WheatNet-IP Networked Digital Console

DMX

WheatNet-IP Networked Digital Console
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 automatlon 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 analog, digital or analog/digital version
- 100% compatible with the WheatNet-IP intelligent network
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.
DMX utilizes WheatNet-IP to access, control, and process any and all audio sources on the network via its 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.
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
Cool Stuff about DMX

No External Switch Needed

With the Audioarts Mix Engine, we've provided five Ethernet ports for interfacing the Surface, the Engine, and your PC for use with Navigator or DMX Surface Setup, as well as optional devices such as VoxPro PC, a media server, or a couple of Razor I/O units for expansion. Essentially acting as a built-in switch, this keeps IT management and procurement costs down while making it dead simple to expand your AoIP network.

Of course, if you DO want to expand even further and add more DMX consoles, you can add a managed gigabit switch and be off and running to a larger WheatNet-IP network.

Source and Program Select

Any channel can be assigned to one or more program output busses, making your material available to an on-air feed as well as an Internet stream, for instance.

Any input can be called up on any channel on the DMX. This means, for instance, the feed you've got plugged into input 7 on the back of the Engine (or ANY Razor I/O Interface) can show up on channel 2...or any other channel. Same with any input.

Tough Metal Construction

We've built the DMX to withstand years of use and abuse. The finest components and the most reliable construction come together to create a surface that any station would love to have in their production suite, control room, or on-air.

Mix-Minus/Direct Output/Talkback

Each fader has a dedicated Mix-Minus output that includes all active faders on its selected source bus, except for itself. These auto generated monaural Mix-Minus signals may be routed to feed telephone hybrids or other devices as required. Alternately, these outputs may be set to provide a separate direct output from that channel only, consisting of the source assigned to that channel. Each channel has a talkback that will interrupt the feed to that mix-minus.
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

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<th>EQ Lo</th>
<th>EQ Lo Mid</th>
<th>EQ Lo Mid</th>
<th>EQ Lo Mid</th>
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<tbody>
<tr>
<td>FREQ 100 Hz</td>
<td>BW .99 OCT</td>
<td>FREQ 794 Hz</td>
<td>BW .50 OCT</td>
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<tr>
<td>EQ Lo Mid</td>
<td>EQ Lo Mid</td>
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<td></td>
</tr>
<tr>
<td>FREQ 2.4 kHz</td>
<td>BW 1.2 OCT</td>
<td>FREQ 6.3 kHz</td>
<td>BW 0.1 OCT</td>
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<tr>
<td>EQ Lo Shelf</td>
<td>EQ Lo Shelf</td>
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<td>LPF OUT</td>
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<tr>
<td>HPF OUT</td>
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<tr>
<td>EQ Hi Shelf</td>
<td>EQ Hi Shelf</td>
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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.

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.
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 ETHERNET SWITCH mounted in it. 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 pre-configured for this). Likewise, to use the Audioarts Mix Engine with the 5-port switch, you need to physically jumper the ETHERNET OUT to an available ETHERNET switch.
Analog Audio Out To Control Room Monitors

Analog Audio Out To Outboard Cue Speaker

Analog Audio Out To Studio Monitors

Ethernet To DMX Control Surface

Ethernet To PC and optional RAZOR devices or switch

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

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

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

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