

MP4

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 (V2.0)	July 30(th), 2025	First release

2 Product Introduction

MP4 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 MP4 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; single port resolution up to 3840 x 3840.

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).



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.
- 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
- Supports Android 12 operating system
- Dual-mode operation: Wi-Fi AP and Wi-Fi STA

4 Product Features

4.1 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 2.0 and one USB 3.0 port for program insertion and storage expansion.
- Supports 1 sensor interface for connecting 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.

4.2 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,etc.
TXT Display	Single-Line TXT,Static TXT,Multi-Line TXT
Image Partition	It supports Video,Image,Scrolling Caption,LOGO,Data and Time; the images could be partitioned freely.
OSD Supported	It supports 32bit 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

4.3 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 according to scheduled programs
Management Software	APP Supports various Android and iOS devices
Scheduled power on/off	Centralized settings can be configured through the management system.

5 Product Appearance

Front Panel



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

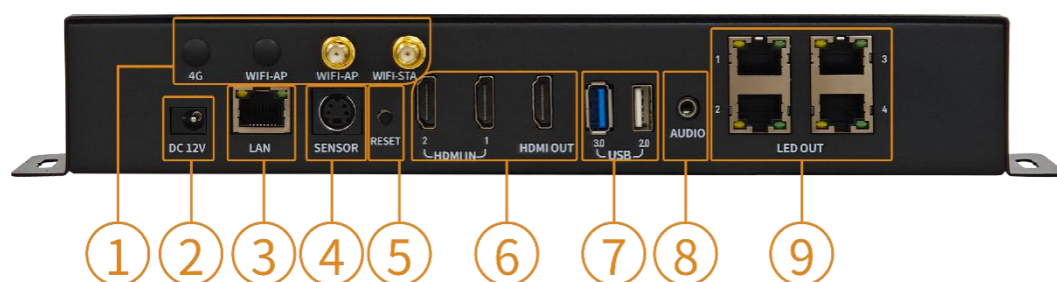
5.1 Data Interface Description

Interface Name	Interface Introduction
Indicator	● POWER: FPGA status indicator, always on red when starting up; ● RUN: Android indicator. Green flashing indicates the operating system is functioning normally; steady on/off indicates an operating system malfunction. ● HDMI IN1: The HDMI button selects synchronization. The indicator light is always

	on red when it is in the pixel-to-pixel state, and the indicator light flashes when the zoom state is in; ● PART: Indicator light steady on: Point-to-point display mode; Off: Full-screen zoom mode ● LOCK: button lock, the red is always on and locked; press and hold the LOCK button for 4 to 5 seconds until the LOCK indicator light goes out and the button is unlocked; The device will automatically lock the button after 2 minutes of no operation; the default button lock is locked when the device is powered on; ● INC: 1. INC indicator flashes rapidly: Receiving card position during current inspection; 2. INC indicator flashes slowly: Receiving card parameters during current inspection; 3. INC indicator stays lit: Currently consolidating inspection data. ● 4G: The 4G indicator light is always on in red to indicate that the 4G module is working normally, otherwise it will be off; flashing indicates data communication; ● WIFI: WIFI indicator light. When WIFI is enabled but no device is connected, it stays solid green; otherwise, it turns off. In WIFI AP mode, it flashes rapidly; in WIFI STA mode, it flashes slowly.
Button	HDMI IN 1&ASYNC: Switch between synchronous and asynchronous signal playback PART: Short press: Switch between pixel-to-pixel/full-screen zoom mode LOCK: Long press for 2 seconds: Unlock keypad lock. After system startup, the keypad lock is enabled by default with the indicator light solid red. When unlocked, the indicator light turns off. NEXT: Switch to the next program. Only effective when the ASYNS button is selected. INC: support for inspection. 1, short press the key, INC indicator light flashes fast, the sending card has been patrolling the receiving card offset; when the INC indicator light flashes fast, press the key, INC indicator light out immediately release the key, INC indicator light no longer flashes fast, the inspection function is closed. 2、 Long press the key for more than 3S and then release it, INC indicator light will flash

