NetworkAV™ HDMI over IP Encoder/Decoder Kit — 120M 1080p

The EXT-AVIP120M delivers a simple and cost-effective path to HDMI distribution over IP — extending full HD 1080p/60 HDMI signals up to 120m (394 ft) over a single UTP CAT5e/6 cable using MJPEG compression. The included encoder/decoder kit supports point-to-point, point-to-many, and many-to-many configurations over standard TCP/IP network infrastructure, with no proprietary switching hardware required for basic deployments.

Built into a compact metal enclosure with integrated mounting ears, the EXT-AVIP120M is well suited for classrooms, lobbies, digital signage networks, and corporate AV systems where 1080p distribution is needed without the cost or complexity of a dedicated AV matrix. IR pass-through and an embedded HTTP server for IP configuration are included. For larger many-to-many deployments, VLAN configuration and a compatible 10G switch are required.

- Encoder/Decoder Kit
- 1080p@60Hz
- 120M Range
- IR Control
- HDCP Compliant

FEATURES

- ✓ Extends 1080p HDMI signals up to 120m (394 ft) over a single UTP CAT5e/6 cable
- ✓ Includes both encoder (TX) and decoder (RX) — complete kit, no additional hardware required for point-to-point
- ✓ MJPEG compression — supports point-to-point, point-to-many, and many-to-many network configurations
- ✓ Cascadable via 10G Ethernet switches for large-scale many-to-many deployments
- ✓ Wideband IR pass-through 38–56kHz for remote source control
- ✓ Embedded HTTP server for IP configuration via web browser — no software installation required
- ✓ HDCP compliant; supports TCP/IP protocol
- ✓ Metal enclosure with integrated rack-mount ears and 5V DC power supplies included

PACKAGE CONTENTS

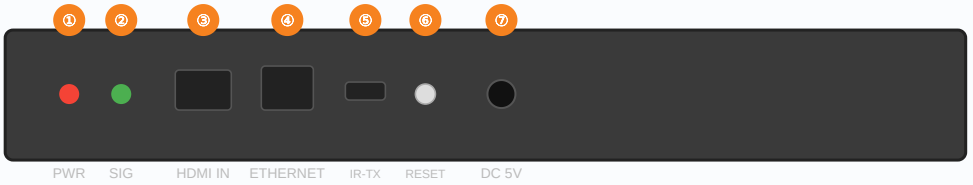
1× Transmitter • 1× Receiver • 1× IR-TX cable • 1× IR-RX cable • 2× Power adapter DC 5V/1A • 1× User manual

Specifications

VIDEO	
Compression	MJPEG
Supported Formats	DTV/HDTV: 480i / 576i / 480p / 576p / 720p / 1080i / 1080p
Input Video Signal	0.5–1.0V P-P
Input DDC Signal	5V P-P (TTL)
Video Output	HDMI
HDCP	Compliant
TRANSMISSION	
Max Distance	120m (394 ft) over CAT5E/6, 24AWG solid
Protocol	TCP/IP
CONTROL	
IR Frequency	38–56kHz
NETWORK	
Default IP (TX)	192.168.168.55 (MAC: 00:0b:78:00:60:01)
Default IP (RX)	192.168.168.56 (MAC: 00:0b:78:00:60:02)
POWER	
Supply	DC 5V/1A (included)
Consumption	TX: 3W max / RX: 3W max
ENVIRONMENTAL	
Operating Temperature	-5 to +35°C (+23 to +95°F)
Operating Humidity	5–90% RH, non-condensing
PHYSICAL	
Dimensions (L×W×H)	4.07″ × 3.68″ × 0.97″ (103.5 × 93.5 × 24.6mm)
Net Weight (each)	0.49 lbs (220g)
CERTIFICATIONS	
Regulatory	FCC Class B (Part 15)

