

# DM-NAX-4ZSP

## DM NAX™ 4-Zone Streaming Preamp



- *Audio-over-IP (AoIP) preamplifier, puts Crestron multiroom distributed audio on the network*
- *Built-in streaming services support*
- *1 RU form factor, low power consumption, cool-running operation*
- *Built-in chime support*
- *Provides four stereo zone (8-channel) line-level outputs*
- *Voice control support for Crestron Home™ OS*
- *Output Bussing — enables linked operation of multiple adjacent zones*
- *Connects directly to a managed network to route to or from other DM NAX™ and DM NVX® devices*
- *Interoperable with Dante® audio networking devices via AES67 compatibility*
- *Full DSP capabilities*
- *Streamlined setup and adjustment via the device's web interface*
- *Seamless Crestron system integration with Crestron Home and SIMPL Windows programming*

The Crestron DM-NAX-4ZSP is a next generation Audio-over-IP (AoIP) preamplifier that puts Crestron multiroom audio distribution on the network. It provides four stereo zone (8-channel) line-level outputs. A dedicated streaming service player enables streaming different content in each of the four zones.

The DM NAX™ platform is built on AES67 standards with additional ease of configuration via a web interface, SIMPL Windows, C#, and/or a RESTful API. It is compatible with the following:

- DM-NVX® platform through the AES67 secondary audio stream
- Third-party AES67 solutions
- Dante® devices via the compatibility mode enabled through Dante Controller

Full DSP capabilities are available on the line outputs.

Voltage triggers corresponding to the 4 stereo line-level analog outputs can be used to power connected external amplifiers on and off.

### Audio-over-IP

DM NAX takes audio distribution to a whole new level by putting it onto the network. The scale of DM NAX far exceeds the capabilities of previous generations of Crestron distributed audio. DM NAX units integrate with DM NVX devices to pull audio from video feeds for rooms without displays.

### Streaming and Casting Services

A dedicated streaming service player for each of the zones supporting AirPlay® 2, Internet Radio, Spotify Connect™, Pandora®, SiriusXM®, TIDAL™, Deezer®, Qobuz®, Podcasts and more. The DM-NAX-4ZSP delivers streaming, routing, distribution, and preamplification in a single device. Streams can be routed to other non-streaming AoIP devices.

### Chimes

A library of chimes is built into the unit. Chimes can be assigned to different zones to help identify them. Whenever a chime is triggered, the zone audio will duck or pause, so the chime can be clearly heard over active media until the chime concludes.

### DSP

DSP capabilities such as bass and treble boost and cut, loudness, adjustable delay, output limiting, tone profiles, a full 10-band EQ per output, and an option to have line output as a fixed or variable level with or without DSP applied are available.

Zones can be permanently bussed together (up to 4 buses available per unit, and up to all 4 zones can join a given bus) for simultaneous routing and control, or grouped dynamically with other zones for a temporary collection of zones that playback the same media.

### Encoder and Decoder Functionality

The DM-NAX-4ZSP is configurable to operate as a network AV encoder and decoder. The analog line level sources, digital S/PDIF sources or media streams on one DM NAX can be sent to any other DM NAX or AES67 capable endpoint on the network.

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## DM NAX™ 4-Zone Streaming Preamp

### Specifications

#### Audio

<b>Input Signal Types</b>	4 stereo analog (RCA); 4 digital S/PDIF (2 TOSLINK® and 2 Coaxial)
<b>Output Signal Types</b>	4 stereo analog outputs, Outputs 1 and 2 have a balanced 5-pin stereo Phoenix connection and an unbalanced RCA connection
<b>Sampling Rates and Bit Depths</b>	Digital Input (Coaxial): Up to 192 kHz, 24-bit; Digital Input (Optical): Up to 96 kHz, 24-bit; Media Players: Up to 192 kHz, 24-bit
<b>Source Compensation</b>	±10.0 dB per input
<b>Input Monitoring</b>	Source Signal Detect
<b>Frequency Response</b>	20 Hz to 20 kHz ±0.2 dB
<b>THD</b>	0.006%
<b>S/N Ratio</b>	110 dB digital in, 108 dB analog in
<b>Zone Volume Level Control</b>	-80.0 to +20.0 dB, adjustable from 0% to 100% plus mute
<b>Bass Control</b>	±12.0 dB
<b>Treble Control</b>	±12.0 dB
<b>Loudness Compensation</b>	On/Off
<b>Dynamic Range Control</b>	Off/Low/Medium/High
<b>Balance Control</b>	Left/right adjustable
<b>Tone Profiles</b>	Flat, Classical, Jazz, Pop, Rock, Spoken Word
<b>EQ Filter Types</b>	EQ, High Pass, Low Pass, Treble Shelf, Bass Shelf, Notch
<b>EQ Center Frequency</b>	10 to 20,000 Hz per band
<b>EQ Gain</b>	+20/-40 dB per band
<b>EQ Bandwidth</b>	0.1 to 4.0 octaves per band
<b>Bus Volume Offset</b>	±12.0 dB per zone for output bussing