	slowly, and the sending card will start to inspect, and the contents of the inspection will be all the contents of the inspection configured by the host computer (receiving card network port offset, receiving card parameters, sending card parameters). End of the inspection, INC indicator off. 3、 Press and hold the button for more than 10s and then release it, the INC indicator light will be always on, and the contents of the inspection will be saved (receiving card offset, receiving card parameter, receiving card gamma, sending card parameter), do not carry out any other operation during the process of curing. When curing is finished, the INC indicator turns off. 4. The above operations are performed when AutoLED is not connected. 5. The above functions can only take effect after the master control cures the data and then saves the inspection parameters.
IR	Supports remote control operation to switch programs on Android media players.
SIM	SIM: Micro SIM card, 4G mobile SIM Provides 4G/5G connectivity for remote control (requires optional 4G/5G module)
Power Switch	Device Power Switch

Rear Panel

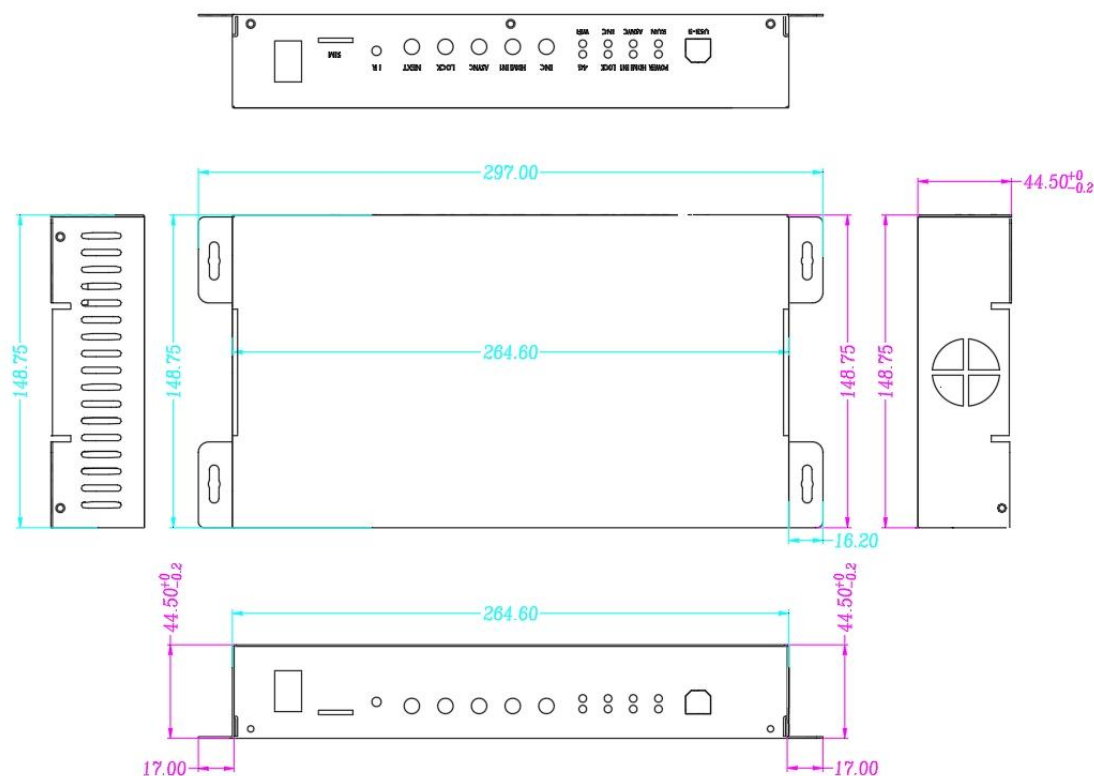




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Rear Panel		
#	Name	Illustration
1	WI-FI Antenna 4G Antenna	WiFi-AP Interface: Connects to WiFi antenna to enhance wireless signal 4G Antenna Interface: 4G antenna interface (equipped when opting for the 4G module)
2	DC 12V	Input power connector, 5.5 x 2.1 mm
3	LAN	Gigabit Ethernet network connection
4	SENSOR	Light sensor probe interface
5	Reset	Factory settings
6	HDMI	HDMI IN2: Sync signal input or video wall input HDMI IN1: Sync signal input, supports adaptive scaling HDMI OUT: HDMI output
7	USB	USB 3.0 × 1, USB 2.0 × 1; Supports Android mice, keyboards, and USB drives for program playback and updates
8	AUDIO	1 x 1/8" (3.5mm) TRS audio output jack
9	LED OUT	4 Gigabit Ethernet ports

