nevion

FLASHLINK

ADA-IP-MUX

Analog and digital audio over IP multiplexer

The ADA-IP-MUX is an analog and digital audio over IP product used for audio networking in broadcast applications.

The analog audio conversion is broadcast quality, providing a dynamic range above 105dBA for any conversion. The digital audio signals may be transported completely bit transparent. This ensures optimized audio quality for both analog and digital audio signals.

The product provides routing of audio in the IP layer, and together with its digital version AES-IP-MUX, several of these products can be used together as a large distributed mixed analog and digital audio router. The product also supports bi-directional audio transport making it well suited for both AES and 4-wire based intercom transport.

Its multiplex design is optimized for ensuring low and fixed latency in the audio network.

The board can be ordered with 4 stereo pair inputs, 4 stereo pair outputs or 2 stereo pair inputs + 2 stereo pair outputs.

The card is easy to use with minimum setup needed and broadcast centric control enabled thru Nevion's control panel support.

Applications

- Live media networking
- Audio contribution
- Intercom transport

Key features

- Supporting network topologies
- Fully bit transparent audio transport of all channels
- 4 analog stereo pair ports
- 8 AES ports (direction follows analog audio option)
- AES67 compliant stream
- PTP support
- Supported only by Flashlink FR202 chassis and Flashcase II

ADA-IP-MUX
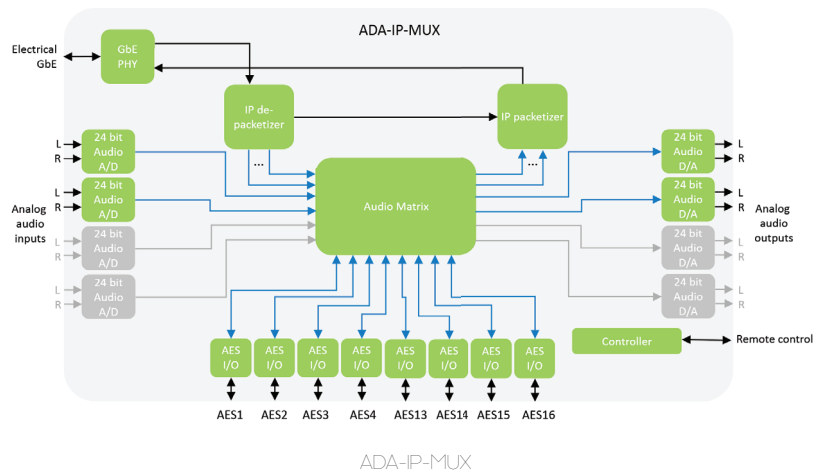
The product comes in 3 variants:

- 4 stereo inputs + 8 AES inputs

- 4 stereo outputs + 8 AES outputs

- 2 stereo inputs + 4 AES inputs, 2 stereo outputs + 4 AES-outputs.

The module use a central timing reference (PTP). It encodes linear PCM audio into AES67 packets. The packet times supported are 0.25ms, 0.5ms, 1ms and 4ms. The sample frequency supported is 48 kHz. The audio signals are transported either completely bit transparently AES3 or in a standard 16 or 24 bit packet format.

The audio transport has a minimum latency of just over the selected packet time plus the network delay. The latter is usually less than 0.1 ms in a normal gigabit LAN.

The encoding parameters are set on the AES input (ingest) ports and are automatically detected on the output (egress) ports.

The modules are intended to be used in a centrally managed system with 'out of band' management. i.e. The routing and configuration are done with the Multicon controller on a separate LAN.

The ADA-IP-MUX does not use 'client to client' managed routing or session management. Larger systems, spanning multiple audio LANs may be realised with VideoIPath.

There are two operational modes for the module.

- VideoIPath mode.

- Multicon Matrix mode.

Large systems made be realised using VideoIPath. This mode also requires Multicon GYDA but the settings of the modules are controlled directly from VideoIPath.

The Multicon Matrix mode can provide up to 128 audio connections. Routing control may be dynamically controlled with hardware router control panels or web panels, or may be static for point to point links.

There are two available back planes, one with two DB-25 TASCAM style connectors and the other with Moelx KK crimp connectors. The product is only available for the FR202 chassis or Flashcase II.

ADA-IP-MUX-C1   ADA-IP-MUX-C2

Flashlink ADA-IP-MUX
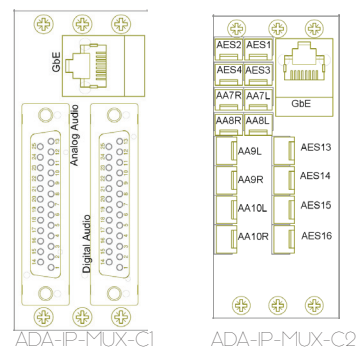
General

Power	4.7W/5V, 0.8W/15V, 0.8W/-15V
User interface	Status LED, Status GPI, configuration DIP switches Web interface and SNMP thru Multicon controller
Operating temperature	0 – 40C
Supported standards	AES3-2003, AES-67, IEEE802.3ab, IEEE802.3z

Digital audio input

No of inputs	8 - ADC-AES-8 option 4 - ADDA-AES-8 option 0 - DAC-AES-8 option
Signal type	AES-3
Connector	DB-25F - C1 backplane Molex KK-3pin - C2 backplane

Digital audio output

No of outputs	0 - ADC-AES-8 option 4 - ADDA-AES-8 option 8 - DAC-AES-8 option
Signal type	AES-3
Connector	DB-25F - C1 backplane Molex KK-3pin - C2 backplane

Analog audio input

No of inputs	4 stereo pairs - ADC-AES-8 option 2 stereo pairs - ADDA-AES-8 option 0 stereo pairs - DAC-AES-8 option
Connector	DB-25F - C1 backplane Molex KK-3pin - C2 backplane
Impedance	24kOhm
Dynamic range	typ. 107dB(A)
Frequency response	20Hz-20kHz +/-0.1dB
A/D conversion	24 bit

Analog audio output

No of outputs	4 stereo pairs - DAC-AES-8 option 2 stereo pairs - ADDA-AES-8 option 0 stereo pairs - ADC-AES-8 option
Connector	DB-25F - C1 backplane Molex KK-3pin - C2 backplane
Impedance	53Ohm
Maximum signal level	+24dBu
Dynamic range	typ. 105dB(A)
Frequency response	20Hz-20kHz +/- 0.1dB
D/A conversion	24 bit

Electrical Ethernet port

No of ports	1
Signal type	1Gb Ethernet
Connector	RJ45

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