

MPX-1616-LM

HYBRID CARD MODULAR
MATRIX
SWITCHER

MPX-1616-LM — Hybrid Card Modular Matrix Switcher



Product Overview

The **MPX-1616-LM** is a professional hybrid card modular matrix switcher designed for cross-switching multiple audio and video signal types. Its modular architecture supports seamless HDMI, HDBaseT, SDI and VGA input/output signal cards, with independent audio/video terminals.

Key Features

- 16 input / 16 output channel chassis (3U).
- Modular signal-card architecture for flexible system design.
- Supports HDMI, HDBaseT, SDI and VGA seamless signal cards.
- EDID learning and 10 scene save/recall functions.
- Control via front-panel buttons, IR, RS-232 and TCP/IP.
- LCD display and indicators for real-time status.

Model	MPX-1616-LM
Chassis Type	Hybrid Card Modular Matrix Switcher
Capacity	16 input / 16 output channels
Chassis Height	3U
Signal Card Types	HDMI, HDBaseT, SDI and VGA
Control	RS-232, TCP/IP, IR Remote, Front Panel
Operating Temperature	0°C to +50°C
Relative Humidity	10% to 90%
Dimensions	436.6 × 320.0 × 132.5 mm (without mounting ears)
Power Consumption (no-load)	31 W
Manual Version	MPX-1616-LM_2026V1.0

Source reference: User Manual MPX-1616-LM_2026V1.0; functions described in the manual were updated by May 2025.

Series & Chassis Specifications

Input Slots	4 card slots for the 16-way hybrid matrix
Output Slots	4 card slots for the 16-way hybrid matrix
Control Interfaces	2 × DB9 RS-232; 1 × RJ45 TCP/IP; IR; front-panel buttons
Power	AC 110–220V
Power Consumption	31 W (no-load)
Dimensions	W436.6 × D320.0 × H132.5 mm
Operating Temperature	0°C to +50°C
Relative Humidity	10%–90%
Signal Port Hot Plug	Signal ports support hot plugging; signal cards do not support hot plugging

Compatible Input Signal Cards

MPX-4IUHS-C	4 × HDMI + 4 × analog audio; HDCP supported
MPX-4INH4-4K	4 × HDMI + 4 × analog audio; HDCP supported
MPX-4I-BTS-C	4 × RJ45 HDBaseT + audio + 3.5mm; HDCP not supported
MPX-4I-SS-V	4 × BNC SDI; HDCP not supported
MPX-4I-VA-C	4 × 15-pin D-Sub + 4 × analog audio; HDCP not supported

Compatible Output Signal Cards

MPX-4OUHS-C	4 × HDMI + analog audio; HDCP not supported
MPX-4OUTH4-4K	4 × HDMI + analog audio; HDCP not supported
MPX-4O-BTS-C	4 × RJ45 HDBaseT + audio + 3.5mm; HDCP supported
MPX-4O-SS	4 × BNC SDI; HDCP not supported
MPX-4O-VS-C	4 × 15-pin D-Sub + analog audio; HDCP not supported

Packing List

1 × Hybrid Card Matrix Switcher Host (without signal cards) • 1 × Power Adapter • 1 × RS-232 Cable • 1 × Remote Controller (without batteries) • 2 × Handles • 4 × Foot Pads • 1 × User Manual

4K@30Hz HDMI Seamless Card

Signal / Ports	4 × HDMI; 4 × analog audio; HDMI Type-A female; 3-pin terminal block
Maximum Resolution	3840 × 2160p @ 30Hz
Bandwidth	10.2 Gbps
Color Depth	8-bit
Audio	Embedded PCM, Dolby Digital, DTS, DTS-HD; external PCM
HDMI / HDCP	HDMI 1.3; input HDCP supported; output HDCP not supported
EDID	EDID learning supported
Gain / Switching	0 dB / 200 ns max
Power Consumption	12.5 W
Temperature / RH	0°C to +50°C / 10%–90%
Notes	HDMI compatible with DVI-D; output card supports 8 resolution adjustments; stereo audio embedding/de-embedding

