



DESCRIPTION

The MediaMatrix nWall 2.0 is a surface mount CobraNet interface panel with two analog microphone/line level input channels. The device converts audio from the input channels to a CobraNet audio stream. It can then be routed via CobraNet bundle transmitters over a local area switched network using CAT5e UTP cable.

There are two XLR connectors on the front panel with 12V DC phantom power. The input sensitivity can be selected using rotary switches. Electret condenser and dynamic microphones are supported, plus line level audio. There are also two 1/8" (3.5mm) TRS mini jacks, which accept a nominal -8dBu signal; this is summed to mono and mixed with the XLR input.

The nWall eliminates the need for long runs of analog cables terminated in racks of patch bays. As the connection to the nWall uses CAT5e UTP cable with network standard RJ45 crimp connectors, the installation time, number of terminations required and associated cost are all minimized. A MediaMatrix nWall fits within a standard 2 gang North American NEMA back box and is powered over the attached network cable from a network PoE capable switch that conforms to IEEE 802.3af.

FEATURES & BENEFITS

- 2 balanced XLR inputs - mic/line selectable gain via front panel 3 step rotary switch allows quick source setup at the wall panel. Latchless connection minimizes mechanical damage.
- 2 unbalanced TRS 1/8th inch (3.5mm) mini jack inputs - summed mono for PC and Aux consumer line level audio products using off the shelf consumer audio cables.
- CobraNet audio transport - via switched network and RJ45 crimp connectors greatly reduces critical path delivery time and costs, replacing the need to solder/terminate analog interface panels.
- Electronic patching - using MediaMatrix NWare any number of nWall panels can be patched on the fly to any number of NIONs, eliminating the need for expensive patch panels and greatly reducing setup time between events.
- Analog to digital conversion at the wall panel - reduces problems with buzz, hum, ground loops and other cable issues. It also eliminates the need for isolation and impedance matching interfaces.

APPLICATIONS

- Civic & convention centers
- Hotel ballroom, function and meeting rooms
- Stadiums, arenas, performing arts centers
- Schools, universities
- Auditoriums & theaters
- Paging systems
- Airports
- Mass rapid transportation systems
- Theme parks
- Houses of worship
- Teleconferencing
- Cruise ships & tour boats
- Medical centers / hospitals

Specifications

Front Panel Connections

2 x balanced XLR3 (F) inputs (latchless).

Rotary (3 step) switch supports each adjacent XLR. Selectable gain attenuation: -56dBu / -26dBu / +4dBu (nominal) with +20dBu (peak) headroom for each setting.

2 x unbalanced TRS (F) 1/8th inch mini jack inputs summed to mono then mixed with XLR, -8dBu (nominal) + 12 dBu (peak).

2 x blank label boxes for custom labeling of each input channel.

Rear Panel Connections

LAN: RJ-45 socket for CobraNet and control communications on 100Base-T Ethernet. Requires Power-over-Ethernet (PoE) via an IEEE 802.3af capable network switch.

Digital Audio Performance

Frequency response: +/- 1dB 20Hz to 20kHz nominal level

THD+noise: Less than 0.1% 20Hz to 20kHz nominal level

Hum & Noise / EIN, 150 Ω : -126 dBm at max gain, 20Hz - 20kHz

Dynamic Range: 98 dB (gain min)

CMRR: 65 dB

Nominal Input Sensitivity / Max Input Level

XLR connectors:

Position 1 +4dBu / +24dBu

Position 2 -26dBu / -6dBu

Position 3 -56dBu / -36dBu
(Impedance mic = 2.0 kOhm)

TRS connectors:

-8dBu / +12dBu

(Impedance line = 10.0 kOhm)

Phantom Power:

+12V DC (DIN 45 596 or IEC 268-15A)

(Allocated to XLR inputs)

CobraNet Performance

2 audio sub channels at 48 kHz sample rate, 5.33ms latency to CobraNet transmit bundles.

System Configuration

Audio interface panel IP settings, CobraNet bundle settings and subchannel mapping assignments are remotely accessible via the Ethernet network.

CobraNet Discovery can be used for basic set up. Advanced and dynamic set up via NWare requires an nTouch 180 or nControl.

Power / Data requirements & connection

Requires IEEE 802.3af PoE compliant network switch that provides up to 15.4 W of DC power (minimum 44V DC and 350 mA) from each individual port over CAT5e UTP cable.

Power over Ethernet (PoE):

Consumption = 350 mA (Max)

Mechanical Specification

Dimensions: 4.57" (116mm) W x 2.0" (51mm) D x 4.5" (114mm) H

Net Weight: 1.54 lb. (0.70 kg)

Mounting: North American NEMA 2-gang finish plate, requires 2.25" clearance depth minimum. Mount in metal box coupled to EMT conduit.

NOTE: Take care to ensure that back box and conduit coupling hardware, wire or other terminating devices do not obstruct the installation of the nWall circuit assembly.

Finish

Grey powder coat on 18 gauge CRS.

NOTE: The nWall can only be powered via an IEEE 802.3af PoE compliant network switch. This must provide up to 15.4W of DC power (minimum 44V DC and 350mA) from each individual port over CAT5e UTP cable. Although any 802.3 compliant network switch should work with CobraNet, less expensive switches cannot operate at wire speed or have limited queue buffer sizes and can cause problems when a large amount of network traffic is present.

Architect's & Engineer's Specifications

Audio Network In Wall Interface Panel

The audio network interface panel shall be an in wall surface mount panel housed within a North American NEMA 2-gang back box designed for fixed installation in engineered audio and communication systems. It shall provide up to 4 input analog audio channels supporting both microphone and line level balanced and unbalanced line audio sources with input attenuation being selectable from rotary switches located on the front panel. The balanced analog audio inputs shall provide for 12V DC phantom powering for microphones. The audio network interface shall be powered from Power-over-Ethernet according to standard IEEE802.3af. The audio interface panel shall be a 2 channel device, where internal circuitry shall mix and sum mono the TRS mini jack and XLR inputs for each channel allowing for the audio inputs to be transmitted over an audio network. The audio network shall be CobraNet™, operating on a 100Base-T Ethernet physical interface. The network interface panel Ethernet port shall be side mounted to ensure connected network cable has sufficient bend radius. Remote set up and control via Ethernet shall be possible for CobraNet settings. A software device to control the audio network interface panel shall be available for integration into the NWare configuration file. The audio network interface panel shall be the MediaMatrix nWall 2.0 or approved equal.

