

# MP400

Commercial Led Display Controller Series

Specification V4.0



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## 1 Update Records

| Document Version | Hardware Version | Release Time | Update Record |
|------------------|------------------|--------------|---------------|
| V4.0             | MP4 (V3.1)       | 29-12-2025   | First release |

## 2 Product Introduction

MP400 Media Player features high performance 4 Cortex-A55 Chip Set and it's a combination of the Player with the Sending Card(Integration). Given that the Player has a very high performance of the video processing.

Integrated with synchronous and asynchronous playback, HDMI Multi-Screen Playback, and other functions, it supports remote cluster control via the internet, multi-window playback, and rich media content including videos, images, text, documents, clocks, streaming media, webpages, weather, timers, HDMI IN, discount windows, and more.

Compact and low-power consumption, the MP400 operates across a wide temperature range with easy installation and maintenance.

Supports 4 network port outputs with a maximum load of 2.6 million pixels; Maximum height and width for a single network port: 3840

## 3 Product Characteristics

- 4× Ethernet ports with 2.6 million pixels, supporting resolution scaling to match LED screen resolution
- Supports synchronous/asynchronous mode button and timed display switching
- Supports asynchronous mode display with HDMI synchronized video output
- Supports Screen Manager app control and smart photo capture to screen

- Supports multi-window playback with freely adjustable window size/position and window overlay; video windows support up to 4K×2 or 1080P×6 or 720P×10 or 360P×20
- Rich media content: video, images, text, doc, clock, streaming media, webpages, weather, timers, etc.
- Supports Android 12. Manage content and configure settings via computers, phones, tablets, cloud platforms, etc.
- Supports HDMI loop-out, cascading, and multi-device display
- Supports H.265 hardware decoding for 4K@60Hz video sources; simultaneous decoding of multiple videos
- Supports remote cluster control via internet, 4G/5G (optional), LAN, and Wi-Fi connections
- Dual-mode operation: Wi-Fi AP and Wi-Fi STA

## 4. Application Scenarios

It could be widely used at business display area(fields) such as : Fixed Installation LED Display, Intelligent Lamppost Led Display, Over-door Led Display,Vehicle-Mounted Led Display, Chain Stores Cluster Display Management, Led Electronic Whiteboard, Led Mirror(Mirror-like Led Display),Advertise Led Display, and the Led Display that does not need to be used with the PC(Offline Mode).



## 4.1 Cascading Stitching

Support HDMI cascading, automatically stitching and displaying images from multiple devices.



## 4.2 HDMI Input Synchronous Playback

Supports HDMI input for synchronous playback; one-touch switching between different modes.



### 4.3 Cluster Control

Supports remote internet-based cluster control, with optional 4G/5G, LAN, and Wi-Fi connectivity



### 4.4 Screen Mirroring Function

Supports wireless screen mirroring from computers and mobile phones.



## 5 Product Features

### 5.1 Features

- Supports 1 Gigabit Ethernet input port for parameter debugging and program transmission.
- Supports 2 HDMI input interfaces with synchronous/asynchronous multi-window playback; image scaling; and cascading display.
- Supports one USB 3.0 port for plug-in program playback; supports one OTG debug interface.
- Supports one sensor interface, compatible with light sensors to enable automatic brightness adjustment.
- Supports 4 Gigabit Ethernet ports with video scaling; handles 2.6 million pixels, with maximum 3840-pixel width/height per port.
- 1 x 1/8" (3.5mm) TRS audio output jack.
- 1 x HDMI output port, enabling multi-level cascading by connecting to downstream inputs.

### 5.2 Audio & Video Performance:

|                    |                                                                                                                                                                                                                                                             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programs Partition | Supports freely adjusting window size and position, supports window overlay, video windows (supports up to 4K×2 or 1080P×6 or 720P×10 or 360P×20)                                                                                                           |
| Media Content      | Supports video, images, text, documents, clock, streaming media, web pages, weather, timer, HDMI IN, etc.                                                                                                                                                   |
| Video Format       | MPG,MOV,MP4,FLV,MKV etc.                                                                                                                                                                                                                                    |
| Audio Format       | MPEG-1 Layer III, AAC,etc.                                                                                                                                                                                                                                  |
| Image Format       | JPG、PNG,GIF etc.                                                                                                                                                                                                                                            |
| TXT Display        | Single-line text, static text, multi-line text, colorful text, etc.                                                                                                                                                                                         |
| Image Partition    | It supports Video,Image,Scrolling Caption,LOGO,Data and Time; the images could be partitioned freely.                                                                                                                                                       |
| OSD Supported      | It supports True Color OSD,it could be displayed at any position, it supports the video ,image and TXT to be played together at the same time, the image or TXT could be superposed on the videos, it supports transparent,semi-transparent,opaque effects. |
| RTC                | Real Time Clock Display and Management                                                                                                                                                                                                                      |

