

IPVU

IP-to-HDMI

Monitoring Gateway



The IPVU is a compact dual-channel IP-to-HDMI converter that's perfect for displaying IP sources and a multiviewer's IP outputs on HD and 4K UHD HDMI displays.

The IPVU from Grass Valley® offers an integrated IP-to-HDMI gateway that can be installed on a rack shelf or mounted behind the display. It provides the missing link enabling you to view any IP source, or to connect an IP multiviewer's output to a display.

The IPVU is a dual-channel IP-to-HDMI converter supporting SMPTE ST 2110, SMPTE ST 2022-6* and SMPTE ST 2022-7. It is fully compliant with NMOS IS-04/-05 discovery, registration and connection management specifications. Each channel is completely independent – which optimizes the bandwidth usage on the IP fabric – which in turn reduces the total cost of the system by halving the number of required switch ports and optical SPF's versus a single-channel device.

Two models are available: one for 720p/1080i/1080p resolutions, and one for 720p/1080i/1080p/2160p resolutions. The 720p/1080i/1080p model can be upgraded to 2160p 4K UHD with a software license.

Rollcall® is used to fully configure and operate the IPVU. IPVU is integrated into the GV Orbit® system – it can be dynamically controlled to route any IP source to the display.

The new IPVU-OPT-JPEGXS option is part of a standardized compression solution (comprised of LDX® 100 camera and XIP-3901-JPEG-XS) that offers a true end-to-end ecosystem, allowing broadcasters to reap the full scalability, flexibility and efficiency benefits of JPEG XS in an IP infrastructure, leveraging a 10-bit standard codec. This creates the best-in-class experience with optimal use of network resources.

Benefits

- Dual channel to optimize switch port bandwidth usage
- Low processing latency for critical monitoring applications
- In-band or out-of-band control for more flexibility
- Clean switch between two IP sources with no video loss (make-before-break or freeze frame)
- 4K UHD resolution support at full 50 or 59.94 frame rates with SMPTE ST 2022-7 hitless redundancy
- NMOS IS-04/-05 compliant

