

ION 2.0 & ION 0.2

Wall Mount CobraNet® Interfaces



MEDIA
TECHNOLOGY
SYSTEMS



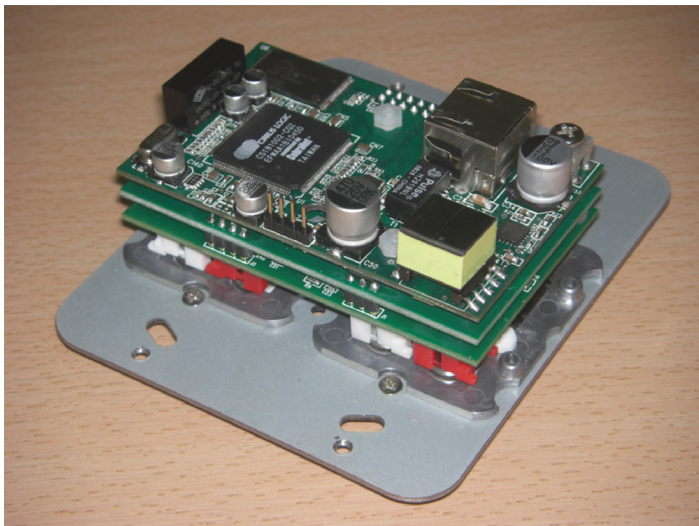
The ION2.0 & ION0.2 are 2-gang wall mount CobraNet® interfaces, with either 2 analog audio inputs converted to CobraNet® (ION2.0), or 2 CobraNet® inputs converted to analog audio (ION0.2).

KEY BENEFITS

- **Value added:** The ION product line leverages additional value from the investment into the structured cable system, as the MTS ION interfaces are simply additional LAN 'endpoints' on the building network.
- **On-board DSP:** Both ION2.0 and ION0.2 have onboard signal processing. The ION2.0 provides an AGC, filters, EQ and Compressors. The ION0.2 has an 8x8 Mixer, along with loudspeaker management processing
- **Low cost LAN cable/Many channels:** One UTP cable carries multiple audio channels (instead of one costly microphone cable for one audio channel)
- **Low Cost LAN Connector/Reduced cost of labor:** Replaces the skilled labor and long hours required to solder terminate, impedance check and polarity check specialist XLR/RCA audio connectors with the widely available skillset required to crimp/terminate RJ45 connectors.
- **Rapid deployment:** Critical path delivery is dramatically reduced, as one technician can terminate and test an entire ballroom (say 48 ION UTP ports) in a morning compared to days for an analog solution with patch bays
- **Aesthetics:** Fits standard backboxes and decorative faceplates in different finishes to suit the needs of the creative consultants
- **Future proofed:** Once the audio system is part of the structured cabling solution, then upgrading to future audio network products is 'plug and play'.
- **Integration:** Simple integration with the Building Management System (BMS)
- **Eliminates noise problems:** Early conversion to digital eliminates the usual audio buzz & hum problems
- **Rapid Configuration:** The network addressing solution also allows complex patching and room combining to be achieved in seconds. For example, the configuration of a banquet room can be quickly changed from a daytime corporate function to an evening event.
- **Reliability:** Early conversion to Ethernet increases system reliability, as the system is not dependent on a single point of failure in the control room
- **Pro-Audio compliant:** Meets audio performance and signal interfacing needs for both consumer and professional audio applications.

DESCRIPTION

The ION2.0 and ION0.2 are network 'Endpoints', where the audio signal is converted to a CobraNet® stream 'at the wall'.



The ION2.0 and ION0.2 are fully compliant with the CobraNet® protocol and will connect to any 3rd party Control Room DSP solution.

Converting to CobraNet® at the wall reduces problems with buzz, hum, ground loops and other cable issues. In addition, the system design no longer needs special isolation and impedance matching interfaces to connect a customer's laptop via a long analog cable back to the AV switcher in the control room.

The ION2.0 and ION0.2 can also co-exist with the building Data traffic, usually on their own VLAN. Combining the audio and data networks will leverage additional value from the structured cabling investment, taking 10-15% off the cost of the audio system budget and 50% off the system deployment time.