### 5.3 Terminal Management:

|                                     |                                                                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Network Communication               | LAN/WiFi/4G Network Access                                                                                                               |
| Programs Update                     | USB Flash Drive Content Plug-and-Play; Management Terminal Network Transmission                                                          |
| Device Management                   | PC, Android, iOS, and Other Smart Terminal Devices                                                                                       |
| Wireless Control                    | Real-time Brightness Adjustment, Display Switch, System Parameter Configuration, Program Playback Control, Wireless Program Transmission |
| Brightness Automatically Adjustment | Supports automatic screen brightness adjustment based on time or ambient light levels                                                    |
| Timing Playing                      | Supports playback in the form of a playlist.                                                                                             |
| Management Software                 | APP Supports various Android and iOS devices                                                                                             |
| Scheduled power on/off              | Centralized settings can be configured through the management system.                                                                    |

## 6 Product Appearance

### Front Panel



\* Product photos are for reference only, please refer to the products actually purchased.

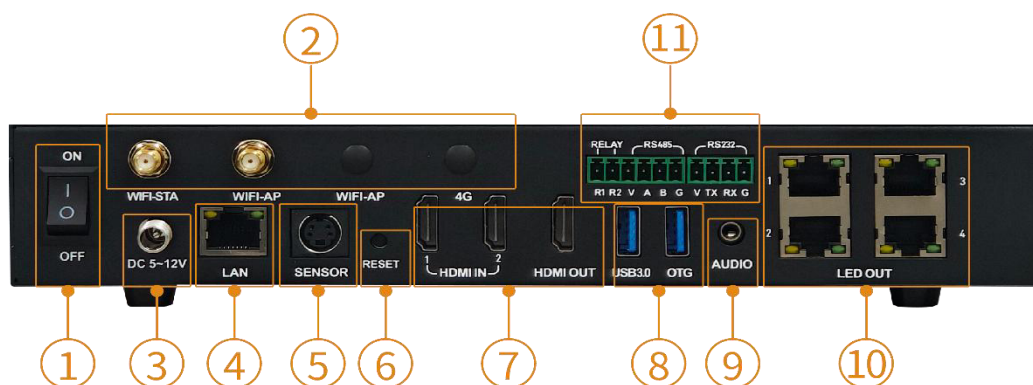
### 6.1 Data Interface Description

| Front Panel |           |                                                                                             |
|-------------|-----------|---------------------------------------------------------------------------------------------|
| #           | Name      | Illustration                                                                                |
| 1           | CONTROL   | CONTROL: Communication with PC software; debug interface.                                   |
| 2           | Indicator | POWER: Device power supply status; solid red light indicates successful startup completion. |



|   |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                | <p>RUN: Android indicator light; green blinking indicates normal operating system operation; solid or off indicates abnormal operating system operation.</p> <p>4G: 4G indicator light; solid red indicates normal operation of the 4G module, otherwise off; blinking indicates data communication.</p> <p>WIFI: WIFI indicator light; solid green when WIFI is enabled but not connected to any device, otherwise off; fast blinking in WIFI AP mode, slow blinking in WIFI STA mode.</p>                                                                                                                                                                                                                                                                                                            |
| 3 | Button         | <p>ASYNC: Solid green light indicates the current mode is asynchronous.</p> <p>HDMI IN1: Solid green light indicates the current mode is HDMI IN1.</p> <p>HDMI IN2: Solid green light indicates the current mode is HDMI IN2.</p> <p>SCALE: Solid green light indicates the current mode is full-screen scaling; off indicates point-to-point mode. Short press to toggle between point-to-point and full-screen scaling modes.</p> <p>NEXT: Switches to the next program; effective only when ASYNC button is selected.</p> <p>LOCK: Button lock; solid green indicates locked. Long press the LOCK button for 4–5 seconds until the LOCK indicator turns off to unlock. The buttons will automatically lock after 2 minutes of no operation. On power-up, the button lock is enabled by default.</p> |
| 4 | Infrared probe | IR: Supports remote control of the Android player to switch programs (remote control sold separately).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|   | SIM card slot  | SIM: Micro SIM card, 4G mobile phone card. Provides 4G/5G network connection for remote control (4G/5G module optional).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Rear Panel

