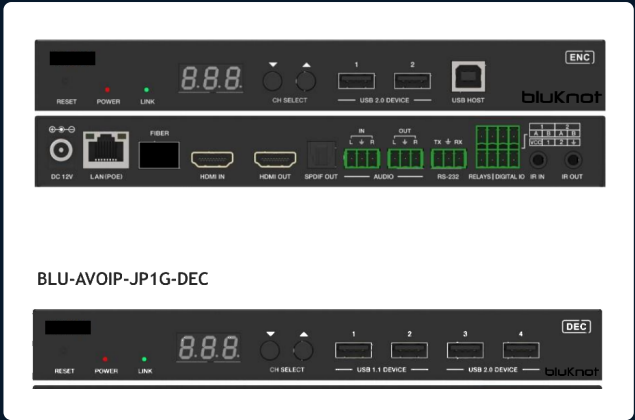


AV OVER IP · JPEG2000 ENCODER/DECODER

BLU-AVOIP-JP1G-ENC

A/V over IP. JPEG2000, 1 Gig.

A JPEG2000 AVoIP encoder/decoder with integrated copper and fibre ports. 4K60 4:4:4 in and out, ARC/eARC/SPDIF/analog audio return, USB 2.0 KVM, bi-directional IR, RS-232, CEC, RELAY and I/O ports, plus PoE. Point-to-point, video matrix or video wall to 9×9 — over a 1G IP network.



4K60 4:4:4

JPEG2000

1G

COPPER + FIBRE

Video wall

9 × 9

KVM / IR

RS-232 / CEC

PoE

24V

SPECIFICATION SUMMARY

Type	JPEG2000 AV-over-IP (ENC + DEC)
HDMI	HDMI 2.0b
HDCP	HDCP 2.2
Bandwidth	18Gbps
Max Resolution	4K60 4:4:4
Reach	100m via CAT5e/6/6A/7
Network	1G Ethernet (copper + fibre)
Audio return	ARC/eARC/SPDIF/Analog
Control	RS-232, IR, CEC, USB KVM
Power	DC 12V/1A, PoE

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KEY FEATURES

- HDMI 2.0b, HDCP 2.2, 18Gbps, 4K60 4:4:4
- JPEG2000 over 1G copper + fibre in one box
- Video wall to 9×9, matrix, unicast and multicast
- ARC/eARC/SPDIF/analog audio return + USB KVM

One box, two roles. The same hardware operates as encoder or decoder, carries video, audio, KVM, IR, RS-232 and CEC over a single 1G Ethernet link, and builds video walls to 9×9 out of the box.



JPEG2000 · 1G copper or fibre · video wall to 9×9 · KVM · IR · RS-232

AVOIP · JPEG2000 SOURCE ENCODE, NETWORK DELIVER, DECODE TO DISPLAY

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AV OVER IP · JPEG2000

01 Overview

What the encoder/decoder does, and what's in the box.

The **Astro Series AVoIP** is based on JPEG2000 technology, integrating a copper and fibre port in a single box. The **encoder** input supports 4K60 4:4:4 with audio embedding/extracting; the **decoder** output supports 4K60 4:4:4 with audio extracting. The product supports ARC/eARC/SPDIF/analog audio return, USB 2.0/KVM, 1G Ethernet, bi-directional RS-232, two-way IR and PoE. Built-in RELAY and I/O ports for contact control. MJPEG substream supports 3rd-party preview. Operates in point-to-point, video matrix or video-wall mode (up to 9×9).

FEATURES

- HDMI 2.0b, HDCP 2.2 compliant
- 18Gbps video bandwidth
- Input and output up to 4K60 4:4:4
- 100m via CAT5e/6/6A/7 (copper) or fibre
- Video, audio, IR, RS-232, CEC and USB over Ethernet
- Integrated copper and fibre port in one box
- ARC/eARC/SPDIF/analog audio return
- Front-panel buttons + LED screen configuration
- Built-in 2-channel RELAY and 2-channel I/O ports
- Unicast and multicast support
- Point-to-point, video matrix and video wall (up to 9×9)
- MJPEG substream real-time preview
- 1G Ethernet switch

AT A GLANCE

Role	ENC / DEC	HDMI	2.0b	HDCP	2.2
BW	18Gbps	Max	4K60	Wall	9×9
Codec	JPEG2000	PoE	Yes		

PACKAGE CONTENTS

1×	BLU-AVOIP-JP1G-ENC (Encoder)
1×	BLU-AVOIP-JP1G-DEC (Decoder)
1×	12V/1A Power Adapter
1×	User Manual

02 Specifications

Technical performance figures.