The ION2.0/ION0.2 can be patched electronically though network addressing. Even unskilled Banquet staff can set up a system at the click of a mouse - a particularly important feature in Hotels and Convention centers, where every day is a new setup and speed is essential.

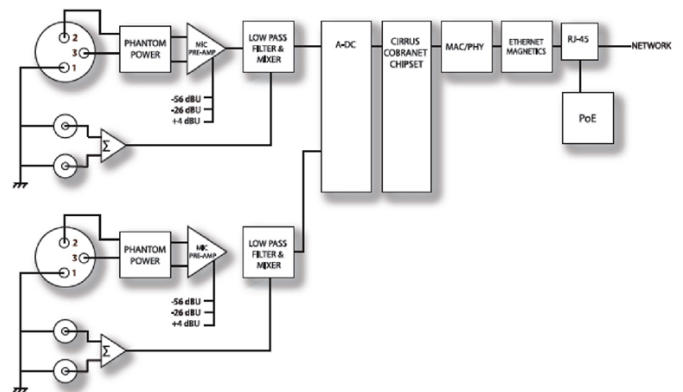
The ION2.0/ION0.2 offers a 'future-proofing' benefit. The act of connecting the wall plates to the Ethernet network automatically future-proofs the cable solution. Any new product or protocols will be Ethernet compliant and thus able to use the same cable and network infrastructure.

The ION2.0 and ION0.2 are only a fraction of the cost of most 8-channel CobraNet® interfaces. All the benefits of converting the audio system into a set of network endpoints costs no more than a standard control room solution.

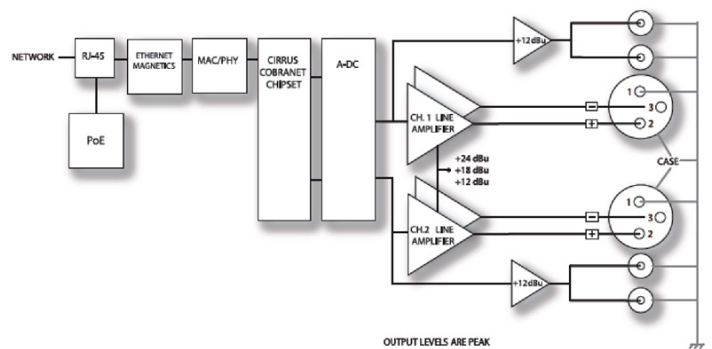
PRODUCT DETAILS

The ION2.0 and ION0.2 are CobraNet® Analog audio to LAN interfaces in a convenient 2-gang wall mount package. The interfaces are designed to fit commonly available decorative wall plates and backboxes from Leviton (Decora), MK, etc. This feature allows the installer to meet the Interior Designer or Architects requirements for color and finish.

The ION2.0 converts 2 channels of analog Mic/Line audio input into a CobraNet® audio stream. The XLR inputs accept a +4dBu balanced audio signal and have three different input sensitivities ...+4dBu (line level), -26dBu (electret condenser microphones) and -56dBu (dynamic microphones). Phantom power (12volt) is always present on the XLR inputs to allow for the different sensitivities of condenser microphones. The RCA inputs accept a -8dBu Consumer level signal (+12dbu peak) and are summed to mono.

