Atlona AT-OMNI-112 OmniStream Dual-Channel Networked AV Encoder

OmniStream Dual-Channel Networked AV Encoder

The Atlona OmniStream™ 112 (AT-OMNI-112) is a networked AV encoder with two independent channels of encoding for two HDMI sources up to 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, plus embedded audio and RS-232 control. OmniStream is designed for distributing AV over 1 Gigabit Ethernet in enterprises and other large-scale installations. The OmniStream 112 features SMPTE VC-2 visually lossless compression for critical-quality video applications, with extremely low, sub-frame latency from encode to decode. It also includes selectable AES-128 encryption, and SMPTE 2042 forward error correction for robust AV distribution spanning multiple networks. This dual-channel encoder is housed in a half-width rack enclosure and is ideal for high-density rack installations. With two Ethernet ports, the OmniStream 112 can also deliver duplicate AV streams to two networks for full system redundancy in mission-critical applications.

OmniStream was engineered from the ground up at Atlona to deliver the performance and dependability of traditional AV distribution, with the virtually unlimited scalability and cost efficiency of integrating over data networks. It addresses the many challenges AV and IT integrators encounter with implementing networked AV systems, while delivering immediate and long-term ROI to end users in enterprises and other organizations.

Networked AV Redundancy

The OmniStream 112 can provide networked AV system redundancy in conjunction with an OmniStream 122 dual-channel AV decoder. It can deliver two simultaneous encoded streams from an HDMI source, with the two channels connected into primary and redundant networks, and an OmniStream 122 configured to decode both streams simultaneously. The OmniStream 122 can detect the loss of a physical network connection, or disruption in an AV stream, and then automatically switch over to the secondary network for continuous system operation.

Designed for Pro AV Integration

The OmniStream 112 includes several features for optimizing integration and enhancing professional AV presentations. EDID and HDCP management features ensure reliable, consistent system operation and compatibility with source devices. EDID management includes the option to assign an EDID captured from a display at an OmniStream AV decoder. Aspect ratio controls are available to specify the presentation viewing format as desired by the end user. Additionally, OmniStream offers the option to overlay a logo image (PNG with transparent background) onto an AV presentation for corporate or institutional branding. A full-screen image can also be displayed, as a backup in an event of an interruption in an AV stream, or to display information between presentations.

Applications

The OmniStream 112 is ideal for use in:

- Enterprises and other large organizations
- Corporate and university campuses with the need to distribute AV between buildings
- Applications in which any AV content or resource can be shared anywhere in the system

Product Compatibility

The OmniStream 112 is compatible with the OmniStream 121 and OmniStream 122 decoders.

Configured and Managed by AMS

OmniStream is configured, controlled, and managed using the Atlona Management System (AMS), a powerful network software platform for IP-controllable Atlona products. AMS is essential for accessing all capabilities of the OmniStream encoders and decoders, including AV and control routing between sources and destinations, configuring OmniStream dual-channel encoders and decoders for independent or redundant streams, monitoring the status of OmniStream endpoint devices, powering displays on or off through automatic display control, and more. AMS is also used for Dante™ network configuration with the OmniStream 232 networked audio interface.

Atlona AVoIP Certification

Atlona is pleased to offer free online education courses and Atlona AVoIP Certification at atlonaacademy.com/omnistream. This is a great opportunity to learn about networked AV systems, the OmniStream product family, and the essential principles of data networking. These courses are industry certified and accredited by InfoComm.

With Atlona AVoIP Certification, you'll have the credibility, knowledge, and confidence to inform your customers on the ideal networked AV system solutions for their requirements, and deliver quality sales and technical support whenever necessary.

Being certified by Atlona gives you priority and key advantages in selling and supporting OmniStream systems. For more information, please contact your Atlona sales representative.

Features

AV encoder for HDMI up to 4K/UHD, plus embedded audio and RS-232 control

- Streams video, audio, and control, with the flexibility of transmitting them together or to separate network destinations
- Allows wide-ranging versatility for integrators to design systems to specific AV and control scenarios

Dual-channel AV encoding

- Two independent channels of encoding in a single box, with dedicated processing for each channel
- Allows high-density rack installations and reduces box count, without any compromise in performance

Networked AV redundancy

- Deliver two duplicate streams from an HDMI source into two separate networks
- Maximizes system reliability and meets IT requirements for system redundancy and failover AT-OMNI-122

4K/UHD capability @ 60 Hz with 4:2:0 chroma subsampling

- Compatible with HDMI sources up to 4K/UHD 30 Hz at 4:4:4 or 60 Hz at 4:2:0
- Supports high resolution applications such as CAD, 3D visualization, desktop publishing, and detailed financial reporting

SMPTE VC-2 visually lossless video compression

- Broadcast-quality, light video compression with absolutely minimal, sub-frame latency from encode to decode
- Ensures pristine-quality video and graphics presentations, and is ideal for applications requiring interactivity

Network error resilience with FEC (forward error correction)

- Compensates for the possibility of AV packet losses in large systems spanning several networks
- Enables consistent, reliable performance in enterprise-wide networked AV implementations

Secure content distribution with AES-128 encryption

- Any AV presentation content can be secured by scrambling IP streams
- Ideal for government, military, and enterprise applications, as well as meeting IT security requirements

Local or PoE (Power over Ethernet) powering

- With PoE, encoders can conveniently be powered over the network from a PoE-equipped network switch
- PoE simplifies integration without the need for local AC power, and allows centralized power monitoring and management
- Optional external power supply available

HDMI input switching

- Input switching is available when streaming from one HDMI source at a time through both encoders
- Switching control is available from the front panel or through AMS (Atlona Management System)

Automatic input selection using hot plug detect and video detection technology

- Selects active input when sources are connected or if there is a change in source power status
- Eliminates the need for a complex control system

EDID management

- Manages EDID communications between source and encoder; allows integrators to force a source to a preferred resolution
- Ensures desired audio formats and video resolutions are provided to the AV system
- EDID can be assigned from a display connected to an OmniStream decoder

HDCP management

- OmniStream systems are HDCP 1.4 compliant from encoders to decoders
- HDCP compliance can be disengaged through AMS
- Allows non-protected material from PCs to pass to non-compliant displays and teleconference systems; protected content is not transmitted

Multi-channel audio compliant

- Streams PCM, Dolby® Digital, Dolby Digital Plus™, Dolby TrueHD, DTS Digital Surround™, and DTS-HD Master Audio™

Enhance AV presentations with visual enhancements

- Provide corporate or institutional branding by overlaying a logo (PNG with a transparent background)
- Display a full-screen image as a backup in an event of an interruption in an AV stream, or between presentations
- Identify and label presentation content with static or scrolling text

Automatic display control

- Enables display and volume control through AMS and front panel controls. Control signals transmitted via CEC or RS-232.
- Eliminates the need for a complex control system. CEC enables control of low-cost consumer displays.

Configured and managed by AMS

- AMS is the essential software tool for accessing all capabilities of OmniStream, including AV and control signal routing, system monitoring with instant alerts, and more
- Integrates OmniStream device configuration, management, and updates to reduce installation time and enable remote support

Award-winning 10 year limited product warranty

- Ensures long-term product reliability and performance in residential and commercial systems
- Specify, purchase, and install with confidence