DMX

WheatNet-IP Networked Digital Console

AUDIOARTS ENGINEERING

DMX Surface

With DMX, Audioarts joins the WheatNet-IP Intelligent Network, allowing it to access BLADEs, consoles, appliances, processing, and the full complement of Wheatstone (and partners) equipment network-wide.

Unique to DMX is its built-in networking (5-port switch) that lets you create a smaller local network, adding I/O and another console without needing an external switch.

The DMX surface is available in 8- or 16-input versions. Both are low-profile, compact table-top consoles that fit into just about any broadcast environment.

Overview

The DMX AoIP console line carries forward the rugged quality and practical functionality of the Audioarts brand, but includes WheatNet-IP audio routing.

DMX can be used as all-inclusive without the need for an external Ethernet switch. It's an ideal setup for a two- or three-studio facility where each studio can act independently as a separate standalone entity, but the studios are linked together through an IP network.

To accommodate this, DMX provides 1Gb connectivity via its built-in five-port switch for robust routing of sources and destinations between studios and integrates easily into most existing radio automaton systems.

Need more? The DMX is also completely WheatNet-IP compatible, so you can use it with the full complement of BLADEs, software, processing, and anything else that works on the WheatNet-IP Intelligent Network.

The new DMX control surface is a fully integrated standalone console for on-air and production applications. It is available in an 8-fader (DMX-8) or 16-fader (DMX-16) frame with four program busses and bus-minus on every fader as well as convenient multi-function knob on each channel for adjusting pan, mode, dynamics, and input sources. The console has talkback and cue functions, EQ/dynamics, and control room, studio and headphone monitors, plus LED metering, built-in timer, and four-event recall.

Features

- Standalone production or on-air console with local inputs and outputs

- 5-port Ethernet switch built into Audioarts Mix Engine - no need for an external switch

- Control surface sizes for 8-, 16-fader channels

- WheatNet-IP protocol with 1Gb connectivity - any source to any fader

- Bus Minus (N-1) on each input channel

- Four program output busses

- Four event buttons for recalling entire console setups at the touch of a button

- Control room, studio, and headphone jack (with built-in amplifier w/level control)

- Full EQ functions (4-band parametric with high/low pass and high/low shelving) and full dynamics (compression, limiting, and expansion) on every channel

- Talkback and cue functions

- Built-in timer

- Multi-function channel-encoder knob with OLED display on each channel for control of EQ, dynamics, sources, pan, mode, and more

- Six logic GP I/O ports for network control

- Audioarts Mix Engine is configured: 2 mic inputs on XLRs, with all additional I/O on RJ-45 connectors: 4 analog inputs, 4 digital inputs, 4 analog outputs, 4 digital outputs, 2 analog mic outputs, Headphone output, Cue output, Studio output, and Control Room output. There are also 5 Ethernet ports that will interface directly with optional I/O Razor Interfaces, and a 1 Gb Ethernet port for networking.

- Optional Razor I/O Interfaces can expand the system I/O with 8 stereo or 16 mono in and/or out; available in digital or analog/digital version

