DM-NVX-DIR-ENT

DigitalMedia™

DM NVX Director™ Virtual Switching Appliance, Enterprise Version

- *Comprehensive network AV system configuration, management, and signal routing*
- *Emulates a traditional hardware-based matrix switcher*
- *Works with Crestron® DM NVX™ encoders and decoders*
- *Supports 1000 endpoints and 240 domains*
- *Enables grouping of endpoints in up to 240 independent subsystems*
- *Fully scalable for any sized network*
- *Intuitive web-based graphical user interface*
- *Ethernet control system interface[1]*
- *Fully-programmable control of virtual matrices and physical endpoints*
- *Automatic endpoint device discovery*
- *Custom naming and search tools*
- *Easy diagnostics and signal status display*
- *XML device map file import/export*
- *Built-in logging*
- *Crestron XiO Cloud™ remote provisioning and management*
- *Six Gigabit Ethernet RJ45 LAN ports*
- *Six 10 Gigabit Ethernet SFP+ LAN ports (Four are 1 Gb compatible)*
- *Fiber optic connectivity via optional SFP or SFP+ transceivers*
- *Single-space 19" rack-mountable*
- *Onboard 100-240V hot-swappable redundant power supplies*

Virtual DM® Switcher

The DM-NVX-DIR-ENT virtually emulates the functionality of a traditional hardware-based DigitalMedia™ matrix switcher, routing high-quality 4K streaming AV signals throughout a room, building, or campus. The DM-NVX-DIR-ENT supports a total of 1000 endpoint devices consisting of DM NVX encoders and decoders. Multiple units can be deployed, with the ability to route signals between units just like hardware switchers [2], easily handling even the largest corporate enterprise, university, governmental, military, medical, transportation, sports, entertainment, hospitality, gaming, or retail application.

Simple, Flexible Configuration

System configuration could not be simpler. The DM-NVX-DIR-ENT automatically discovers each DM NVX endpoint on the network, and allows each endpoint to be assigned as a logical input or output within a "domain." A domain is a logical grouping of endpoints that operate together as a single switching entity, allowing individual rooms and other subsystems to be arranged and controlled independently. It's like having multiple independent matrix switchers in a single rack space. The DM-NVX-DIR-ENT effectively eliminates the need for physical switchers in every room, replacing them with the virtual equivalent running on the AV network.

NOTE: The DM-NVX-DIR-ENT supports a maximum of 240 domains. For larger systems, use multiple units.

Easy Web-Based Setup and Control

The DM-NVX-DIR-ENT provides an intuitive web-based user interface to facilitate system configuration, signal routing, and comprehensive diagnostics of the complete AV network. Each domain and endpoint, as well as the inputs and outputs on each endpoint, can be designated with a user-friendly name. Navigating the entire system is easy using the search box [2] to quickly find domains, endpoints, inputs, and outputs by name or address. A system overview screen is also provided, showing the video and audio signal status for every input and output in a graphical layout that's easy to view and navigate.

Copper or Fiber LAN Connectivity

The DM-XIO-DIR-ENT includes six 1000Base-T RJ45 LAN ports and six 10GBase-X SFP+ LAN ports. Connection to a Gigabit or 10 Gigabit fiber optic network is facilitated by inserting an appropriate SFP or SFP+ transceiver module (Crestron SFP-1G or SFP-10G series, sold separately) into any SFP+ port. A selection of modules is offered to accommodate various multimode and single-mode fiber types.

NOTE: Ports 7 and 8 are strictly 10 Gb and only compatible with SFP-10G SFP+ transceivers.

Redundant Power Supplies

Onboard dual redundant power supplies provide enhanced reliability for demanding applications. In the unlikely event of an individual power supply fault, the DM-NVX-DIR-ENT will continue to operate unhindered on only one functioning power supply. A modular, hot-swappable design allows either power supply to be replaced in seconds from the rear panel without powering down or rebooting the system. The DM-NVX-DIR-ENT ships complete with both power supply modules installed.

Crestron XiO Cloud™ Provisioning and Management

The Crestron XiO Cloud service is a unifying cloud-based platform for remotely provisioning, monitoring, and managing Crestron devices across an enterprise or an entire client base. The XiO Cloud™ service enables installers and IT managers to deploy and manage thousands of devices in the amount of time it would ordinarily take to manage just one. It provides a zero-touch solution that allows complete configuration of device settings without any hardware in hand. Simply connect each device on site and let the XiO Cloud service push out the

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settings, licenses, drivers, and firmware updates automatically and securely for a quick and painless, ready-to-use deployment.

Ongoing XiO Cloud service facilitates daily management and monitoring of every device through a single dashboard with comprehensive reporting and logging, live status viewing and alerts, performance metrics and analytics, scheduled actions and updates, and more. As requirements grow and evolve, new features and functionality can be added easily to one or many devices at any time without ever going on site. The XiO Cloud service is subscription based, offering an adaptable SaaS (Software as a Service) solution with graduated levels of functionality and unlimited scalability. For more information about the XiO Cloud service, visit https://www.crestron.com/xiocloud.

