ME10 Gateway Kit

IPMX Gateway Reference Design



An IPMX gateway for HDMI 2.0, built for Pro AV.
Start from a working design, customize it with our engineering team, and reach the market sooner.

Macnica ME10 Gateway Kit - Your Pathway to IPMX

An IPMX endpoint means solving the transport layer first: JPEG-XS compression, PTP timing, NMOS control, HDCP, and interoperability with equipment that has not shipped yet. That's a year or more of development that won't differentiate your product once it ships.

The ME10 Gateway Kit is a working IPMX gateway built on Macnica's ME10 SoC. Board, firmware and enclosure run today, configurable as a sender or a receiver. Evaluate it as a kit, then carry the same design forward as the starting point for your commercial gateway.



IPMX from the Start

IPMX gives Pro AV the interoperability of ST 2110, without broadcast's assumptions about environment, budget and operator. Macnica helped write the IPMX specification, and the ME10 SoC was designed against it from the silicon up.

CERTIFIED IPMX IP MEDIA EXPERIENCE
ICID: IPMX-2026-4830
ALLIANCE FOR IP MEDIA SOLUTIONS
ipmx.io/registry
Profiles: Uncompressed Audio • JPEG-XS

Built for Pro AV

Up to 4K60p with full 4:4:4 chroma at 8-bit and 10-bit, so fine detail and small type stay sharp across the network. JPEG-XS from intoPIX holds latency under a frame, keeping the source usable for live presentation and KVM.

HDCP 2.3 with HKEP passes protected sources end to end. Up to eight audio channels ride embedded in HDMI, with analog line in and out for the room system.

Fastest Time to Market

The ME10 Gateway Kit is a finished, working gateway, so the hardest parts of an IPMX product are already behind you. Build directly on the design, or use it as the foundation for something more.

Macnica's engineering team helps you adapt the design to your enclosure and I/O, integrate your control and branding, and carry it through to production.

Features

- Built on the Macnica ME10 SoC, purpose-built for IPMX
- HDMI 2.0 in or out, configurable as sender or receiver
- Up to 4K60p, RGB and YUV 4:4:4 at 8-bit and 10-bit
- JPEG-XS compression from intoPIX
- Sub-frame latency for live presentation and KVM
- HDCP 2.3 with HKEP, EDID handling over NMOS IS-11
- Analog line audio in and out, plus 8 embedded channels
- USB 2.0 OTG for KVM HID
- NMOS IS-04, IS-05 and IS-11 over a RESTful API
- Powered over PoE+, or from a 12V DC supply
- Rear-panel UART, microSD and JTAG for bring-up
- A path to volume through Macnica partner ODMs

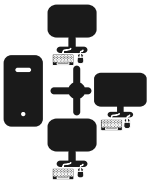
Example Applications

Presentation spaces
Corporate AV



HDMI in and out over the room's existing network, with USB HID alongside so the keyboard and mouse follow the source.

KVM Extension
Control Rooms



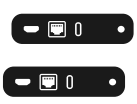
Sub-frame latency keeps the operator experience interactive across a network path instead of a point-to-point cable.

Display Endpoints
Retais, Venue, Transport



A receiver-configured SBE drives a display from a shared IPMX network, discovered and routed over IS-04 and IS-05.

Product Platform
AV Manufacturers



The starting point for your own commercial encoder or decoder, with the partner ODM program available for volume.

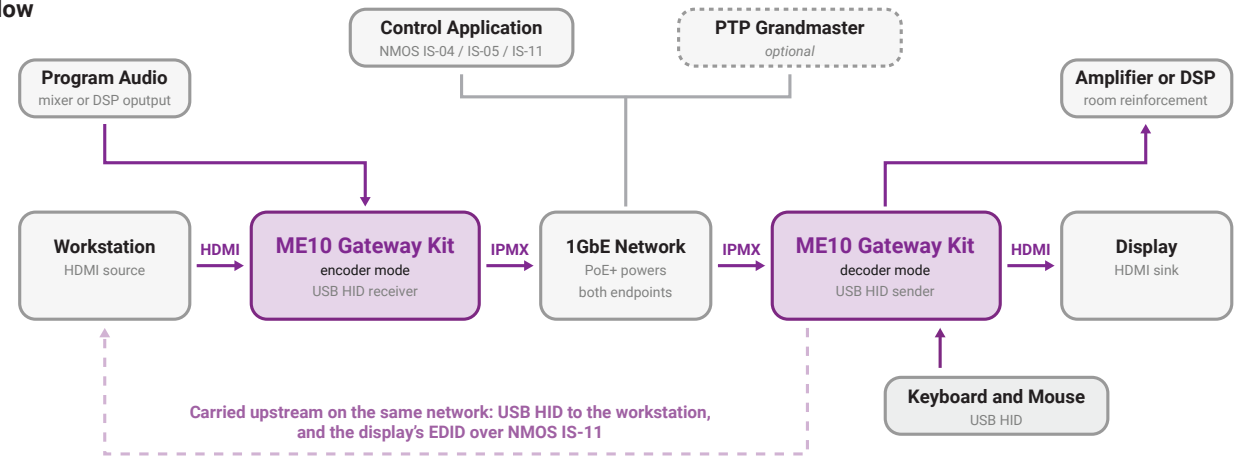
macnica.com/americas

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Signal Flow



Technical Specifications

Feature	Specification	Note
Video and Audio		
Video Input/Output	1 x HDMI 2.0. Input in encoder mode, output in decoder mode	
Video Resolution	Up to 4K60p, common Pro AV resolutions supported	
Video Color Space	RGB 4:4:4 8-bit / 10-bit; YUV 4:4:4 8-bit / 10-bit; YUV 4:2:2 8-bit	
Codec	JPEG-XS	
Latency	Sub-frame	
Audio	Unbalanced analog stereo line in and out on 3.5 mm; up to 8 channels embedded in HDMI	48KHz Sampling Rate / 24 bit Depth
Network, Control & Security		
IP Network Connection	IPMX via RJ45 1Ggigabit Ethernet	
Control	NMOS IS-04, IS-05 and IS-11 via RESTful API	IS-11 carries sink metadata, including EDID
HDCP	HDCP 2.3 with HKEP	Third-party HDCP device; full documentation and integration support from Macnica
USB	1 x USB 2.0 OTG for KVM HID	1 A bus power. More than one peripheral needs an OTG adapter and an external hub
Developer Interfaces		
Serial	2 x UART on 3-pin Phoenix connectors (UART0, UART1)	G / T / R
Storage	MicroSD	Boot and Firmware
Debug	JTAG header and service micro-USB	
Physical		
Power	PoE+ (IEEE 802.3at) or 12V DC ±5%, 15 W	Back-panel power switch
Dimensions	6 (W) x 7.5 (D) x 1 (H) inch | 152 (W) x 190.5 (D) x 25.4 (H) mm	
Enclosure	Black, ventilated, with mounting flanges	
Operational Temperature	0 - 45 °C	

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