Preliminary datasheet

Virtuoso Audio Converter

Nevion

Virtuoso SoniX

Nevion's Virtuoso SoniX offers an attractive set of audio conversion features for use in a range of live audio production applications.

Virtuoso SoniX provides high density conversion of MADI streams to a mix of analogue and/or digital audio. It also includes GPI interfacing in a compact footprint,

All 64 channels of a MADI stream can be converted to and from either AES3 digital audio or analogue audio interfaces in a single unit configured to specific requirements.

Each Virtuoso SoniX unit is equipped with dual SFP ports to support redundant optical or electrical MADI/AES10 interfaces

When coupled with the powerful audio processing capability of Nevion's Virtuoso platform, flexible routing/mono shuffling and per-channel control of polarity, gain and delay are available. Each of the audio processing engines can also be configured as an audio summing matrix mixer with up to 512 cross-points.

The Virtuoso audio processor media function is optimised for high-speed processing to ensure that the end-to-end latency is kept at a minimum, making it well suited for any live production application.

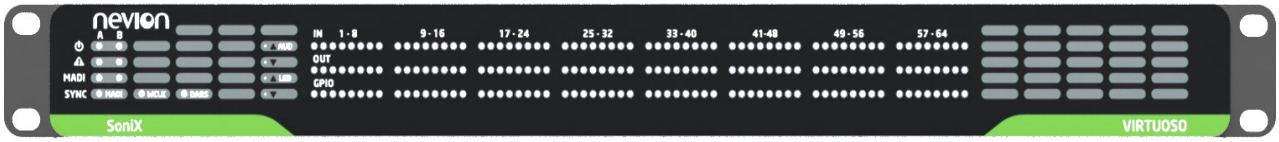
The unit is supplied in a compact 19" 1RU rack.

Applications

- Broadcast facilities infrastructure
- Outside broadcast
- Remote and distributed production
- In-house/campus media networks
- Low noise extension for audio interfacing to Virtuoso appliances

Key features

- Multi-standard audio connectivity
  - MADI/AES10 (optical and electrical)
  - AES3 (balanced and unbalanced)
  - Analog input and outputs
  - Industry standard DB-25 audio interfaces
- Redundant electrical/optical MADI interfaces
- GPI interfacing
  - Configurable GPI interfacing for alarm status
- Alarms and monitoring
  - Audio presence,and level detection
- Standalone MADI breakout operation or powerful audio processing (when used with Virtuoso AUD-PROC-MADI)
  - Flexible audio routing/shuffling, delay and gain
  - Audio summing matrix mixer



High density and flexibility

Each Virtuoso SoniX unit provides conversion of all 64 channels of a single MADI/AES10 stream to physical audio inputs and outputs. These can be flexibly configured as either AES3 or analogue making SoniX an extremely powerful audio format converter.

All 64 channels in the MADI stream are converted to either 64 AES3 or 64 analogue audio channels (32 inputs plus 32 outputs).

Virtuoso SoniX handles bidirectional MADI streams with optical/electrical MADI SFPs.

Audio interfacing is provided through industry standard (Tascam) D-sub rear panel connectors

Virtuoso SoniX also provides interfacing for GPI signals which can be specified alongside the audio capability. In total up to 16 channels of GPI can be connected and transport embedded in the audio data.

Flexible operation

Virtuoso SoniX can be used either as a MADI to AES3/Analogue audio convertor, with the Virtuoso audio processor, or standalone to perform breakout of audio channels from a MADI stream.

Powerful audio processing

The audio conversion strengths of Virtuoso SoniX are enhanced when coupled with the processing power of Nevion Virtuoso's Audio Processor.

The MADI/AES10 streams from Virtuoso SoniX can be connected directly to the Virtuoso AUD-PROC-MADI audio processor (requires Virtuoso MI/RE and HBR10 accelerator).

Four internal 64-channel audio processors enable fully flexible audio routing (mono shuffling), per channel delay of up to 10 seconds, as well as audio level / gain control and polarity inversion.

Timing and sync

External sync output is provided for connection of 48kHz or Word Clock reference signals.

Monitoring

All 64 channels in the MADI input and output streams are continually monitored and the status of each channel, including presence and audio level, is indicated on the front panel display. This provides clear and precise information of all incoming and outgoing signals so that errors can be quickly detected.

Audio interfaces

Audio breakout panels are available to allow easy connection of audio signals into the Virtuoso SoniX.