- 100% compatible with the WheatNet-IP intelligent network

Literally Plug & Play...
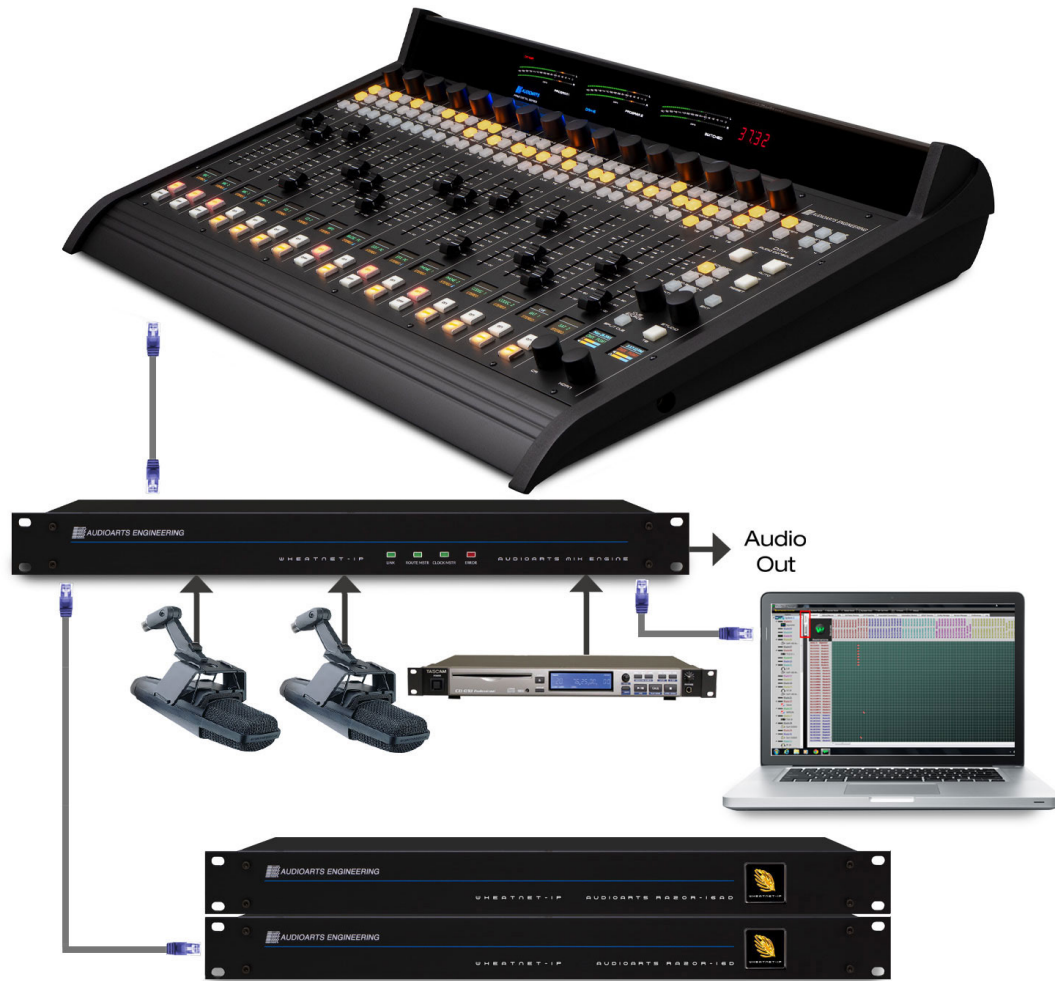
1. Using standard CAT-6 cables, plug the DMX control surface and engine into the built-in switch on the Audioarts Mix Engine

2. Plug in your computer running Audioarts Navigator software to configure your network

3. If you like, add Audioarts Razor I/O modules to add more sources. Or add BLADEs if you'd like to take advantage of their cache of audio tools.

4. Plug your own audio sources into the Audioarts Mix Engine and Razor(s)

5. Turn it all on and hit the airwaves

Audioarts Mix Engine
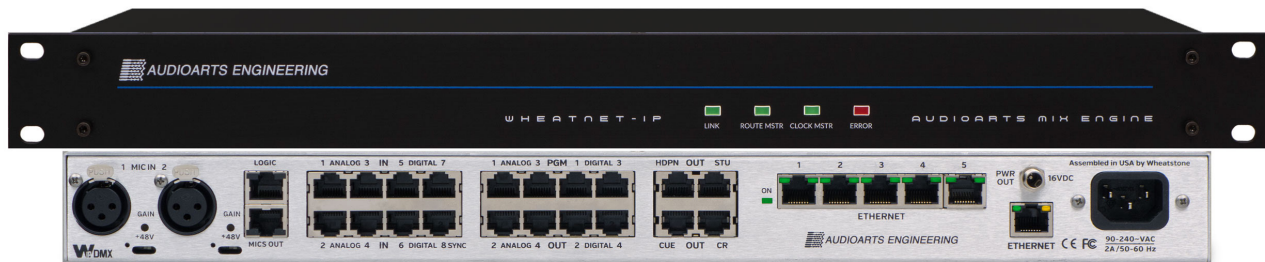
Utilizing WheatNet-IP, the DMX can become a part of an existing WheatNet-IP AoIP network. Or you can use it as the starting point for one.