Specifications

Device Support

Endpoints: Supports 1000 DM NVX devices, each configured as an encoder or decoder

Domains: Supports 240 domains (allows grouping of endpoints in up to 240 individual subsystems)

Communications

Ethernet: 100/1000 Mbps, 10 Gbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, IPv4 or IPv6, HTTPS web browser setup and control, Crestron control system integration [1]

DM NVX (via Ethernet): HDCP 2.2, AES audio/video content encryption, RTP, RTSP, SDP, ONVIF, IGMPv2, IGMPv3, SMPTE 2022, FEC (Forward Error Correction)

Connectors

MGMT (front): (1) 8-pin RJ45 connector, shielded, female; 100Base-TX/1000Base-T Ethernet port for hardware management

USB 3.0 (front): (2) USB Type A connectors, female, blue; USB 3.0 host ports for factory use only

LAN 1 – 6 (front): (6) 8-pin RJ45 connectors, shielded, female; 100Base-TX/1000Base-T Ethernet ports for web browser, endpoint, and control traffic

LAN 7 – 8 (front): (2) SFP+ ports (10 Gb only); 10GBase-X Ethernet ports for web browser, endpoint, and control traffic; Each port accepts one Crestron SFP-10G series SFP+ transceiver module

LAN 9 – 12 (front): (4) SFP+ ports; 1000Base-X/10GBase-X Ethernet ports for web browser, endpoint, and control traffic; Each port accepts one Crestron SFP-1G or SFP-10G series SFP/SFP+ transceiver module

100-240V~ 3-6A 50/60Hz (rear): (2) IEC 60320 C14 main power inlet; Each mates with removable power cord, included

Controls & Indicators

MSG: (1) Bi-color blue/red LED, blue identifies the device when "unit identification" is initiated, red indicates a power supply fault

LAN 1 – 2: (2) Green LEDs, each indicates Ethernet activity on the corresponding LAN port

DISK: (1) Yellow LED, indicates SSD activity

PWR: (1) Green LED, indicates the unit is powered on

RESET: (1) Recessed pushbutton, initiates a hard reset

Power Button: (1) Pushbutton, initiates boot up or shutdown

MGMT: (1) Amber LED & (1) bi-color green/orange LED; indicates Ethernet activity, speed, and link status for the management LAN port

LAN 1 – 6: (1) Amber LED & (1) bi-color green/orange LED per each of (6) ports; each pair indicates Ethernet activity, speed, and link status for the corresponding LAN port

LAN 7 – 12: (2) Green LEDs per each of (6) ports; each pair indicates Ethernet activity and link status for the corresponding SFP+ port

Power

Main Power x2: 6 Amps @ 100-120 Volts AC, 50/60 Hz; 3 Amps @ 220-240 Volts AC, 50/60 Hz

Redundancy: (2) Hot-swappable power supply modules, unit continues to operate at full capacity on one functioning power supply module

Power Consumption: 140 Watts at 100% CPU usage and fan speed

Environmental

Operating Temperature: 32° to 104° F (0° to 40° C)

Operating Humidity: 8% to 90% RH (non-condensing)

Non-Operating Temperature: -40° to 158° F (-40° to 70° C)

Non-Operating Humidity: 5% to 95% RH (non-condensing)

Heat Dissipation: 477.7 BTU/hr

Construction

Chassis: Metal, black finish; vented front, rear, and sides; variable speed fan cooled

Mounting: Freestanding or 1 RU 19-inch rack-mountable (includes rack mounting brackets for attachment to front and

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rear rack rails with 10-32 threaded screw holes or 3/8" (10 mm) square holes, adjustable for varying rack depths)

Dimensions

Height: 1.72 in (44 mm)

Width: 17.50 in (445 mm) without rack mounting brackets; 19.00 in (483 mm) with rack mounting brackets

Depth: 18.78 in (477 mm) without rack mounting brackets

Compliance

IC, CE, FCC Part 15 Class A digital device

Models & Accessories

Available Models

DM-NVX-DIR-ENT: DM NVX Director™ Virtual Switching Appliance, Enterprise Version

Available Accessories

DM-NVX-350: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder

DM-NVX-351: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder w/Downmixing

DM-NVX-352: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder with Dante® Audio

DM-NVX-350C: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder Card

DM-NVX-351C: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder Card w/Downmixing

DM-NVX-352C: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder/Decoder Card with Dante® Audio

DM-NVX-D30: DigitalMedia™ 4K60 4:4:4 HDR Network AV Decoder

DM-NVX-E30: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder

DM-NVX-D30C: DigitalMedia™ 4K60 4:4:4 HDR Network AV Decoder Card

DM-NVX-E30C: DigitalMedia™ 4K60 4:4:4 HDR Network AV Encoder Card

DM-RPP-K24: DigitalMedia™ 24-Port Keystone Patch Panel

DM-CONN-ULTRA-RECP-20: DigitalMedia™ Ultra Keystone RJ45 Jack, 20-Pack w/Termination Tool

