

MB400S

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	MB4 (V1.4)	August 1(th), 2025	First release

2 Product Introduction

The MB400S is a custom-designed network player for irregularly shaped displays. Equipped with an 8-core high-performance CPU, it delivers powerful processing capabilities and integrates a sending card into a single unit, offering robust video processing and exceptional value for money. Compact in size and low in power consumption, the MB400S operates across a wide temperature range and is easy to install and maintain. Supporting dual Ethernet outputs with a maximum load capacity of 1.3 million pixels, the MB400S effectively enhances load utilization for non-standard displays. It accommodates a maximum width of 3840 pixels and a maximum height of 2160 pixels.

The MB400S is widely applicable across commercial sectors for irregular LED displays such as sphere screens and circular screens, rings. Its built-in multimedia playback capability eliminates the need for a computer as a video source, delivering significant advantages.



3 Product Characteristics

- Supports synchronous/asynchronous switching
- Supports HDMI loop-out
- Supports H.265 hardware decoding
- Supports cloud cluster control management
- Supports Android 7.1 system
- Supports comprehensive program control and display panel management via mobile/iPad, LAN, PC
- Supports control of various LED irregular displays including sphere and circular screens
- Supports Wi-Fi connectivity and can function as a Wi-Fi hotspot
- Low power consumption with stable, reliable performance across wide temperature ranges
- Compact size for easy installation and maintenance

4 Product Features

4.1 Features

- Supports switching between synchronous and asynchronous signals
- Supports HDMI input and HDMI loop-out
- Supports H.265 4K HD hardware decoding playback
- Supports cloud cluster control management for program deployment without on-site debugging
- Supports multiple networking methods including LAN/WIFI/4G
- Supports various content types: HD video, images, text, weather, clock, etc.
- Supports multi-window playback with freely adjustable window size/position and window overlay
- Provides Android/iOS system apps
- Enables flexible content management and parameter settings via PC, mobile, or tablet devices

- Supports RS485 sensor interface for monitoring environmental parameters like temperature, humidity, and brightness
- Supports NTP precise timing
- Supports multi-screen synchronized display
- Supports USB flash drive program updates with plug-and-play functionality
- Supports program updates and management via cloud platform
- Supports automatic and scheduled intelligent brightness adjustment
- Supports control of various irregular LED displays such as sphere screens and circular, ring screens

4.2 Audio & Video Performance:

Programs Partition	The Programs Windows could be partitioned arbitrarily ,and supports arbitrary window overlay
Video Format	MP4、MPG、MKV、MOV、3GP、WEMB etc.
Audio Format	MPEG-1 Layer III, AAC,etc.
Image Format	JPG、PNG, GIF 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 as you wish.
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

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/ Power on/off	Supports playback according to scheduled programs,support timing power on/off
Management Software	APP Supports various Android and iOS devices

5 Product Appearance

Front Panel



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

5.1 Data Interface Description

Name	Illustration
DC 12V	Input Power Connector: 5.5*2.5MM
CONFIG	Set Display Parameters via USB Type-B Port
Sensor	Light-sensing Probe Interface
USB	USB 2.0 x 2, for external USB flash drives or other devices
WiFi	WiFi Antenna Connector
4G	4G Antenna Connector (Includes 4G antenna connector when opting for 4G module)