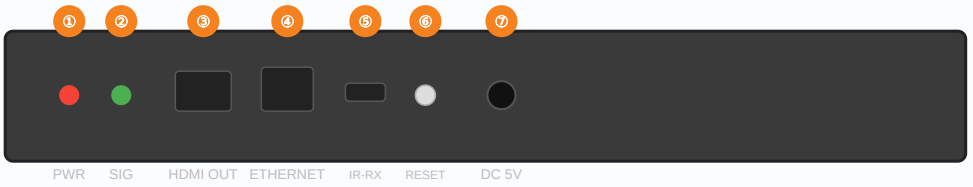
Panel Description

TRANSMITTER (TX) PANEL



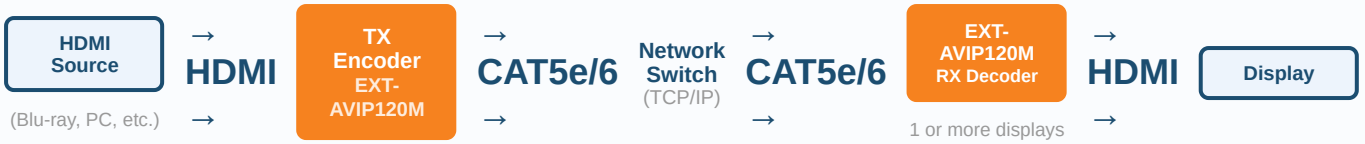
NO.	NAME	FUNCTION
①	**Power LED**	Illuminates red when power is connected.
②	**Signal Status LED**	Green when a valid HDMI signal is detected and network link is up.
③	**HDMI Input**	Connect to the HDMI source device.
④	**Ethernet Port**	RJ45. Connect to network switch or directly to receiver.
⑤	**IR-TX Port**	Connect IR-TX cable. Attach emitter over source device IR window.
⑥	**Reset Button**	Hold 5–10 sec after power-on green LED to restore default IP (192.168.168.55).
⑦	**DC 5V Input**	5V/1A power adapter input.

RECEIVER (RX) PANEL



NO.	NAME	FUNCTION
①	**Power LED**	Illuminates red when power is connected.
②	**Signal Status LED**	Green when a valid IP stream is received and network link is established.
③	**HDMI Output**	Connect to the display device (TV, monitor, projector).
④	**Ethernet Port**	RJ45. Connect to network switch or directly to transmitter.
⑤	**IR-RX Port**	Connect IR-RX cable. Place in line of sight of remote control handset.
⑥	**Reset Button**	Hold 5–10 sec after power-on green LED to restore default IP (192.168.168.56).
⑦	**DC 5V Input**	5V/1A power adapter input.

One-to-Many Distribution — Digital Signage / Classroom



How it works: Connect the HDMI source to the TX encoder. The TX compresses the 1080p signal using MJPEG and transmits over TCP/IP via the network switch. Any number of RX decoders on the same network will decode and display the signal. IP addresses must be unique per device. For many-to-many, configure a VLAN and use a compatible 10G switch (GES24 or equivalent).

IP CONFIGURATION

Each TX and RX has an embedded HTTP server. Access via web browser by connecting a PC on the same subnet (default: 192.168.168.x). Default TX IP: **192.168.168.55**, Default RX IP: **192.168.168.56**. Assign unique IPs for each device in multi-unit deployments.

> Factory reset: power on device, wait for green LED, then press and hold reset button 5–10 seconds until green LED goes out.

TROUBLESHOOTING

Q: No video on the display?
A: Verify both TX and RX power LEDs are lit. Confirm TX and RX are on the same network subnet and have unique IP addresses. Check CAT5e/6 cable follows EIA-TIA 568B standard. Try the reset procedure on both units.

Q: Ghost image or distortion on output?
A: Check the display's resolution settings. Try a higher-quality CAT6 cable. Ensure cable length does not exceed 120m for 1080p 8-bit signals.

Q: Static increases when connecting video connectors?
A: Verify grounding. Do not share ground connections with the display device. Use shielded CAT6 cables with metal RJ45 connectors.