The break out panels connect directly to the rear of the SoniX unit via industry standard Tascam format DB25 connectors.

Breakout panels are available with male, female or mixed male/female XLR type connectors (see product Description).

MADI interfaces

MADI/AES10 circuits are interfaced via MSA compliant electrical or optical SFP modules. Dual SFP port are provided on the rear of the chassis.

Circuit protection

Virtuoso SoniX can be connected to two different circuits. If one circuit fails the unit will continue to operate with minimal interruption. Automatic input selection offers redundancy for critical applications.

GPI

16 direction configurable GPI interfaces with inputs opto-isolated and outputs isolated with relay. Transmission protocol is TSLv3 through the Audio processing module in the Virtuoso MI or RE chassis

nevion

Nevion Virtuoso SoniX

nevion.com

Audio formats

Digital Audio - AES3	AES3-1992 110 ohm Up to 64 channels per unit. 32 AES3 input and 32 AES3 output Two audio mono channels per AES3.
Audio format	48 kHz, 24-bit linear PCM audio 32-bit transparent AES3
Analogue Audio	Up to 64 channels per unit (32 input + 32 output). High impedance inputs, low impedance with high common mode impedance to eatth Ref level: 0 dBFS @+12 to +24 dBu Freq, response: +/-0.1 20Hz to 20kHz Crosstalk: >-100dB 20Hz to 20kHz Out of band filtering: >-100dB > 246kHz (inputs) >-76dB > 26kHz (outputs) Dynamic range: >100dB dB(A) THD+N;>-86dB/0.0005%, 20Hz - 20kHz at -9 dBFS level SMPTE IMD: >-86dB/0.0005%) at -12dBu

GPI

16 GPI channels (direction configurable)

Inputs:	Galvanic Opto-isolated
Outputs:	Relay normally open

Monitoring/Alarm

Front panel LED status/alarm indication per channel

Audio inputs and outputs
- No signal
- Audio level
- Overload

External reference signal detection

Power

Sync

48KHz or Word Clock sync output

Appliance specification

Virtuoso SoniX	Width: 480mm (19 inch) Depth: 295mm Height: 44mm (1RU) Weight: 3Kg
Power supply	Dual internal switching mode 100-240V/50-60Hz AC 60W Power consumption 12W nominal 36W Max (Analogue only in overload) Side to side cooling
Safety and compliance	TBC

Product description

Product codes	VIRTUOSO-SONIX-D64G-RP (25959) VIRTUOSO-SONIX-A64G-RP (25958) VIRTUOSO-SONIX-D32A32G-RP (25960)
Descriptions	VIRTUOSO-SONIX-D64G-RP - Virtuoso SoniX MADI audio format converter with 64 balanced AES3 (32 inputs + 32 outputs), 16 GPI channels and video sync output. Dual power supplies included. VIRTUOSO-SONIX-A64G-RP - Virtuoso SoniX MADI audio format converter with 64 audio input/output. 64 balanced analogue channels (32 inputs + 32 outputs), 16 GPI channels and video sync output. Dual power supplies included. VIRTUOSO-SONIX-D32A32G-RP - Virtuoso SoniX MADI audio format converter with 32 balanced AES3 (16 inputs + 16 outputs), 32 balanced analogue channels (16 inputs + 16 outputs),16 GPI channels and video sync output. Dual power supplies included. All with DB-25 (Tascam) female connectors (DB-25 cables not included).
Number of ports	10 female DB-25 audio interfaces (Tascam) 2 MADI (electrical/optical) SFP ports 2 BNC sync ports (48kHz or Word clock) 2 IEC PSU ports 1 RJ45 management port (future)
Breakout panels	Supplied separately VIRTUOSO-SONIX-BRK-XLR16M (25955) 1RU passive breakout panel for Virtuoso SoniX MADI audio adapter with 16 male XLR connectors. DB-25 female connector. (DB-25 cable included). VIRTUOSO-SONIX-BRK-XLR16F (25956) 1RU passive breakout panel for Virtuoso SoniX MADI audio adapter with 16 female XLR connectors. DB-25 female connector. (DB-25 cable included). VIRTUOSO-SONIX-BRK-XLR16MF (25957) 1RU passive breakout panel for Virtuoso SoniX MADI audio adapter with 8 male and 8 female XLR connectors. DB-25 female connector. (DB-25 cable included).

Nevion near you!

Nevion has a presence in all the major regions, and an extensive network of partners to reach customers anywhere in the world.

Visit our website for your nearest sales contact

nevion.com