

Pro Convert IP to AIO 4K: one screen to a wall

One decoder per screen. Each unit takes feeds from the network and shows them as single view, picture-in-picture or quad view, on HDMI 2.0 and 12G-SDI at the same time. Add units to add screens. Also available as a Modator module, ten to a 2U chassis.

Per unit

Network	1 × RJ45, 10/100/1000 Mbps
Power	PoE+ (IEEE 802.3at), ≈ 15.1 W max · module ≈ 14.6 W from chassis
Outputs	HDMI 2.0 + 12G-SDI, same picture , both live
Layouts	Single up to 4Kp60 (HDR) · PiP 2 × 1080p60 · quad 4 × 1080p60
Saved layouts	Up to 9 profiles, applied from web page or on-screen menu
Warranty	2 years (1 year supplied cables/adapters)

Bandwidth per stream (1080p60)

STREAM	≈ MBPS
NDI HX2 (H.264 / H.265)	16 / 11
NDI HX3 (H.264 / H.265)	62 / 50
Full NDI	130 (up to 150)

Source: NDI, docs.ndi.video. Figures are approximate and may change.

Network checklist

- Managed gigabit switch, a port per unit (**PoE+** for standalone units)
- **Multicast** with **IGMP snooping**, so each stream only goes where it's wanted
- Links between switches sized for the total of all streams crossing them
- Remote feeds: each one uses the **sending site's upload**; the SRT listener end needs a reachable public address

Design limits

- Each unit makes **one picture**: it does not span one image across several screens
- Multiview output is **SDR**; HDR in single view only
- **One audio** source plays in multiview

Feeds accepted

NDI	Full NDI, NDI HX2, NDI HX3 · multicast receive
Internet	MPEG-TS over SRT (caller or listener), RIST · buffer up to 5,000 ms
Other	RTMP, RTSP, HLS/HTTP, UDP/RTP (incl. multicast), Zixi

Quad view takes H.264/H.265 feeds only (NDI HX2/HX3, SRT, RTMP, RTSP...). **Full NDI**: single view, or at most one stream in PiP.

Load per unit (worked examples)

LAYOUT	≈ MBPS
Quad, 4 × HX2 H.264	64
Quad, 4 × HX3 H.264	248
Single, full NDI	130–150

Arithmetic from the NDI figures; check against your actual encoder settings.

Control

- Web page and on-screen menu on every unit
- **Magewell Control Hub**: Basic up to 20 devices, Plus 50, Pro 150
- Registers with Zixi ZEN Master for very large systems

Parts list

- ☐ One decoder per screen: standalone, or Modator modules + Modator 2U chassis
- ☐ Managed switch (multicast, IGMP snooping, PoE+)
- ☐ Encoders for local sources; an SRT link for remote sites
- ☐ Control Hub edition for your device count, on a computer or server
- ☐ HDMI and/or 12G-SDI cables to each screen, router or recorder

Ideas to build on: a control room mixing local cameras and remote sites on one quad · multi-site monitoring with an SRT feed from each site · 12G-SDI into a router or recorder while HDMI drives the local screen · "event" and "rehearsal" layouts saved as profiles.