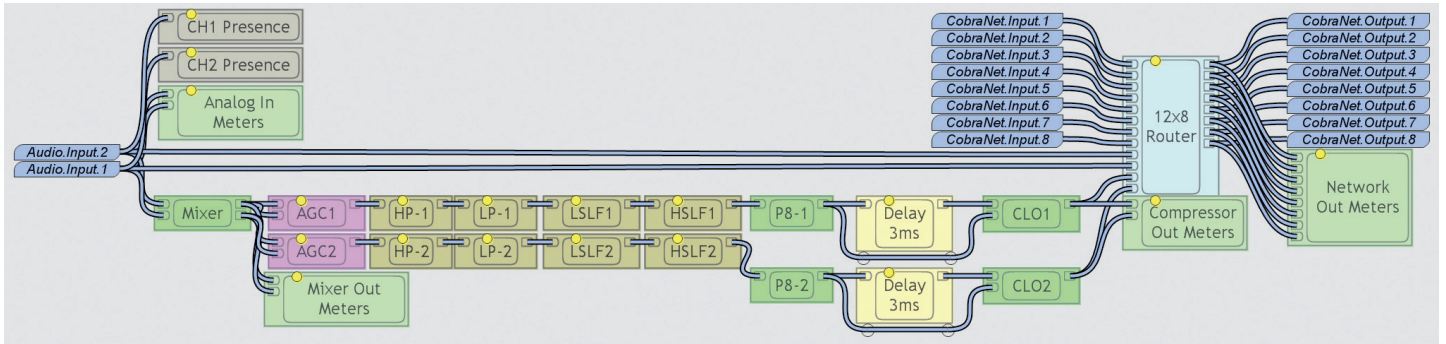


The ION0.2 converts 2 channels of incoming CobraNet® data stream back into analog audio signals. The XLR outputs have three different peak output sensitivities ...+22dBu (ProAudio), +18dBu (Prosumer) and +12dBu (Consumer and amplifiers). The RCA outputs are -8dBu nominal (+12dBu peak).

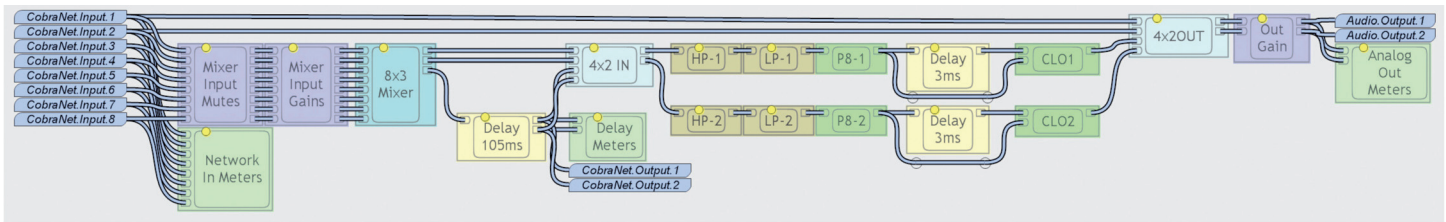


Note: The RCA's are summed to mono and combined with the XLR, so each ION is a 2 channel device, where each channel has one XLR and two RCA's.

The ION2.0 and ION0.2 both have 100MIPS of internal DSP processing, DSP schematics as shown below.



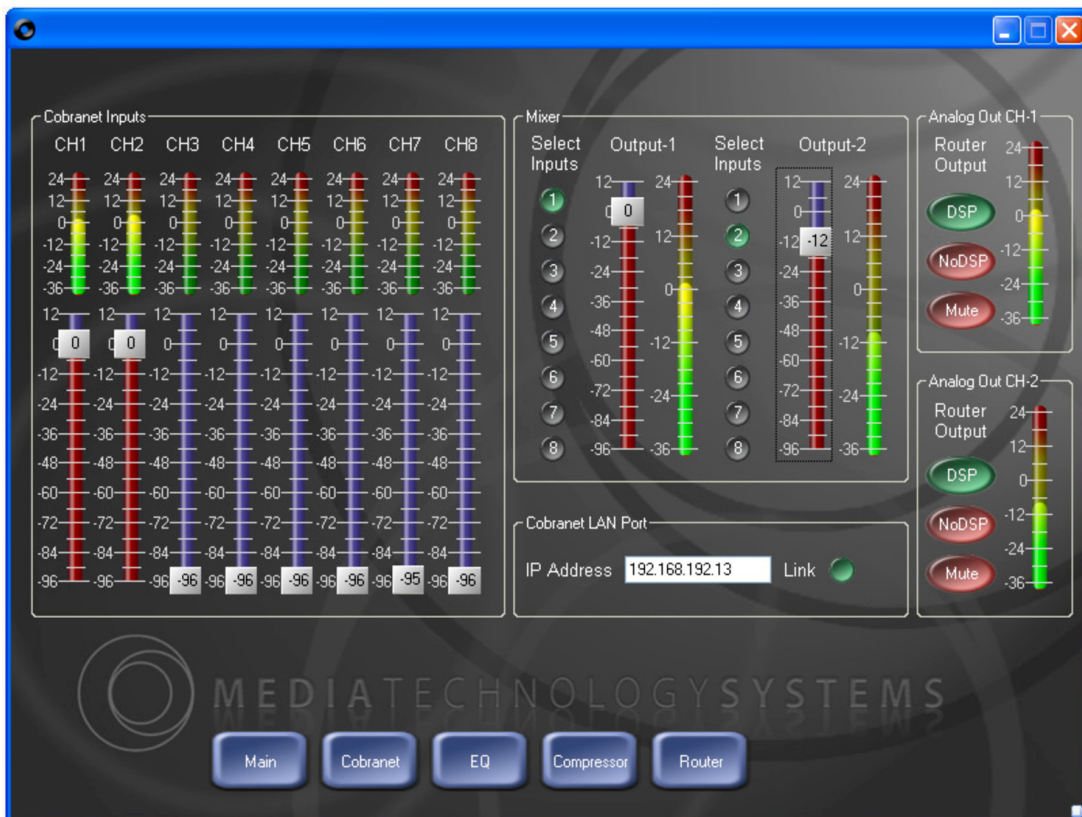
The ION2.0 (above) has 2 analog inputs each with a processing side chain of 2x2 Mixer, AGC, HP, LP High Shelf and Low shelf filters, an 8 band parametric EQ and a 'Look Ahead' Compressor. The 2 analog channels can be transmitted on any of 1-4 outgoing network bundles. In addition, the 2 analog channels can be combined with the incoming network channels from other ION2.0's to make a single 8 channel bundle for those CobraNet® DSP processors that can only accept 8 channel bundles.



