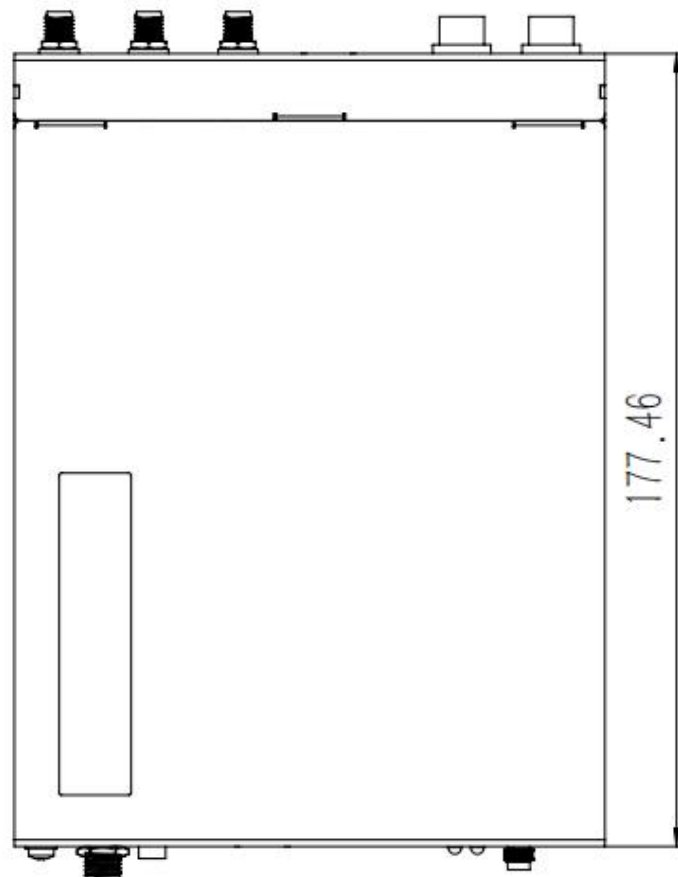
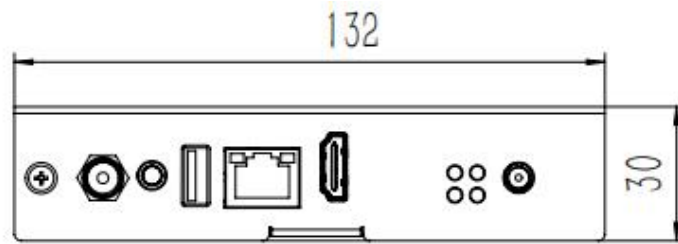
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|------|---|
| | <ul style="list-style-type: none"> • The light is constantly on;It is connected to the internet but not to the cloud; • The screen flashes once every 2 seconds, indicating a normal cloud connection; • per second, indicating operating system upgrade in progress; • Flashes once every 0. 5 seconds, upgrade package being copied. <p>RUN: Running status indicator light</p> <ul style="list-style-type: none"> • The video feed flashes once per second;the FPGA is functioning normally but there is no video source; • Flashing once every 0. 5 seconds indicates that the FPGA is functioning normally; • Always on/Not on, FPGA loading error. |
| WiFi | WiFi antenna interface, supports AP and STA switching. |

3.2. Rear panel



| Name | Description |
|-----------|---|
| SENSOR 1 | Sensor interface for connecting various sensors such as brightness, temperature, and humidity sensors. |
| SENSOR 2 | Reserved interface. |
| RESET | Short press for 1 second: Switch between USB Device and Host modes; Long press for 5 seconds: Restore factory settings. |
| LED OUT | A Gigabit output: Capable of driving LED displays via compatible receiving cards. |
| SIM CARD | SIM card slot, supports reverse insertion prevention. |
| COM1/COM2 | 4G and GPS antenna SMA mount. |
| COM 3 | Reserved antenna interface for RF module; installation is required when purchasing the RF module separately. |

4. Equipment size



5. Equipment Specifications

| Specification | Description | |
|---------------------|---|---|
| Electrical | Input Power | DC12V 2A |
| | Maximum Power Consumption | 15W |
| Storage Space | RAM | 1GB |
| | Internal Storage | 32GB |
| Work Environment | Temperature | -20°C ~ +60 °C |
| | Humidity | 0% RH ~ 80% RH, non-condensing |
| Storage Environment | Temperature | -40°C ~ +80°C |
| | Humidity | 0% RH ~ 80% RH, non-condensing |
| Physical | Size (L×W×H) | Excluding interfaces: 177.46×132×30 mm |
| | Net Weight | 640g |
| Accessories | <ul style="list-style-type: none"> • 1× WiFi Omnidirectional Antenna • 1× USB-A male-to-male data cable • 1× DC12V power adapter | <ul style="list-style-type: none"> • 1× Quick Guide • 1× Packing List |
| Protection Level | IP20, please be aware of water resistance. Avoid water droplets entering the product, and do not wet or rinse the product. | |
| System Software | Android 11.0 operating system software; Android terminal application software; FPGA firmware program Note: Installation of third-party applications is not supported. | |

6. Multimedia decoding specifications

6.1. Image

| Codec | Maximum Size | Format | Remark |
|-----------------------|-------------------|---------------|---|
| JFIF file format 1.02 | 4096× 2160 pixels | .jpg .jpeg | Progressive-scan only; JPEG: SRGB & Adobe RGB JPEG supported |
| BMP | 4096× 2160 pixels | .bmp | / |
| PNG | 4096× 2160 pixels | .png | / |
| WEBP | 4096× 2160 pixels | .webp | / |

6.2. Video

| Codec | Resolution Range | Max fps | Max bit-rate | Format | Remark |
|------------|--|-------------|--------------|---|----------------------------------|
| MPEG-1/2 | 48× 48 - 1920× 1080 | 30fps | 80 Mbps | .dat .mpg .vob .ts | Support Field Coding |
| MPEG4 | 48× 48 - 1920× 1080 | 30fps | 38.4 Mbps | .avi .mkv .mp4 .mov .3gp | v1/v2/v3 & GMC not supported |
| H.264 | 48× 48 - 1920× 1080 | 1080p@60fps | 80Mbps | .avi .mkv .mp4 .mov .3gp .ts .flv | Support Field Coding & MBAFF |
| H.264 MVC | 48× 48 - 1920× 1080 | 1080p@60fps | 100Mbps | .mkv .ts | Support Stereo High Profile only |
| H.265/HEVC | 64× 64 - 1920× 1080 | 1080p@60fps | 100Mbps | .mkv .mp4 .mov .ts | Support Main Profile, Tile&Slice |
| VP8 | 48× 48 - 1920× 1080 | 30fps | 38.4Mbps | .webm .mkv | / |
| H.263 | SQCIF(128× 96) QCIF(176× 144) CIF (352× 288) 4CIF(704× 576) | 30fps | 38.4Mbps | .3gp .mov .mp4 | H.263+ not supported |
| MJPEG | 48× 48 - 1920× 1080 | 60fps | 60Mbps | .avi | / |

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