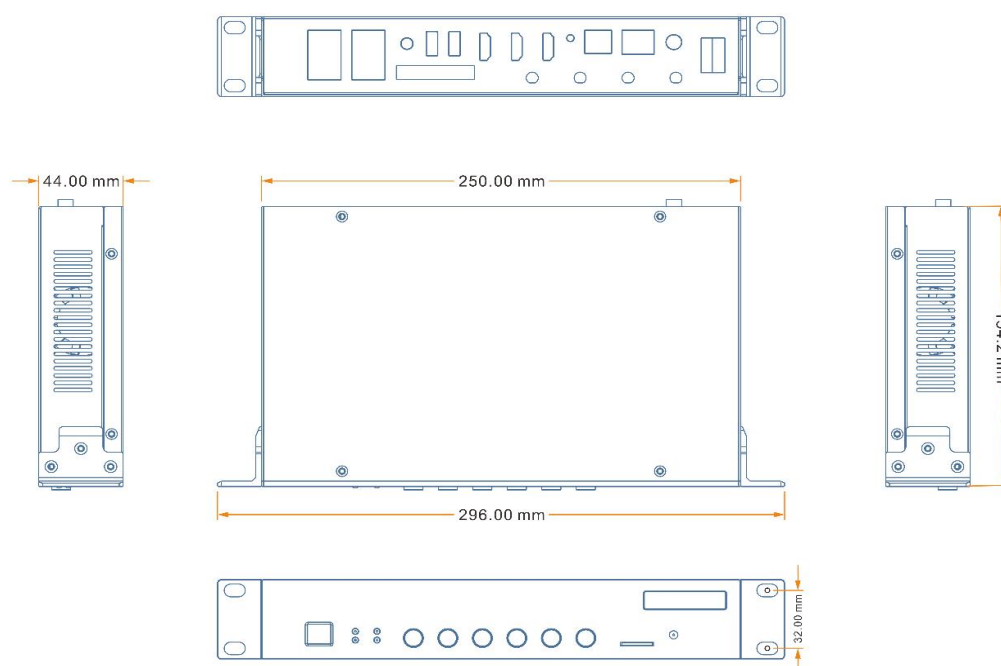


\* Product photos are for reference only, please refer to the products actually purchased.

| Rear Panel |                      |                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #          | Name                 | Illustration                                                                                                                                                                                                                                                                                                                                                                              |
| 1          | ON/OFF               | Device Power Switch: Turns on the device; the power button light stays on when powered.                                                                                                                                                                                                                                                                                                   |
| 2          | WI-FI and 4G Antenna | WIFI-AP Interface: Connects to the WIFI antenna to enhance wireless signal.<br>4G Antenna Interface: 4G antenna connector (included when the 4G module is optional).                                                                                                                                                                                                                      |
| 3          | DC5~12V              | Input Power Interface: 5.5 * 2.1 mm.                                                                                                                                                                                                                                                                                                                                                      |
| 4          | LAN                  | Gigabit Ethernet Port: For network access.                                                                                                                                                                                                                                                                                                                                                |
| 5          | SENSOR               | Light Sensor Probe Interface.                                                                                                                                                                                                                                                                                                                                                             |
| 6          | RESET                | Factory Reset.                                                                                                                                                                                                                                                                                                                                                                            |
| 7          | HDMI                 | HDMI IN1: Picture-in-picture synchronous signal input (currently supports 1920×1080@60Hz input only).<br>HDMI IN2: HDMI 1.4 interface, used for synchronous signal input or cascade input, supports adaptive scaling. Recommended resolution: 1920×1080@60Hz; maximum supported resolution: 3840×2160@30Hz.<br>HDMI OUT: HDMI output, used for cascade data loop-out or image monitoring. |
| 8          | USB3.0<br>OTG        | USB 3.0 × 1: Supports Android mouse, keyboard, USB drive for program playback and updates.<br>OTG × 1: (OTG mode)                                                                                                                                                                                                                                                                         |

|    |         |                                                                                                                                                                                                    |
|----|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9  | AUDIO   | 1 × 1/8" (3.5mm) TRS plug audio output.                                                                                                                                                            |
| 10 | LED OUT | 4 × Gigabit Ethernet ports for output.                                                                                                                                                             |
| 11 | RELAY   | 2-pin Phoenix terminal, reserved for relay interface.<br>R1, R2: Relay switch signals.                                                                                                             |
|    | RS485   | RS485 Interface: 4-pin Phoenix terminal, supports central control protocol.<br>V: 3.3V positive terminal.<br>A: 485 A positive end.<br>B: 485 B negative end.<br>G: GND (power negative terminal). |
|    | RS232   | RS232 Interface: 4-pin Phoenix terminal, supports central control protocol.<br>V: 3.3V positive terminal.<br>TX: Transmit data.<br>RX: Receive data.<br>G: GND (power negative terminal).          |