#### Communications

<b>Ethernet</b>	For control, AoIP, and or console, 100/1000 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP
<b>USB</b>	For configuration management

#### Connectors

<b>SPDIF SOURCES 1 – 2</b>	(2) JIS F05 female (TOSLINK) optical fiber connector; S/PDIF optical digital audio input
<b>SPDIF SOURCES 3 – 4</b>	(2) RCA female; S/PDIF coaxial digital audio inputs; Input Impedance: 75 Ohms
<b>ANALOG SOURCES L/R 5 – 8</b>	(8) RCA female comprising (4) unbalanced stereo line-level audio inputs; Input Impedance: 10k Ohms; Maximum Input Level: 2 Vrms
<b>ANALOG OUT L/R 1 – 4</b>	(8) RCA connectors, female; Comprises (4) unbalanced line-level stereo audio outputs (mirror corresponding amplified output pairs 1 – 4); Output Impedance: 100 Ohms; Maximum Output Level: 2 Vrms
<b>ANALOG OUT L/R 1 – 2</b>	(2) 5-pin 3.5mm detachable terminal blocks; Balanced stereo line-level audio outputs (mirror corresponding unbalanced output pairs 1 – 2); Output Impedance: 150 Ohms; Maximum Output Level: 4 Vrms
<b>Ethernet 1</b>	(1) 8-wire RJ45 female; 100Base-T/1000Base-TX Ethernet port
<b>Ethernet 2</b>	(1) 8-wire RJ45 female; 100Base-T/1000Base-TX Ethernet port
<b>USB</b>	(1) USB Type B connector, female; USB computer console port (cable included); For setup only
<b>100-240V~50/60Hz Universal AC</b>	(1) IEC 60320 C14 main power inlet, mates with removable power cord (included)
<b>G</b>	6-32 screw, chassis ground lug

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## DM NAX™ 4-Zone Streaming Preamplifier

### Controls and Indicators

<b>PWR</b>	(1) LED. White indicates that the device is switched on with audio passing. Red indicates that the device is in standby mode. Off indicates that there is no power from the power supply.
<b>LAN</b>	(1) LED. White indicates that the device is switched on and has a valid IP address. Off indicates that the device is not connected to a network or the IP address is invalid.
<b>NAX</b>	(1) LED. White indicates that AoIP is ready to pass and the unit's PTP clock is synced. Off indicates that no AoIP is passing to or from and/or PTP is not synced.
<b>SOURCE 1-8</b>	(8) LEDs. White indicates signal presence on the specified input/source. Red indicates there is a clipping on an analog input or a bitstream issue on a digital input. Off indicates that there is no signal detected on the specified input/source.
<b>ZONE 1-4</b>	(4) LEDs. White indicates there is audio output on the indicated zone. Red indicates clipping is detected on the output audio.
<b>SETUP</b>	(1) LED. Blinking red indicates that a network reset or factory restore has been initiated via the adjacent SETUP button.

### Power

<b>Power Consumption</b>	15.9 W
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### Environmental

<b>Temperature</b>	32° to 104°F (0° to 40°C)
<b>Humidity</b>	10% to 90% RH (non-condensing)
<b>Heat Dissipation</b>	57 BTU/hr

### Construction

<b>Chassis</b>	Metal, black and silver finish, vented sides
<b>Mounting</b>	1 RU rack-mountable

### Dimensions

<b>Height</b>	1.73 in. (44 mm)
<b>Width</b>	19 in. (482 mm) 17.28 in. (439 mm) without rack ears
<b>Depth</b>	14.50 in. (368 mm)

### Weight

8.06 lb (3.65 kg)

### Compliance

**Regulatory Model: M202123001**

FCC Part 15 Class B digital device, IC Class B, CE, ETL listed

### Model

**DM-NAX-4ZSP**

DM NAX™ 4-Zone Streaming Preamplifier

### Available Accessories

For a list of available accessories, visit the [DM-NAX-4ZSP](#) product page.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/How-To-Buy/Find-a-Representative](http://www.crestron.com/How-To-Buy/Find-a-Representative) or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to [www.crestron.com/warranty](http://www.crestron.com/warranty) for full details.

The specific patents that cover Crestron products are listed online at [patents.crestron.com](http://patents.crestron.com).

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