For smaller applications, there's an integrated 5-port switch, which gives you the speed and flexibility to have a complete, self-contained setup and the ability to add-on without the need for an external switch. For larger applications, the DMX becomes part of a WheatNet-IP network.

Audioarts Mix Engine uses RJ45 connectors for all audio (StudioHub+ format), logic (WheatNet-IP-format), and network connections, except for the 2 mic preamp inputs (XLR).

Connections include Mic Preamps Out; 4 stereo/dual mono analog inputs; 4 stereo/dual mono digital inputs; four stereo Program outputs (both analog and digital); 4 stereo analog Monitor outputs (Control Room, Studio, Cue, and operator headphones); 6-port logic GPIO; Engine Ethernet port; 5-Port Ethernet switch to network the Surface, Engine, and three additional devices.

With two sizes of control surface (8- or 16-channel) available, DMX puts a lot of radio control into a very small footprint – everything you need to take it to the air.

Extending DMX: WheatNet-IP Razors
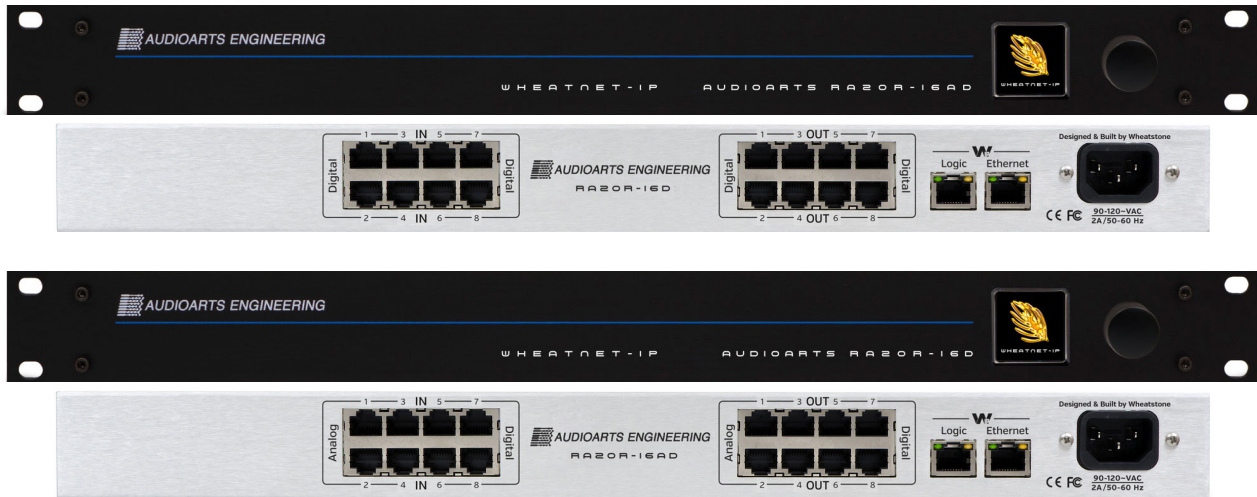
DMX utilizes WheatNet-IP to access, control, and process any and all audio sources on the network via it's Razors. Each of the Razor I/O Interfaces pictured above provides you with 8 analog, digital, or analog/digital inputs and outputs, as well as logic and Ethernet connections on RJ45 connectors and represent a cost-effect way to build your network if you don't need the tools built into BLADEs.