4K@60Hz HDMI Seamless Card

Signal / Ports	4 × HDMI; 4 × analog audio; HDMI Type-A female; 3-pin terminal block
Maximum Resolution	4096 × 2160p @ 60Hz
Bandwidth	10.2 Gbps
Color Depth	8-bit
Audio	Embedded PCM, Dolby Digital, DTS, DTS-HD; external PCM
HDMI / HDCP	HDMI 1.4; input HDCP supported; output HDCP not supported
EDID	EDID learning supported
Gain / Switching	0 dB / 200 ns max
Power Consumption	Input 11.7 W; Output 14.5 W
Temperature / RH	0°C to +45°C / 10%–90%
Notes	Default resolution 3840 × 2160p @ 30Hz; compatible with DVI-D; stereo audio embedding/de-embedding

1080p HDBaseT Seamless Card

Signal / Ports	4 × HDBaseT, 4 × analog audio, 4 × RS-232; RJ45, 3.5mm audio, 3-pin terminal
Maximum Resolution	1920 × 1080p @ 60Hz
Bandwidth / Distance	10.2 Gbps / up to 70 m at 1080p
Audio	Embedded PCM, Dolby Digital, DTS, DTS-HD; external PCM
HDMI / HDCP	HDMI 1.3; input HDCP not supported; output HDCP supported
RS-232	Pass-through supported; two-way serial communication with compatible remote TX/RX
EDID	Manual EDID management

Power Consumption	Input 10.1 W; Output 7.1 W
Temperature / RH	0°C to +45°C / 10%–90%

Additional signal cards include 1080p SDI and 1080p VGA seamless input/output cards. Refer to the manual for complete card-level specifications and compatibility.

Application / System Diagram

General	
Gain	0 dB
Crosstalk	<-50dB@5MHz
Max Switching Rate	200ns
Max Resolution	1920 x 1080p@60Hz
Bandwidth	10.2Gbps
Transmission Distance	1080p ≤ 70m
Audio Format	Embedded audio format: PCM, Dolby Digital, DTS, DTS-HD External audio format: PCM
HDMI	HDMI 1.3
HDCP	Input: Not Support Output: Support
EDID	EDID manual management
Working Temp.	0°C ~ +45°C
Relative Humidity	10% ~ 90%

- Supports RS-232 pass-through.
- Default resolution is 1920 x 1080p@60Hz.
- The output card supports 22 resolution adjustments.
- The HDBaseT signal card needs to be used with the remote transmitter/ receiver, such as TPUH412T/ TPUH412R.
- Supports audio embedding and de-embedding, the default for input is built-in audio, and the default for output is de-embedded audio.
- The RS-232 serial port can be used in conjunction with a remote transmitter/receiver to achieve two-way serial communication.
- RJ45 port indicator status: After the device is powered on, but the cable is disconnected, the yellow light flashes. When the cable is connected, the yellow light flashes and the green light is always on.

System Application

The MPX-1616-LM acts as a central modular switching platform. Multiple source formats can be installed through compatible input cards and routed independently to selected output cards. The platform is intended for broadcasting and television projects, multimedia conference halls, large-screen display projects, TV teaching, and command-and-control centers.

Control Options

- Front-panel control with LCD status display and dedicated input/output channel buttons.
- IR remote control through the built-in IR receiver.
- TCP/IP control through the RJ45 interface, including Web-GUI/client control.
- RS-232 control through DB9 interfaces; default communication settings: 9600 baud, 8 data bits, 1 stop bit, no parity.

CORE CAPABILITY	DETAIL
Routing	Cross-switching of multiple signal input/output channels; independent audio and video terminals
Scene Memory	10 groups of scenes can be saved and recalled; EDID learning supported
Modularity	Signal cards can be selected and matched for system requirements
Status	LCD and indicators show working status in real time

The application diagram is presented on page 14 of the supplied manual; the manual notes that the diagram is for reference and actual application should follow the installed signal-card configuration.