TECHNICAL

HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Compression Standard	JPEG2000
Network Video Bandwidth	10G
Video Resolution	Up to 4K@60Hz 4:4:4
Color Space	RGB 4:4:4, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Color Depth	Input: 8/10/12-bit · Output: 8-bit
HDMI Audio Formats	LPCM 2.0/5.1/7.1CH, Dolby Digital/Plus/EX, Dolby TrueHD, DTS, DTS-96/24, DTS-EX DSD, DTS High Res, DTS-HD Master
Transmission Distance	100m via CAT5E/6/6A/7
IR Level	Default 12V, optional 5V
IR Frequency	Wideband 20K–60KHz
ESD Protection	Human-body Model: ±8kV (Air-gap), ±4kV (Contact)

03 Connections

Connection, mechanical and environmental figures.

ENCODER CONNECTIONS

HDMI Input	1× HDMI IN [Type A, 19-pin male]
Audio IN	1× L/R [3-pin 3.81mm Phoenix]
HDMI Output	1× HDMI OUT [Type A, 19-pin male]
Audio OUT	1× L/R [3-pin Phoenix] 1× SPDIF [Optical]
Network	1× LAN (PoE) [RJ45] 1× FIBER [optical slot]
Control	1× RS-232 [3-pin Phoenix] 1× USB 2.0 HOST [Type B] 2× USB 2.0 DEVICE [Type A] 2× RELAY + 2× I/O [Phoenix] 1× IR IN + 1× IR OUT [3.5mm]

MECHANICAL

Dimensions	204 (W) × 136 (D) × 25.5 (H) mm
Weight	ENC: 631g, DEC: 626g

DECODER CONNECTIONS

Audio IN	1× SPDIF IN [Optical] 1× L/R [3-pin Phoenix]
HDMI Output	1× HDMI OUT [Type A, 19-pin male]
Audio OUT	1× L/R [3-pin Phoenix]
Network	1× LAN (PoE) [RJ45] 1× FIBER [optical slot]
Control	1× RS-232 [Phoenix] 2× USB 1.1 + 2× USB 2.0 DEVICE 2× RELAY + 2× I/O [Phoenix] 1× IR IN + 1× IR OUT [3.5mm]

POWER

Supply	Input: AC 100–240V 50/60Hz Output: DC 12V/1A, PoE
Consumption	ENC: 8.52W, DEC: 7.08W (Max)

04 Interfaces & control

Encoder and decoder connections, and how audio return and KVM work.



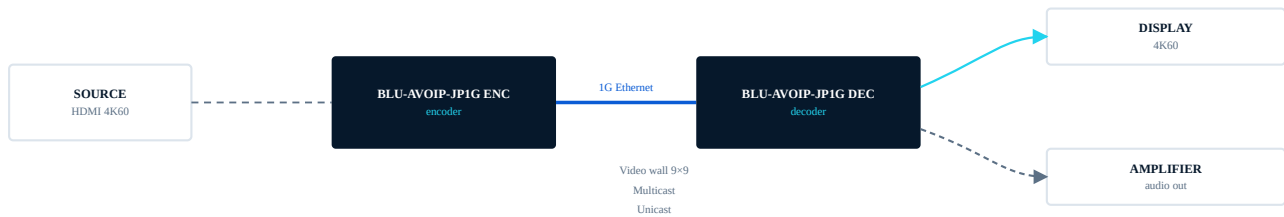
- 1 **HDMI IN / OUT** 4K60 4:4:4 source in (encoder) and display out (decoder).
- 2 **L/R + SPDIF** Analog L/R and optical SPDIF audio in/out for embedding and de-embedding.
- 3 **LAN (PoE) + FIBER** 1G copper Ethernet with PoE, and an optical fibre slot — both in one box.
- 4 **RS-232 / IR / KVM** Bi-directional RS-232, 2-way IR, and USB KVM control over the IP link.
- 5 **RELAY / I/O** Two relay ports and two digital I/O ports for contact control integration.

Audio return. ARC, eARC, SPDIF and analog return paths mean any display or source audio gets back to the amplifier — no extra cables.

Copper and fibre together. A single LAN RJ45 (with PoE) and an optical fibre slot sit side by side — use whichever the install calls for.

05 Application example

Encode at the source, distribute over IP, decode at any screen.



JPEG2000 · 1G copper or fibre · video wall to 9×9 · KVM · IR · RS-232

Scale without limits. Add encoders and decoders to the 1G switch and the video matrix grows without new wiring — video wall, multicast or unicast.

Full control over IP. KVM, IR, RS-232 and CEC all ride the Ethernet link, so operators at the decoder can drive the source device completely.

ORDERING

BLU-AVOIP-JP1G-ENC

Astro Series JPEG2000 AVoIP Encoder/Decoder Set — HDMI 2.0b / HDCP 2.2, 4K60 4:4:4, 1G copper + fibre, 100m reach, video wall to 9×9, ARC/eARC/SPDIF/analog audio, USB KVM, bi-dir IR, RS-232, CEC, RELAY, I/O, PoE, 12V DC

bluKnot

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