Extending DMX: WheatNet-IP BLADEs
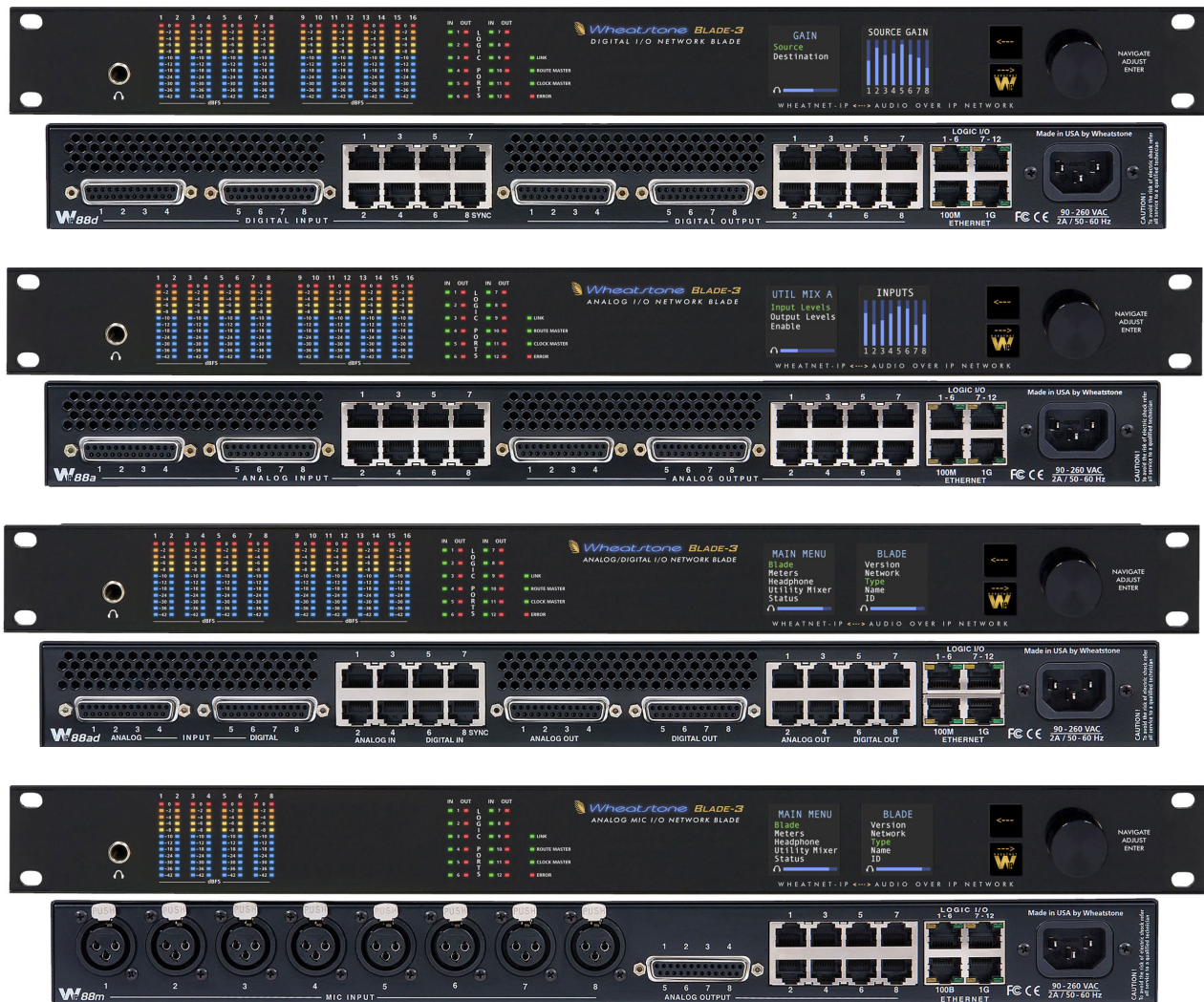
DMX can also tap the full power of the WheatNet-IP Intelligent Network, allowing you to utilize BLADE interfaces to access, control, and process any and all audio sources on the network, utilizing the award-winning tools built into every BLADE. Through AES67, DMX is compatible with similarly equipped third party gear, providing functionality for your facility that is unequaled. Additionally, all software, such as ScreenBuilder, IP Meters, WheatNet-IP Driver, Navigator, and more, are at your disposal to create workflows that can address your exact needs.

To learn more, visit:

wheatstone.com/wheatnet-ip

Surface Functions

MULTI-FUNCTION CHANNEL-ENCODER KNOB:
When the channel is off, rotating the encoder switches the channel display to show alternate sources, selected by "clicking" the encoder. The encoder can also control channel mode, panning, and EQ & Dynamics.