## 6.2 Dimensions(Size: mm)



Tolerance:  $\pm 0.3$  Unit: mm

## 7 Product Parameters

### 7.1 Performance Parameters

|                           |                                                                                                                    |
|---------------------------|--------------------------------------------------------------------------------------------------------------------|
| Performance Parameters    | Processor: Quad-core Cortex-A55<br>Memory: 2 GB DDR3 high-speed RAM<br>Flash Storage: 64GB EMMC high-speed storage |
| Decoding capability       | 1080p60 H.265, H.264 encoding<br>4K H.264/H.265/VP9 60fps video decoder                                            |
| Network Access Method     | 100 Megabit, LAN、WiFi AP、WiFi STA, 4G Module (Optional)                                                            |
| Processing Capacity       | Supports 2.6 Million pixels<br>Maximum width: 3840 pixels, maximum height: 3840 pixels                             |
| Supported Receiving Cards | Mooncell Receiving Cards                                                                                           |

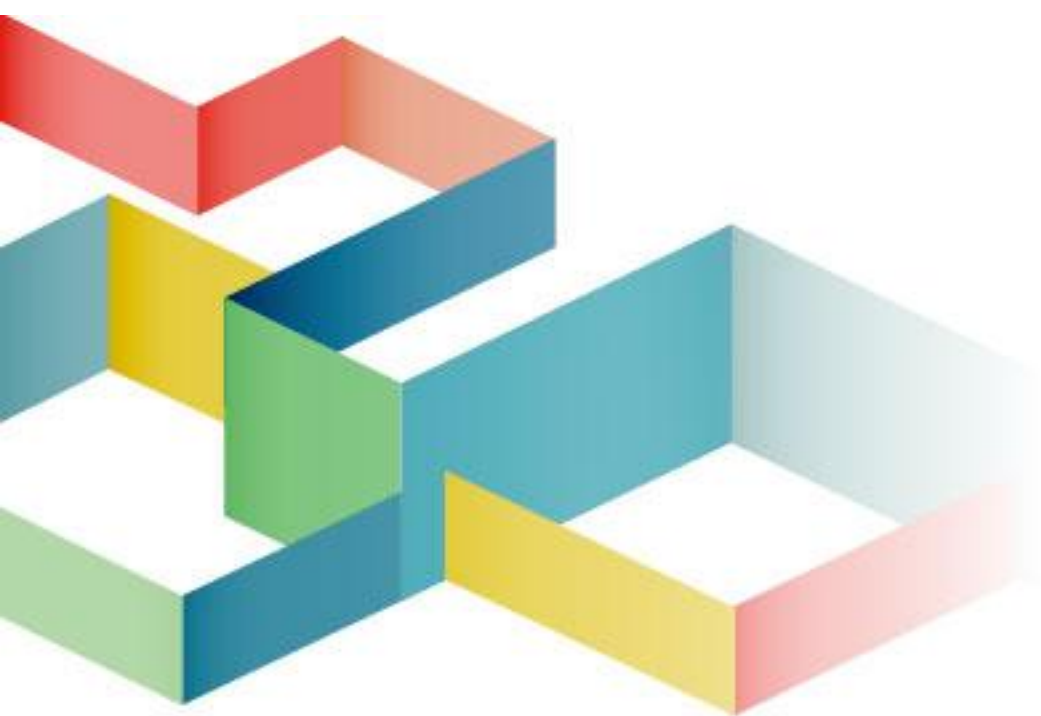
### 7.2 Specification

|                       |                       |                                                                                                                                            |
|-----------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical Parameters | Rated Voltage         | DC 12V                                                                                                                                     |
|                       | Rated Power           | 15W                                                                                                                                        |
| Operating Environment | Operating Temperature | -20°C~60°C                                                                                                                                 |
|                       | Operating Humidity    | 0%RH~80%RH, No condensation                                                                                                                |
| Storage Environment   | Storage Temperature   | -40°C~80°C                                                                                                                                 |
| Dimensions            | 296mm×154.2mm×44mm    |                                                                                                                                            |
| Net Weight            | 1.18 Kg               |                                                                                                                                            |
| Packing Information   | List                  | Wi-Fi Antenna ×2, 12V/3A Power Adapter(5.5mm × 2.5mm 2-pin DC cable, total length 1500mm), HDMI Cable ×1, Ethernet Cable ×1, Certificate×1 |
|                       | Option List           | 4G Module (includes 4G module, antenna, and antenna mount)                                                                                 |
|                       | Dimension             | 365 mm×280 mm×75 mm                                                                                                                        |
|                       | Packaging             | Single unit, outer packaging varies in size depending on quantity.                                                                         |
|                       | Gross Weight          | 1.77 Kg                                                                                                                                    |

\* Current and power consumption may vary according to different factors such as product usage, environment and settings.

## **8 Precautions**

- The installation process must be completed by professionals.
- Must be antistatic.
- Please pay attention to waterproof and dust removal.



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