* Video only

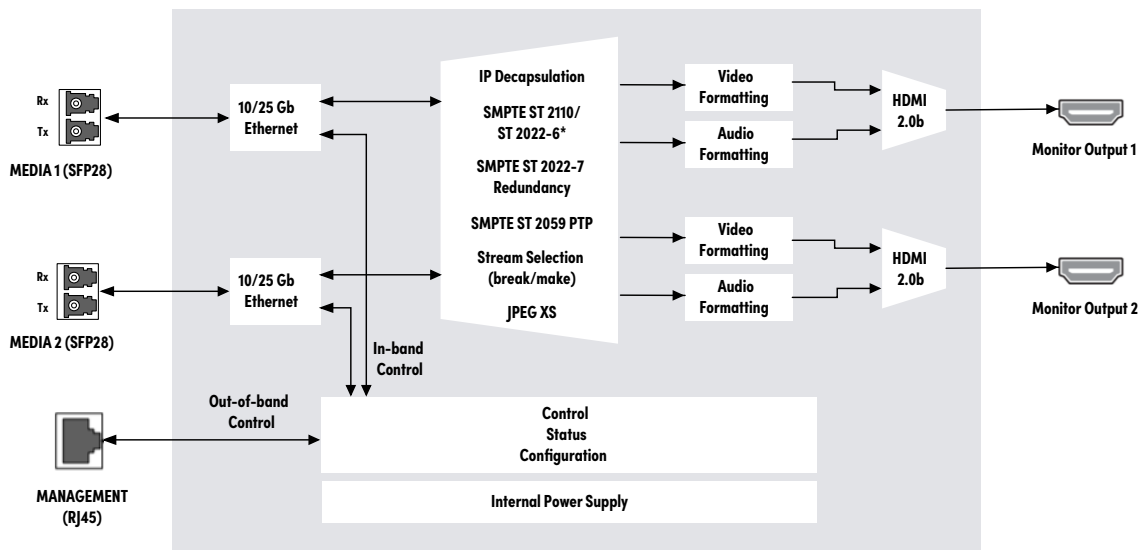
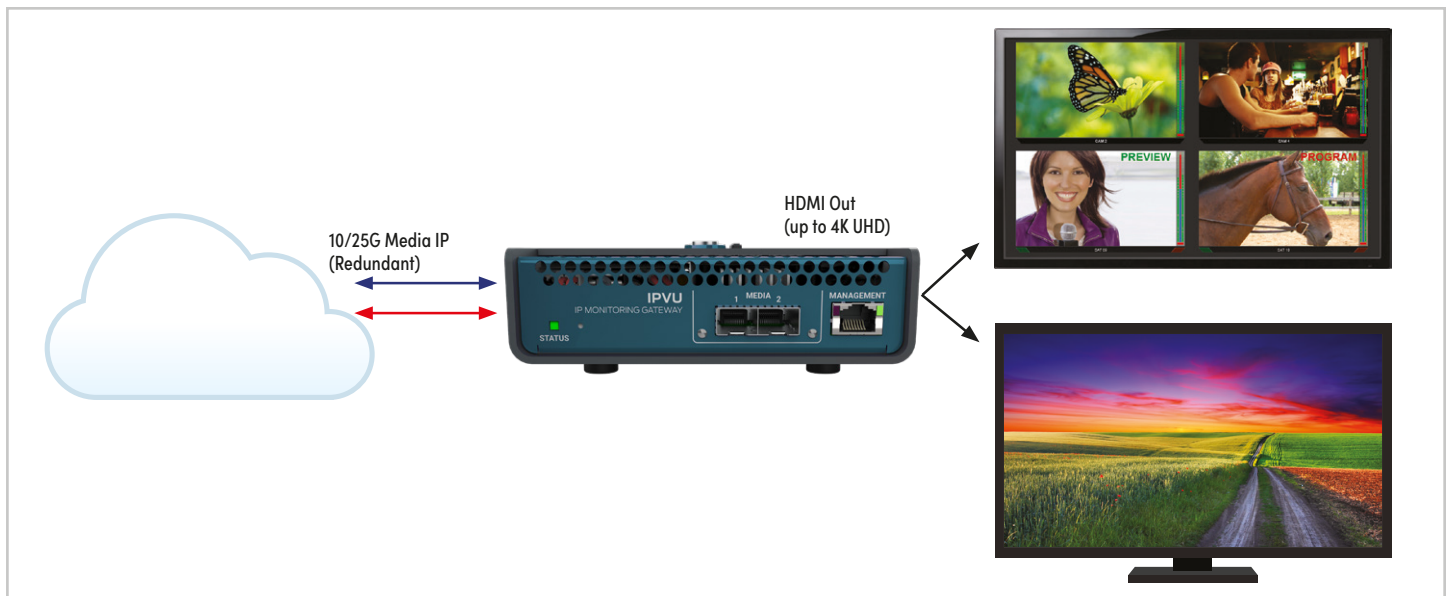
Key Features

- Dual HDMI 2.0b outputs
- Dual media ports:
 - 2x SFP28 cages that support 10 GbE or 25 GbE
 - For use in hitless SMPTE ST 2022-7 redundancy
 - In-band management and control available
- 1 GbE Interface for out-of-band management and control
- Input routing control via GV Orbit or Rollcall
- Seamless switching between two streams:
 - Make-before-break
 - Break-before-make (with output freeze frame)
- Low processing delay (<1 frame) for critical monitoring applications
- Native support for video resolution of 720p to 2160p
- 4K UHD IP input support in quad-flow 2SI, quad-flow SDQS and single raster
- Static HDMI metadata for HDR support
- Uncompressed A/V over IP standards:
 - SMPTE ST 2110-10
 - SMPTE ST 2110-20
 - SMPTE ST 2110-21 N, NL and W profiles
 - SMPTE ST 2110-30 Level A and D profiles
 - SMPTE ST 2022-6*
 - SMPTE ST 2022-7
 - PTP/SMPTE ST 2059
 - NMOS IS-04/-05 compliant
- Compressed A/V over IP standards:
 - SMPTE ST 2110-22 JPEG XS (Option based on license)
- Designed for silent cooling
- Optional bracket for VESA mounting behind the display
- Optional 1 RU rack shelf which holds up to 3 units