ASSIGN:
Directs the channel's signal to any of four stereo output busses.

TB:
Routes the selected talkback mic to the channel's individual bus-minus output.

CUE:
Routes the channel's pre-fader and pre-switch signal to the CUE bus.

FADER:
100mm long-throw fader for channel level control.

ON/OFF:
Switches the channel's audio on and off.

METER:
Selects the switchable meter source between PGM 3, PGM 4, and EXT (external).

EVENT:
Recalls one of four user-programmable console snapshots.

SOFT:
Programmable button to be used as you wish.

TIMER:
Buttons for auto-start, start/stop, and reset for the built-in timer in the meter bridge.

SOURCE:
Selects one of four busses or two external sources for listening in the control room and studio.

CUE/SOURCE:
Adjusts the cue speaker level. Also used to select and set the source for the EXT, EXT 1, and EXT 2 buttons.

EXT:
Sends an external signal (such as an off-air feed) to the STUDIO monitor.

STUDIO:
Level control for the studio monitor output.

SPLIT CUE:
Sets how cue feeds the headphones (split or stereo).

TB:
Engages talkback to the studio monitors.

CR/CONTROL ROOM:
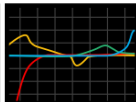Level control for the control room output.

HDPN/HEADPHONE:
Level control for headphone amplifier output.

DMX On board Processing & Displays

Full Parametric EQ and Dynamics Processing on Every Channel

EQ Lo	EQ Lo	EQ Lo	EQ Lo Mid	EQ Lo Mid	EQ Lo Mid	LPF	EQ Lo Shelf	Input 8
FREQ	BW	LEVEL	FREQ	BW	LEVEL			IN/OUT
100 Hz	.99 OCT	5.9 dB	794 Hz	.50 OCT	-4.0 dB	OUT	IN	EQ LO FILTERS
EQ Mid Hi	EQ Mid Hi	EQ Mid Hi	EQ Hi	EQ Hi	EQ Hi	HPF	EQ Hi Shelf	
FREQ	BW	LEVEL	FREQ	BW	LEVEL			
2.4 kHz	1.2 OCT	2.1 dB	6.3 kHz	0.1 OCT	1.5 dB	OUT	IN	

The DMX has 4 fully parametric EQ bands with peak/shelf control for the low and high bands plus high and low pass filters - on every channel. Same with compression, limiting, and expansion dynamics control - a full suite on every channel. When editing, the functions spill out across channels on the DMX letting you see the entire picture at once. When you are done editing, just close out and the board goes back normal display functions.

EQ Cue Dyn	EQ Dyn	EQ Dyn	Pan			EQ	EQ Dyn	Oct 11 2017
HOST	GUEST 1	GUEST 2		VOXPRO	PLAY 1	PHONE 1	CODEC	PGM 1
MONO	MONO	MONO	Center	MONO	STEREO	MONO	STEREO	
Expander	Expander	Expander	Expander	Expander	Expander		Input 8	3:20:09 PM
OPEN	THRES	HANG	RATIO	DEPTH	CLOSE		IN/OUT	PGM 1
5.0 mS	0.0 dB	100 mS	3:1	3.9 dB	300 mS		EXPANDER FILTERS	

With full color OLED displays and color-coded functions, you can see all your settings at a glance. Shown are just a sampling of the displays available on the DMX.

