

MP2S

LED NETWORK MEDIA PLAYER

Synchronous and asynchronous playback for connected LED displays.

1.3M

PIXEL CAPACITY

2

GIGABIT LED OUTPUTS

HDMI 1.3

SYNCHRONOUS INPUT

8 GB

INTERNAL STORAGE

CONNECTED PLAYBACK AND SENDING CONTROL

PC / Android / iOS | LAN / Wi-Fi / Optional 4G

HDMI input | USB playback | Cloud publishing and monitoring

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SECTION 01

PRODUCT OVERVIEW

A compact media player that combines programme playback and LED data output.

MP2S is a new-generation intelligent playback and control processor for full-colour LED displays. It combines media playback and sending functions, supports programme publishing and display control from PCs, mobile phones and tablets, and connects to cloud publishing and monitoring platforms for cross-region cluster management.

The device supports synchronous and asynchronous operation as well as USB-drive programme playback. Terminal authentication and playback verification provide multiple layers of playback security.

4	1 GB	8 GB	15 W
CORTEX-A35 CORES	SYSTEM MEMORY	INTERNAL STORAGE	RATED POWER

DEPLOYMENT ENVIRONMENTS

Fixed LED displays • Smart pole displays • Storefront signs • Chain-store display networks • Retail-store displays
• Shelf displays • LED electronic whiteboards • Mirror displays • Transparent glass displays • Advertising displays
• PC-free LED display installations

PRODUCT POSITIONING

- Stable, secure and easy to use, MP2S supports commercial LED displays and smart-city applications, with integrated playback and LED sending control.
- Synchronous mode uses the HDMI input source; asynchronous mode uses internally stored media.
- Synchronous and asynchronous modes can be selected using the HDMI IN button.

REFERENCE IMAGES Product images are for reference only. The delivered product prevails.

SECTION 02

APPLICATION SCENARIOS

Commercial displays, smart-city installations and connected signage networks.



Smart pole displays



Shopping mall LED displays



LED advertising displays



Cube LED displays

OPERATING PATH	FUNCTION
Asynchronous playback	Uses internal media and scheduled programmes. Content can be published over the network or played from a USB drive.
Synchronous playback	Uses the HDMI 1.3 input as the active video source.
Remote management	PC, Android and iOS terminals publish programmes and control display operation through LAN, Wi-Fi or optional 4G.
LED output	Two Gigabit Ethernet outputs drive the downstream receiving system, with a total capacity of 1,300,000 pixels.

NETWORK PRIORITY When several access methods are active, the device automatically selects the connection in this order: wired LAN, Wi-Fi, then 4G.

SECTION 03

HARDWARE AND VIDEO PERFORMANCE

Processing resources, input limits, output capacity and local control functions.

ITEM	SPECIFICATION
Processor	Quad-core Cortex-A35 (32-bit), up to 1.5 GHz
System memory	1 GB
Internal storage	8 GB
Video windows	Up to 2 × 1080p, 4 × 720p or 6 × 360p windows
HDMI input	1 × HDMI 1.3; pixel clock up to 300 MHz; maximum 1920 × 1200 at 60 Hz
HDMI input behaviour	Progressive signals only; custom resolutions and image scaling supported
LED output	2 × Gigabit Ethernet; 1,300,000-pixel capacity; image scaling supported
Maximum canvas extent	Published maximum width: 7,680 pixels; published maximum height: 7,680 pixels
Audio output	1 × 3.5 mm (1/8-inch) TRS output
Management LAN	1 × 100 Mbps Ethernet port for programme publishing and display configuration
USB	1 × USB 2.0 for programme playback and updates; supports Android-compatible mouse and keyboard

OFFLINE BUTTON CONTROL

- HDMI IN: switches between synchronous and asynchronous sources.
- SCALE: switches between pixel-to-pixel mapping and full-screen scaling.
- NEXT: selects the next programme in Android playback mode.

SECTION 04

MEDIA AND PLAYBACK FUNCTIONS

Supported content types, layout control, scheduling and synchronized playback.