5.2 Dimensions(Size: mm)



Tolerance: ± 0.3 Unit: mm

6 Product Parameters

6.1 Performance Parameters

Performance Parameters	Processor: Quad-core Cortex-A55 Memory: 4 GB DDR3 high-speed RAM Flash Storage: 64GB EMMC high-speed storage
Decoding capability	1080p60 H.265, H.264 encoding 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 Maximum width: 3840 pixels, maximum height: 3840 pixels
Supported Receiving Cards	Mooncell Receiving Cards

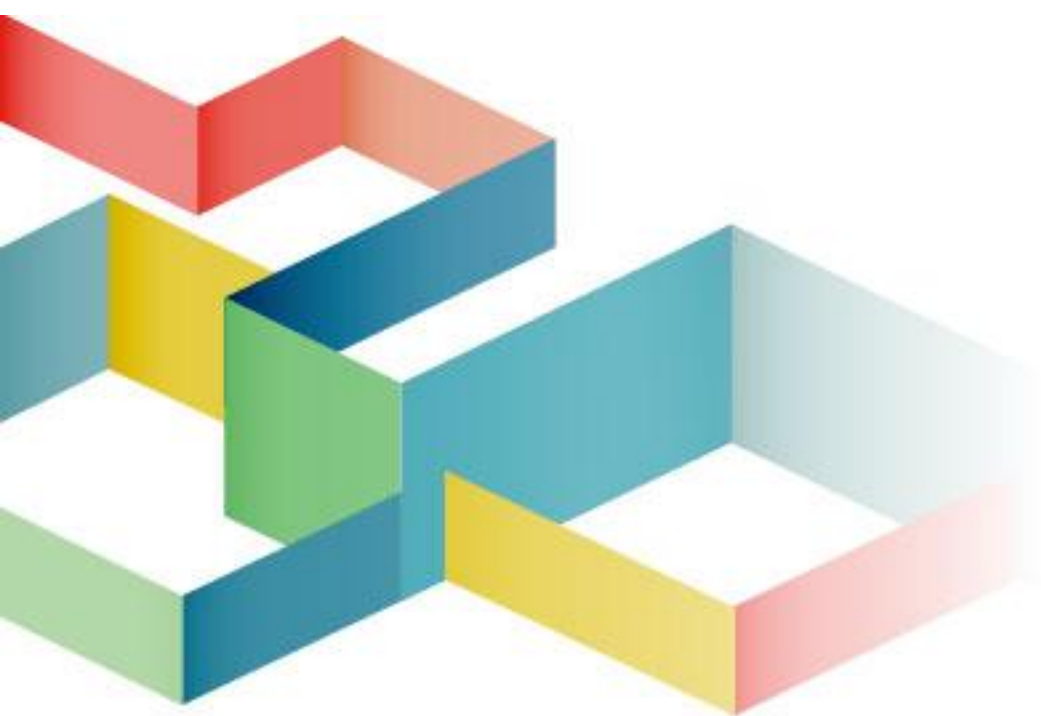
6.2 Specification

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	297mm×148.75mm×44.5mm	
Net Weight	0.6 Kg	
Packing Information	List	Wi-Fi Antenna ×2, 12V/2A Power Adapter (5.5mm × 2.1mm × 10mm standard connector), HDMI Cable ×1, Ethernet Cable ×1, Certificate×1
	Option List	4G Module (includes 4G module, antenna, and antenna mount)
	Dimension	320 mm×275 mm×115 mm
	Packaging	Single unit, outer packaging varies in size depending on quantity.
	Gross Weight	1.2 Kg

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

7 Precautions

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



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