DM-CBL-ULTRA-PC-5: DigitalMedia™ Ultra Patch Cable, 5 ft (1.5 m)

SFP-1G-SX: SFP Transceiver Module, Duplex Multimode Fiber, 850 nm

SFP-1G-LX: SFP Transceiver Module, Duplex Single-Mode Fiber, 1310 nm

SFP-1G-BX-U: SFP Transceiver Module, Simplex Single-Mode Fiber, 1310/1490 nm, Uplink

SFP-1G-BX-D: SFP Transceiver Module, Simplex Single-Mode Fiber, 1490/1310 nm, Downlink

SFP-10G-SR: SFP+ Transceiver Module, Duplex Multimode 850 nm

SFP-10G-BX-U: SFP+ Transceiver Module, Simplex Single-Mode 1270/1330 nm, Uplink

SFP-10G-BX-D: SFP+ Transceiver Module, Simplex Single-Mode 1330/1270 nm, Downlink

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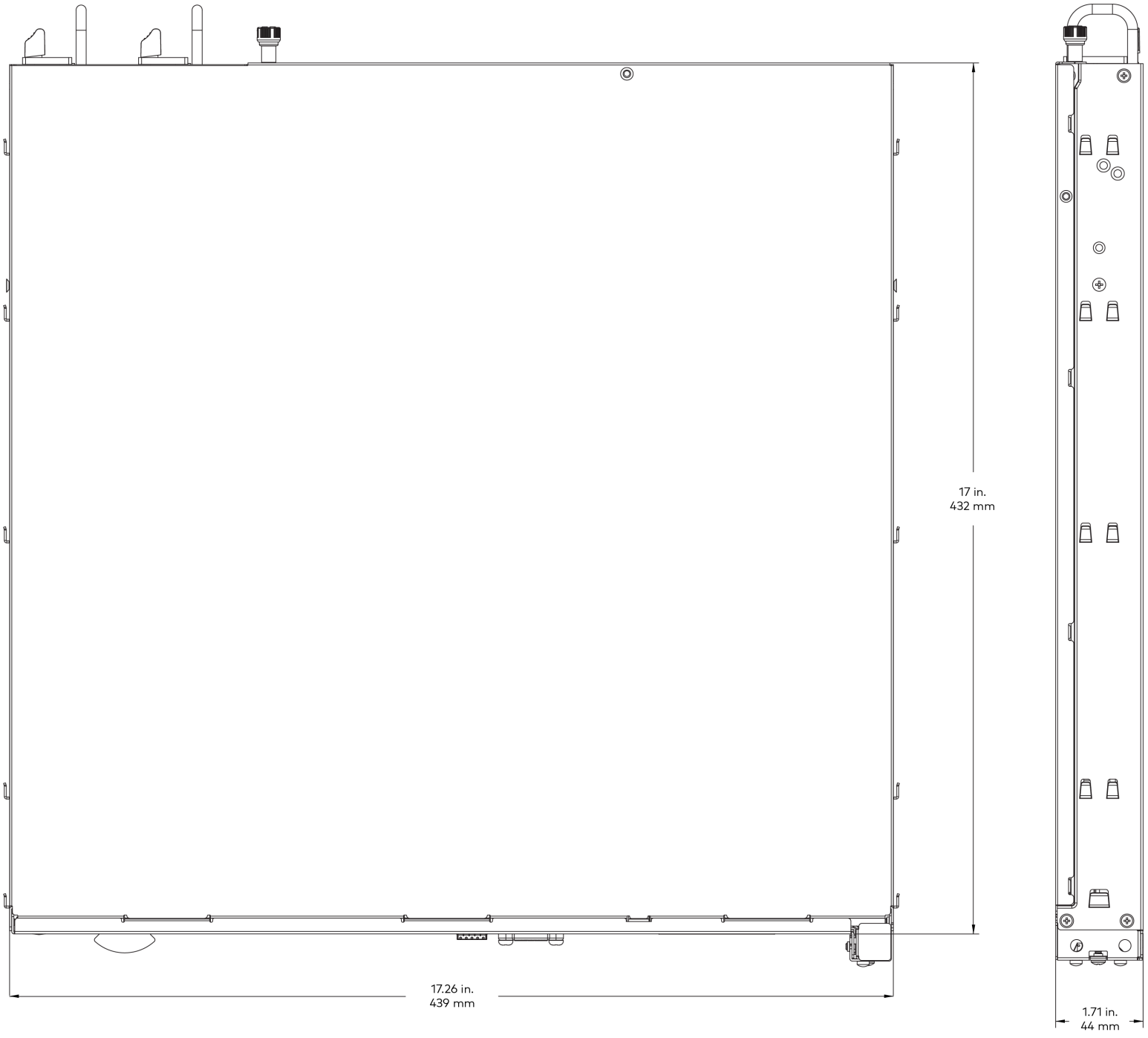

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