Applications

The IPVU is ideal for monitoring use in any application based on an IP infrastructure such as:

- Playback or master control rooms
- Studio galleries
- OB truck and fly kits
- House of worship
- Sports venues



IPVU Functional Block Diagram

* Video only

Specifications

Media Ports (2)

Physical: 2x SFP28

Speed: 10 / 25 GbE

Ethernet:

- IEEE 802.3-2008 10 GigE
- IEEE 802.3cc

Transport Formats:

- SMPTE ST 2110-10
- SMPTE ST 2110-20
- SMPTE ST 2110-21 N, NL and W profiles
- SMPTE ST 2110-30 Level A and D profiles
- SMPTE ST 2022-6*
- SMPTE ST 2022-7 Class A

PTP: SMPTE ST 2059

Discovery: NMOS IS-04/-05 compliant

* Video only

IP Inputs (2)

Video:

- 2160p59.94, 2160p50 2-SI quad flow
- 2160p59.94, 2160p50 SDQS quad flow
- 2160p59.94, 2160p50 single raster
- 1080p59.94, 1080p50
- 1080i59.94, 1080i50
- 720p59.94, 720p50

Audio:

- Single stream
- Up to 16 channels, 125 µs to 4 ms

HDMI Outputs (2)

Physical: 2x type A connector with retainer locknut

Transport: HDMI 2.0b

Resolution: 720p / 1080i / 1080p / 2160p (same resolution as the IP input)

Frame Rate: 50 / 59.94 Hz (same rate as the IP input)

Management (1)

Physical: RJ45

Speed: 10 Mb / 100 Mb / 1 Gb

Ethernet: IEEE 802.3.ab

Power

AC Input:

- 100-240V
- 50/60 Hz

Nominal: 35W

Max: 60W

Current: 0.6-0.25A

Mechanical

Dimensions: 229 mm x 140 mm x 49 mm (8 in. x 5.5 in. x 1.91 in.)

Weight: 0.93 kg (2.05 lbs.)

Temperature range (ambient): 0 to 40°C (32 to 104°F)

Cooling: Front to rear

Ordering

IPVU

Dual-channel IP-to-HDMI converter for 720p/1080i/1080p video formats, supports 10G/25G SFPs (not included)

IPVU-UHD

Dual-channel IP-to-HDMI converter for 720p/1080i/1080p/2160p video formats, supports 10G/25G SFPs (not included)

IPVU-OPT-UHD

Upgrade license for IPVU to support 4K UHD video formats

IPVU-TRAY

19" rack mount shelf for rack installation of three IPVUs in 1 RU

IPVU-MOUNTING-KIT

Mounting kit for attaching the IPVU to the back of a display or a wall. Compatible with VESA 75/100 and large LCD mounting brackets

IPVU-OPT-JPEGXS

License for JPEG XS on both channels, can decode up to 18:1

SFP-25G-SR

SFP28 25GBase Optical Transceiver MMF

SFP-25G-LR

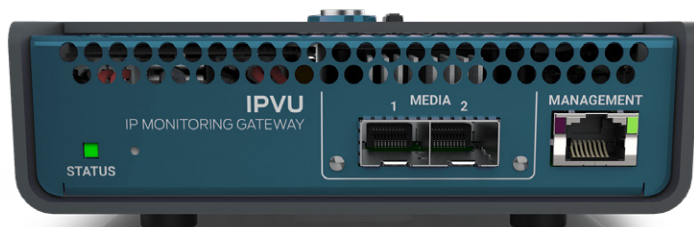
SFP28 25GBase Optical Transceiver SMF

SFP-ETH10G-RT-M85-LC

Optical 10GBase Ethernet cartridge, multimode 850 nm, LC/PC connector

SFP-ETH10G-RT-S13-LC

Optical 10GBase Ethernet cartridge, 1310 nm, LC/PC connector



Front View



Rear View

This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents

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