FUNCTION	CAPABILITY
Multi-window playback	Free window sizing, positioning and overlap; up to 2 × 1080p, 4 × 720p or 6 × 360p video windows
Media assets	Video, images, text, documents, clocks, streaming media, web pages, weather, timers and promotional discount windows
Video formats	MP4, MKV and other common formats
Audio formats	MPEG-1 Layer III, AAC and other common formats
Image formats	JPG, PNG and GIF
Text display	Single-line text, static text, multi-line text and multicolour text
Screen layout	Freely arranged video, images, scrolling text, logo, date and time regions
RTC	Real-time clock display and management
Scheduled playback	Programme-list-based playback
Scheduled power control	Centralized scheduled display power on/off through the management system

MULTI-SCREEN SYNCHRONIZED PLAYBACK

MP2S supports synchronized playback across multiple screens using NTP time synchronization or GPS time synchronization. GPS synchronization requires the specified optional GPS module. Enabling synchronized playback reduces the published decoding capacity by half.

SECTION 05

NETWORK AND TERMINAL MANAGEMENT

Connected publishing, remote control, wireless access and optional expansion.

MANAGEMENT ITEM	DESCRIPTION
Network communication	LAN, Wi-Fi or optional 4G access
Programme updates	USB-drive plug-and-play or network delivery from a management terminal
Management devices	PC, Android and iOS smart devices
Wireless control	Real-time brightness adjustment, display on/off, system configuration, playback control and wireless programme delivery
Automatic brightness	Time-based adjustment or automatic adjustment using an ambient-light sensor
Management app	Supports Android and iOS devices
System software	Android 12 operating system, Android terminal application and FPGA firmware

WI-FI OPERATION

- AP and STA modes are mutually exclusive.
- In AP mode, terminals connect to the MP2S hotspot. The default SSID is the device serial number and the default password is 12345678.
- In STA mode, the device connects to another Wi-Fi network selected by the user.

OPTIONAL FUNCTIONS

- The 4G module is not included as standard and can be purchased separately, with an antenna and antenna base.
- Ambient-light sensor input for automatic display brightness adjustment.
- Infrared receiver interface for compatible remote-control functions.

SECTION 06

FRONT PANEL

Status indicators, local control buttons, synchronous input and network interfaces.



INTERFACE	DESCRIPTION
PWR	Red remains on after startup when device power is normal.
SYS	Green flashes during normal Android operation; continuously on or off indicates abnormal operating-system status.
4G indicator	Red remains on when the optional 4G module operates normally; flashes during data communication; off otherwise.
Wi-Fi indicator	Green remains on when Wi-Fi is enabled; AP and STA modes are mutually exclusive.
HDMI IN button	Short press switches between synchronous and asynchronous playback sources.
SCALE button	Green on indicates full-screen scaling; off indicates pixel-to-pixel mode. Short press changes mode.
NEXT button	Selects the next programme in Android playback mode.
HDMI IN	HDMI 1.3 synchronous video input.
IR	Optional infrared receiver connection.
SIM	Micro-SIM slot for optional 4G connectivity.
4G antenna	Antenna connection for the optional 4G module.
LAN	100 Mbps network port. Direct connection to the host computer supports programme publishing and display configuration.

SECTION 07

REAR PANEL

Power, USB, sensor, wireless, audio and LED data connections.



INTERFACE	DESCRIPTION
DC 12V	DC input, 5.5 × 2.1 mm connector
USB 2.0	Supports Android-compatible mouse and keyboard, USB-drive playback and programme updates
RESET	Press and hold for 10 seconds to restore factory settings. Do not disconnect power during restoration.
SENSOR	Ambient-light sensor interface
Wi-Fi	Wi-Fi antenna connection for improved wireless reception
AUDIO	One 3.5 mm (1/8-inch) TRS audio output
LED OUT	Two Gigabit Ethernet LED outputs. With no receiver card connected, the indicators remain on; during normal communication, the left yellow indicator flashes steadily.

SECTION 08

SIDE VIEW

Enclosure profile and mounting tabs.