DMX Software

WheatNet-IP Navigator

WheatNet-IP Navigator runs on Windows and is the way you get to an overview of your system. From here, you can tweak or reconfigure your entire network. It's intuitive and powerful, making the DMX the command center for your AoIP universe. Or neighborhood (we suffer no delusions of grandeur).
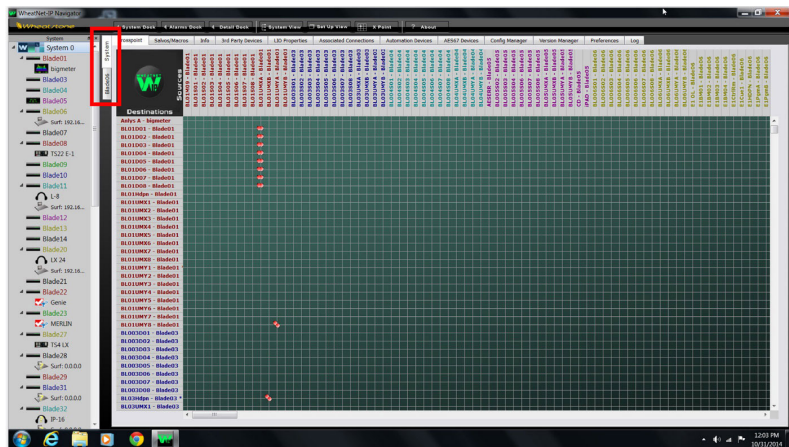
Audioarts Surface Setup

Configuring your DMX is as simple as running this Windows program. Get a birds-eye view of your entire setup and tweak or reconfigure it as you wish. It makes quick work of setup and lets you know just about everything you need to know about the way your board is configured. And when you make a change—whether large or small, you click one button: Apply, and the changes are applied instantly.

Audio In From Outboard Analog Sources Such as CD Player, MP3 Player, etc

Audio In From Outboard Digital Sources Such as CD Player, MP3 Player, etc

**Anal...
Audio C...
To Optio...
Headpho...
Amplif...**

To GPIO Devices

Jumper for Audio From Analog Mics Pre Out To Analog Input 1
(These will show as BL01MIC1 and BL01MIC2)

Analog Outputs PGM 1 thru PGM 4

AES Digital Outputs PGM 1 thru PGM 4

**A...
To ...
Cu...**

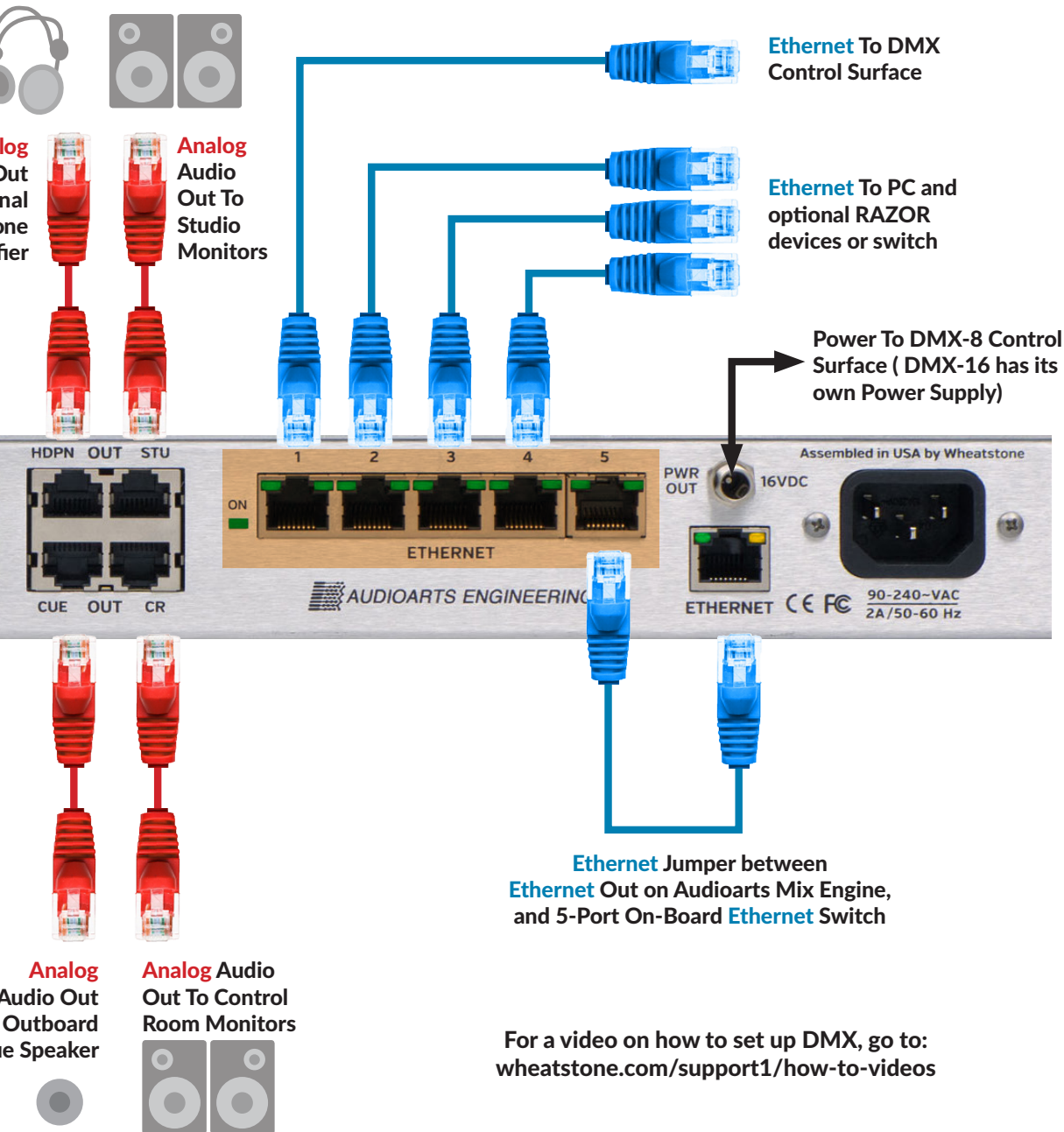|	
▬ **Balanced XLR Audio Cable**	▬ **StudioHub CAT6 Cable for Analog Audio**
▬ **Ethernet CAT6 Cable**	▬ **StudioHub CAT6 Cable for Digital Audio**