Rear Panel

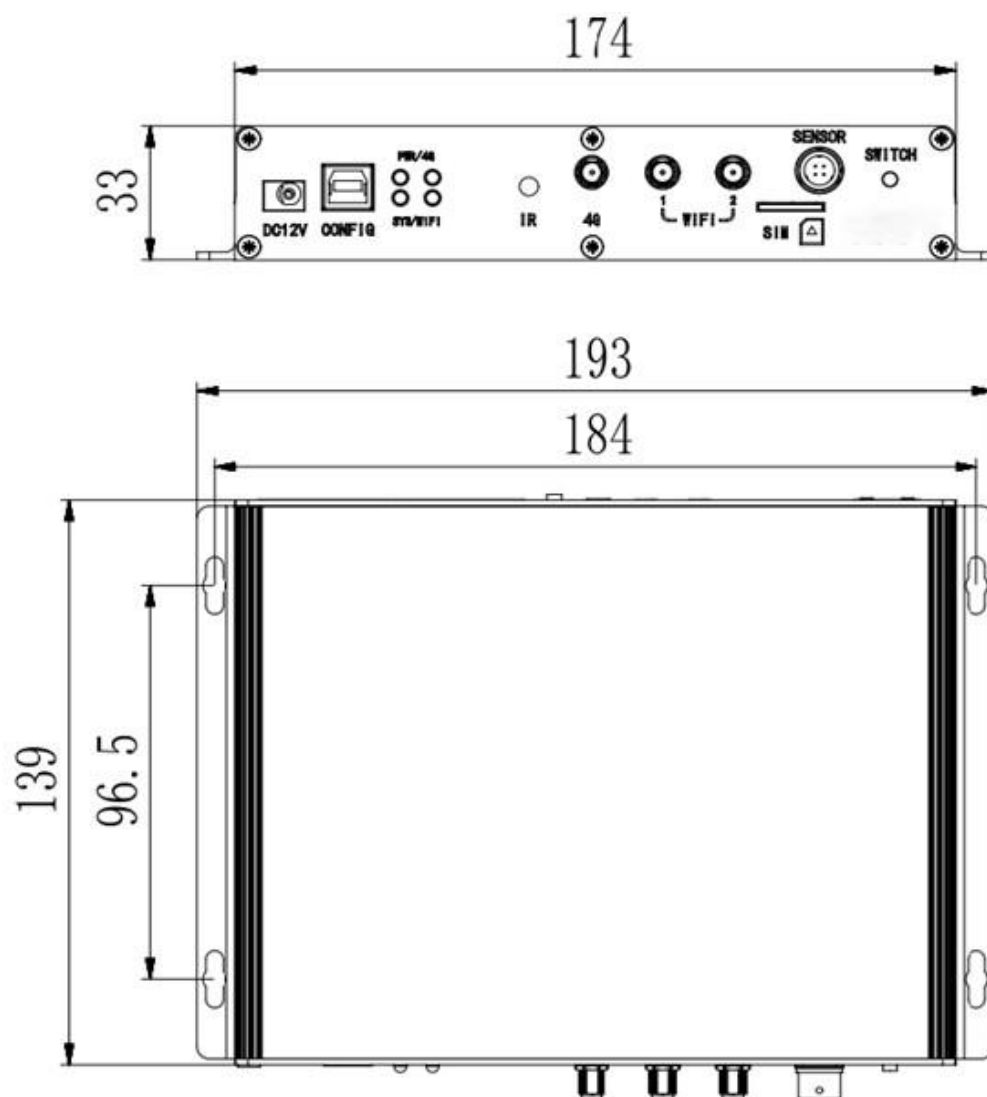


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Name	Illustration
LEDOUT	2 Gigabit Ethernet ports output signals to the receiving card
ETHERNET	100Mbps Ethernet network access
USB	2x USB 2.0 ports for external USB storage or other devices
HDMI IN	HDMI input
HDMI OUT	HDMI output
AUDIO	1/8" (3.5mm) TRS audio output jack
RESET	Restore factory settings

Indicator	Illustration
4G	Constant On: 4G module functioning normally Off: 4G module malfunctioning
PWR	Power Indicator: Remains on when powered
WIFI	Constant On: Wi-Fi hotspot functioning normally Off: Wi-Fi hotspot malfunctioning
SYS	Flashing: Operating system running normally Constant On/Off: Operating system malfunctioning

5.2 Dimensions(Size: mm)



Tolerance: ± 0.3 Unit: mm

6 Product Parameters

6.1 Performance Parameters

Performance Parameters	Processor: Octa-core CPU Memory: 2GB DDR3 high-speed RAM Flash Storage: 8GB eMMC high-speed storage Resolution: Supports H.265 HD hardware decoding playback
Network Access Method	100 Megabit, LAN、WiFi AP/Station、4G Module (Optional)
Processing Capacity	Supports 1.3 million pixels Maximum width: 3840 pixels, maximum height: 2160 pixels
Supported Receiving Cards	Mooncell Receiving Cards

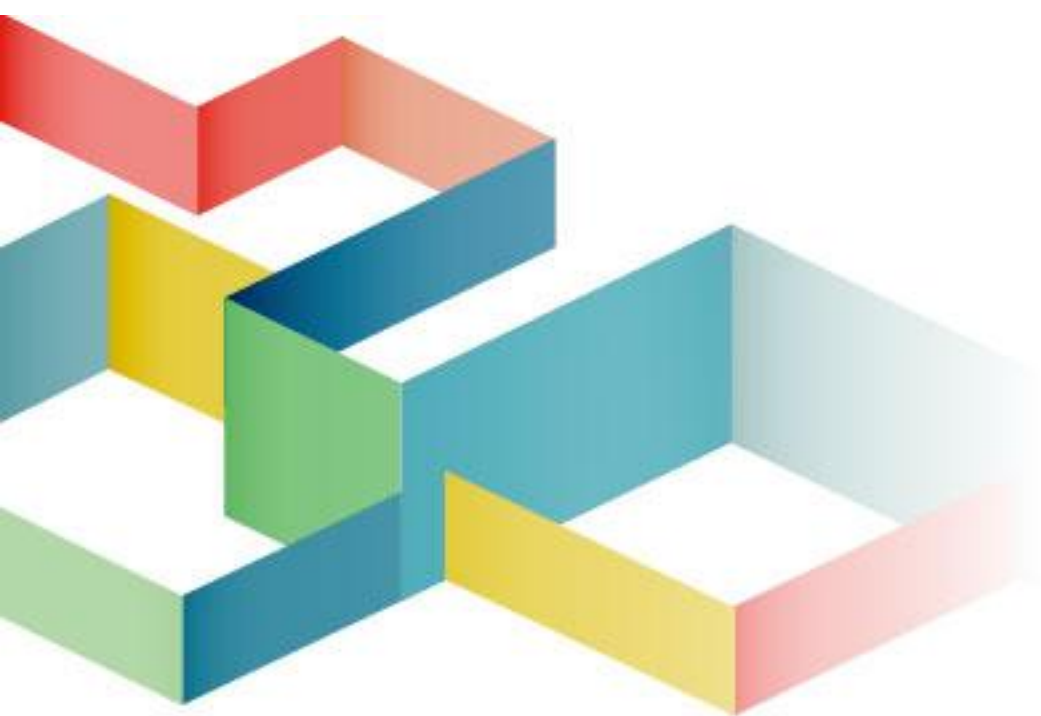
6.2 Specification

Electrical Parameters	Rated Voltage	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	193mm×139mm×33mm	
Net Weight	0.56Kg	
Packing Information	List	1× Wi-Fi antenna, 1× 5V power adapter (5.5mm × 2.5mm standard connector), 1× USB cable, 1×Certificate
	Option List	4G Module (includes 4G module, antenna, and antenna mount)
	Dimension	300mm×245mm×85mm
	Packaging	Single unit, outer packaging varies in size depending on quantity.
	Gross Weight	0.95Kg

* 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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