The ION0.2 (above) has 8 channels of network input feeding an 8x2 mixer and HP, LP filters, an 8 band parametric EQ, and 'Look Ahead' Compressor on each of the 2 analog output channels. In addition, a 2-tap, 105mS 2-tap can be connected to the outputs, as well as cascading multiple ION0.2's over Cobranet for delays of 210mS, 315mS, 420mS, etc.

The combination of four ION2.0 and one ION0.2 will make a small standalone meeting room system that can combine with a central DSP for room combining.

Remote control of the ION2.0 and ION0.2 is via SNMP. MTS provides a configurable system software package (MTS Control) that uses Stardraw Control as the core engine (see screenshot of the ION0.2 Control UI below).



APPLICATIONS

- Hotels/Hospitality
- Convention Centers
- Corporate Meeting rooms
- Classrooms and Lecture rooms

SPECIFICATIONS

Frequency response:

20Hz-20kHz, +0/-1dB

THD:

<0.12%

EIN:

20Hz-20kHz, less than 121dBm

Hum and Noise:

>70dB below rated output

ION2.0 Analog inputs (note RCA's sum to mono and combine with the XLR):

- Balanced XLR inputs: 2kohm impedance, +22dBu peak, Phantom (12volts)
- XLR gain switch: 0dB (+4dBu nominal), +30dB and +60dB
- Unbalanced RCA inputs: 10kohm impedance, -8dBu nominal, +12dBu peak

ION0.2 Analog outputs (note RCA's are mono and source from the XLR):

- Balanced XLR outputs: 200 ohm balanced, 100ohm unbalanced, 600ohm minimum load to preserve PoE stability. +22dBu peak
- XLR sensitivity switch: +22dbu, +18dBu, +12dbu (peak)
- Unbalanced RCA outputs: 100 ohm impedance, -8dBu nominal, +12dBu peak

ION2.0 CobraNet® I/O:

- 8 channels of CobraNet® streaming input, selectable from any of 8 bundle receivers
- Analog & Network inputs routable to any of 8 channels of CobraNet® streaming output across any of 4 bundle transmitters.
- Full channel submapping of transmitters available.

ION2.0 CobraNet® I/O:

- 8 channels of CobraNet® streaming input, selectable from any of 8 bundle receivers.
- Full channel submapping of receivers available.

Power Supply:

PoE

Control and Monitoring:

SNMP

Control Software:

MTS-CONTROL, CN Discovery (CNDISCO)

Size:

Fits standard 2-gang back box and Decora Faceplate. Rear PCB assy is 80mm (w) x 50mm (h) x 40mm (d).

Weight:

0.2kg (155x135x65mm & 0.33kg Packed).

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