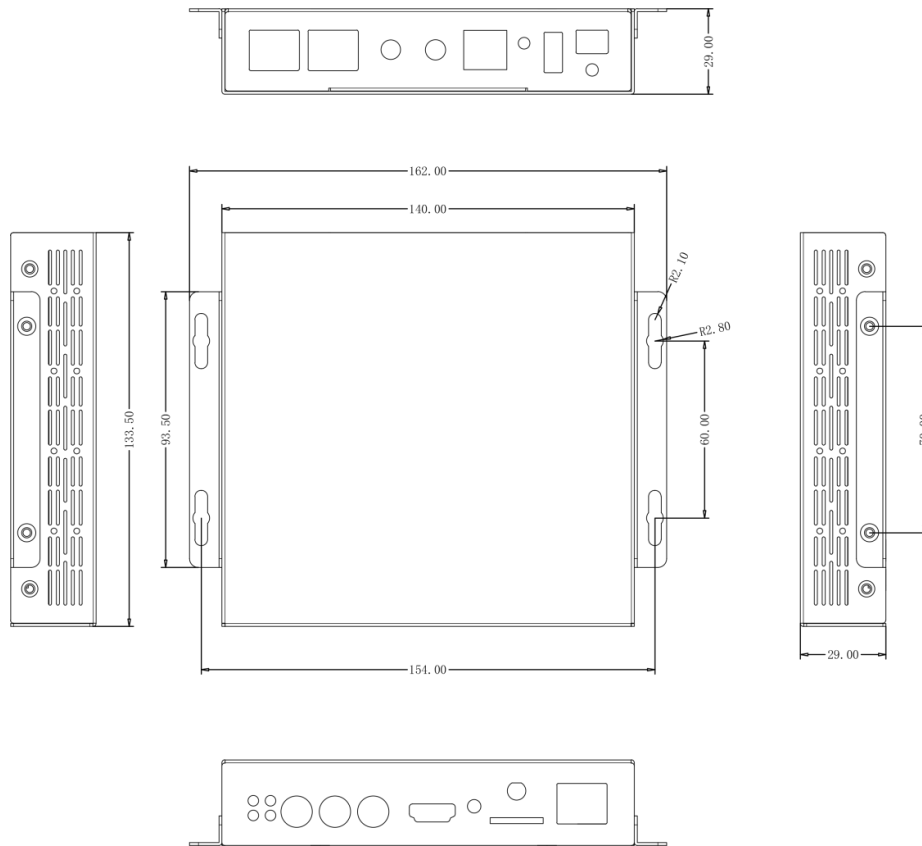


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SECTION 09

MECHANICAL AND ELECTRICAL SPECIFICATIONS

Installation dimensions, power requirements and environmental limits.



Dimensional tolerance: ± 0.3 mm. Units: mm.

PARAMETER	SPECIFICATION
Input voltage	DC 12 V
Rated power	15 W
Operating temperature	-20 °C to 60 °C
Operating humidity	0% RH to 80% RH, non-condensing
Storage temperature	-40 °C to 80 °C
Overall dimensions	162 × 133.5 × 29 mm (W × D × H)
Net weight	0.55 kg

SECTION 10

PACKAGE SAFETY AND DOCUMENT CONTROL

Supplied items, optional hardware, operating precautions and release information.

PACKAGE INFORMATION

ITEM	DETAIL
Standard contents	1 × Wi-Fi antenna; 1 × 12 V / 2 A power adapter with 5.5 × 2.1 mm connector; 1 × HDMI cable; 1 × Ethernet cable; 1 × certificate and packing list
Optional contents	4G kit including module, antenna and antenna base
Outer carton size	320 × 295 × 62 mm
Packaged weight	1.09 kg including accessories
Packing method	One device per package; outer packaging may change with order quantity

INSTALLATION AND HANDLING

- Installation must be performed by qualified professionals.
- Observe electrostatic-discharge precautions.
- Protect the equipment from water and dust.

REVISION HISTORY

DOCUMENT VERSION	HARDWARE VERSION	RELEASE DATE	REVISION
V4.0	MP2S V1.1	September 7, 2026	First release of the updated document

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Professional LED Display Control Systems

Specifications and product appearance are subject to change without notice.