Think of the back of the Audioarts Mix Engine as a rack that has a **TWO CHANNEL MIC PRE**, an **I/O SECTION**, and a **5-PORT ET...**
To use them, you have to physically patch the outputs of the **MIC INPUTS** into your choice of **ANALOG INPUTS 1-4 (Input 1 is p...**
Likewise, to use the Audioarts Mix Engine with the 5-port switch, you need to physically jumper the **ETHERNET OUT** to an avai...
ETHERNET switch.

Ethernet To DMX Control Surface

Ethernet To PC and optional RAZOR devices or switch

Analog Audio Out nal one fier

Analog Audio Out To Studio Monitors

Power To DMX-8 Control Surface (DMX-16 has its own Power Supply)

HDPN OUT STU

ON

ETHERNET

1 2 3 4 5

PWR OUT 16VDC

Assembled in USA by Wheatstone

AUDIOARTS ENGINEERING

ETHERNET CE FC 90-240~VAC 2A/50-60 Hz

CUE OUT CR

Ethernet Jumper between Ethernet Out on Audioarts Mix Engine, and 5-Port On-Board Ethernet Switch

Analog Audio Out Outboard e Speaker

Analog Audio Out To Control Room Monitors

For a video on how to set up DMX, go to: wheatstone.com/support1/how-to-videos

THERNET SWITCH mounted in it. re-configured for this). lable port on the onboard 5-port

AUDIOARTS ENGINEERING

Designed and built in the USA.
Phone +1-252-638-7000
audioarts.com | sales@wheatstone.com

PHYSICAL DIMENSIONS DMX 8 CONSOLE:
17.625"/45cm wide
17"/43cm deep (tabletop mount)
4.25"/11cm high (rear)
1.625"/4.1cm high (front)
Weight 16 lbs/7.26 kg
Powered by an external power supply

PHYSICAL DIMENSIONS DMX 16 CONSOLE:
29.625"/75.3cm wide
17"/43cm deep (tabletop mount)
4.25"/11cm high (rear)
1.625"/4.1cm high (front)
Weight 26 lbs/11.8 kg
Powered by an external power supply

Designed and built by

Wheatstone Corporation
600 Industrial Drive | New Bern NC 28562-5440 USA
phone 1.252.638-7000 | fax 1.252.635-4857
wheatstone.com | sales@wheatstone.com

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