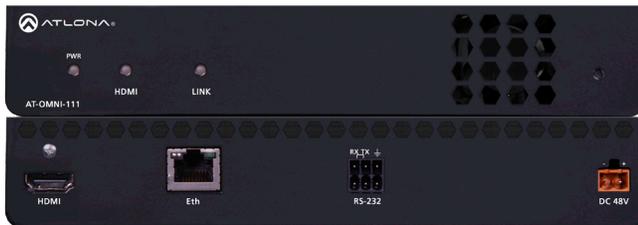AT-OMNI-112

AT-OMNI-122

AT-OMNI-111

AT-OMNI-121

OmniStream is an all-new AV over IP product family from Atlona for distributing 4K video, audio, and control over a standard Gigabit network. It delivers the performance and dependability of traditional AV distribution, with the virtually unlimited scalability, security, and cost efficiency of integrating over IP networks.

OmniStream was engineered from the ground up at Atlona with several industry-exclusive capabilities including high density encoding and decoding, redundant AV networks and streams, secure content distribution, network error resilience, critical-quality 4K video compression with extremely low latency, and audio distribution.

Atlona specifically developed OmniStream to address the many technological and practical challenges associated with converging video onto IP networks. OmniStream is designed to integrate easily into a new or existing Gigabit network infrastructure, and deliver the same reliability, performance, and image quality expected of a baseband or HDBaseT™ video system.

Supports HDMI video up to 4K/UHD, plus audio and RS-232 control -
* 4K @ 24 Hz, UHD @ 30 Hz, and 1080p @ 60 Hz
* Video, audio, and RS-232 can be routed together or independently

High density video over IP integration -
* Dual channel units can process two independent services per chassis

Networked AV redundancy -
* Replicate AV over two separate networks and IP streams – a first for the pro AV industry
* Enables 99.9% system failover for mission-critical applications

Easy Setup with AMS -
* Automatic discovery with IP address configuration
* Helps get the system flowing video in no time

Secure content distribution -
* AV presentation content can be encrypted to prevent unauthorized access
* HDCP also supported

Professional visually lossless video compression using VC-2

Highly robust and reliable over IP networks -
* SMPTE FEC (forward error correction) for very high resilience to network errors
* Ensures reliability and dependability of traditional video and audio routing platforms

Extremely low latency of less than 0.5 frame from encode to decode -
* < 8ms for 60 Hz video – lowest in the proAV industry

Standard Gigabit network infrastructure -
* Works with standard, off-the-shelf Gigabit managed switches from Cisco and others
* Can easily be integrated into existing network infrastructures

Design highly flexible and scalable AV systems -
* No theoretical limitations on I/O size, switching capacity, or transmission distance
* "Virtual matrix" – can route any source to any destination, anywhere on the network
* Easily add sources, displays, and additional switches as needed

Power over Ethernet

Flexible audio integration

Specifications

Video Resolutions

Video	4096x2160@24Hz, 3840x2160@24/25/30Hz (UHD), 1080p@23.98/24/25/29.97/30/50/59.94/60Hz, 1080i@25/29.97/30Hz, 720p@30/50/59.94/60Hz
VESA*	1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768
Codec	VC-2
Latency	0.5 frames (**e.g.** 1080p@60Hz latency is <8ms) **Note:** Unusual network configurations may increase overall latency
Bitrate	Up to 900 Mbps
Color Space	YUV, RGB
Chroma Subsampling	4:4:4, 4:2:2
Color Depth	8-bit, 10-bit, 12-bit
Scaling	Up/down conversion

Audio

Digital IN/OUT	LPCM 2.0, LPCM 5.1, LPCM 7.1 Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos DTS, DTS-HD Master Audio
Analog OUT	Analog 2Ch, OMNI-121 - 1 x Stereo, OMNI-122 - 2 x Stereo
Sample Rate	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
Bit Depth	up to 24-bit

Distance

Max distance dependent on Network configuration

Signal

CEC	Yes - Display: volume, power, input
HDCP	1.4 switchable, hardware capable 2.2
Scrambling	Up to AES 256 bit

IP

Protocol	RTP
Ethernet Speed	10/100/1000 Mbps
Address	DHCP, static
QoS Tagging	Per RFC 2475
FEC	Per SMPTE 2022-5:2013 Columns: 1-20 Rows: 0, 4-20

RS-232

Bit Rate	2400-115200 bps
Connector	Molex - OMNI-111 & 121 - 3 pin, OMNI-112 & 122 - 2 x 3 pin

Temperature

Operating	0°C to 50°C	32°F to 122°F
Storage	-20°C to 60°C	-4°F to 140°F
Humidity	20 to 90% non-condensing	

Power

Consumption	~13W w/o analog audio, TBD w/ analog audio
Supply (optional)	Input: AC 85~264VAC 50/60Hz Output: DC 48V 0.83A
SKU	AT-PS-48083-C

Dimension

H x W x D	34 x 208 x 112 (mm)	1.34 x 8.19 x 4.41 (inch)

Weight

Dual-Channel	0.7 kg	1.54 lbs
Single-Channel	TBD kg	TBD lbs

Certification

Power Supply	CE, FCC, cULus, RoHS, CCC, RCM
Product	CE, FCC, RoHS

*All VESA resolutions are 60p