

DM NVX Director™ Virtual Switching Appliance, 1000 Endpoints



- *Network AV system configuration, management, and signal routing*
- *Compatible with Crestron® DM NVX® encoders and decoders*
- *Support of 1000 endpoints and 240 domains*
- *Fully scalable for a network of any size*
- *Intuitive web-based graphical user interface*
- *Full programmable control of virtual matrices and physical endpoints*
- *Automatic endpoint device discovery*
- *Interdomain routing*
- *Multicast address control*
- *Credential management of DM NVX endpoints*
- *Custom naming and search tools*
- *Easy diagnostics and signal status display*
- *XML device map file import and export*
- *Built-in logging*
- *Multiple control system support*
- *XiO Cloud® service support*
- *Six 1000BASE-T RJ-45 ports*
- *Six 10GBASE-X SFP+ ports (four are 1000BASE-T compatible)*
- *Fiber-optic connectivity via SFP or SFP+ transceivers (sold separately)*
- *1 RU 19-inch rack mountable*
- *Onboard 100-240V hot-swappable redundant power supplies*

The Crestron DM-NVX-DIR-ENT is an enterprise-grade network appliance that facilitates configuration, control, and management of a large-scale AV network using [DM NVX®](#) encoder and decoder endpoints. The DM-NVX-DIR-ENT virtually emulates the functionality of a traditional hardware-based DM® matrix switcher, routing high-quality 4K streaming AV signals throughout a room, building, or campus.

The DM-NVX-DIR-ENT supports a maximum of 1000 DM NVX endpoints. Multiple DM NVX Director™ network appliances can be deployed to handle corporate enterprise, university, government, military, medical, transportation, sports, entertainment, hospitality, gaming, and retail applications.

Simple and Flexible Configuration

The DM-NVX-DIR-ENT automatically discovers up to 1000 DM NVX endpoints on the network and enables each endpoint to be assigned as a logical input or output within a domain. Up to 240 domains are supported. For larger systems, multiple DM-NVX-DIR-ENT network appliances can be used.

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 diagnostics of the complete AV network. Each domain and endpoint, as well as the inputs and outputs of each endpoint, can be designated with a user-friendly name. Navigating the entire system is easy using the search box 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 is easy to view and navigate.

Interdomain Routing

Video inputs can be routed to video outputs within a single domain. In addition, support of interdomain routing enables video inputs within a domain to be routed to video outputs of one or more other domains. Routing control of AV signals is accomplished by using the web interface or control system programming.

Multicast Address Control

A custom multicast range can optionally be assigned for DM NVX encoder and decoder endpoints within a domain. The custom multicast range is determined by the assignment of a starting multicast address, the number of multicast addresses assigned to each DM NVX endpoint, and the number of DM NVX endpoints assigned to a domain. Multicast address control is accomplished by using the web interface.

Credential Management of DM NVX Endpoints

Username and password credentials can be changed simultaneously for all DM NVX encoder and decoder endpoints within a domain. Alternatively, the username and password can be changed for only particular DM NVX endpoints within a domain. Username and password credential management is accomplished by using the web interface.

Copper or Fiber Ethernet Connectivity

The DM-NVX-DIR-ENT includes six 1000BASE-T RJ-45 ports and six 10GBASE-X SFP+ ports. Four of the 10GBASE-X SFP+ ports are 1000BASE-T compatible. Connection to a 1000BASE-T or 10GBASE-X fiber-optic network is facilitated by inserting an appropriate SFP or SFP+ transceiver module (Crestron SFP-1G or SFP-10G series, sold separately) into an SFP+ port. A selection of modules is offered to accommodate various multimode and single-mode fiber types.

NOTE: Ports 7 and 8 support 10GBASE-X only and are compatible with SFP-10G SFP+ transceivers only.

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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.

Multiple Control System Support

The DM-NVX-DIR-ENT supports Crestron 3-Series® or later control systems. A single control system, referred to as the Global Domain control system, can be assigned to all domains simultaneously. In addition, support of multiple control systems enables the Global Domain control system or another control system, referred to as a Domain control system, to be assigned to each domain on an individual basis. The Domain control system that is assigned on an individual basis must be different for each domain. Assignment of multiple control systems is accomplished by using the web interface or control system programming.

XiO Cloud® Service Support

The DM-NVX-DIR-ENT is compatible with the Crestron XiO Cloud service, which is an IoT (Internet of Things) platform for remotely provisioning, monitoring, and managing Crestron devices across an enterprise or an entire client base. Built on the Microsoft® Azure® software platform and using industry-leading Azure IoT Hub technology, the XiO Cloud service enables installers and IT managers to deploy and manage thousands of devices in the amount of time it previously took to manage a single device. Unlike other virtual machine-based cloud solutions, Azure services provide unlimited scalability to suit the ever-growing needs of an enterprise. For more information, visit 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, HTTPS web browser setup and control, Crestron 3-Series® or later control system integration

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 RJ-45 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

Ethernet 1 – 6 (front): (6) 8-pin RJ-45 connectors, shielded, female; 100BASE-TX/1000BASE-T Ethernet ports for web browser, endpoint, and control traffic

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

Ethernet 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 mains power inlet; Each mates with removable power cord, included

Controls and Indicators

MSG: (1) Bicolor blue/red LED, blue identifies the device when the unit identification process is initiated, red indicates a power supply fault

Ethernet 1 – 2: (2) Green LEDs, indicate Ethernet activity on the corresponding Ethernet port

DISK: (1) Yellow LED, indicates SSD (solid-state drive) activity

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

RESET: (1) Recessed push button, initiates a hardware reset

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

MGMT: (1) Amber LED and (1) bicolor green/orange LED; indicates Ethernet activity, speed, and link status for the management Ethernet port

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

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

Power

Mains Power x2: 6 Amps @ 100-120 VAC, 50/60 Hz; 3 Amps @ 220-240 VAC, 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 rear rack rails with 10-32 threaded screw holes or 3/8 in. (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

Weight

18 lb (8.16 kg)

Compliance

Regulatory Model: DM-XIO-DIR-ENT

UL® Listed for US and Canada, CE, IC, FCC Part 15 Class A digital device

Model

DM-NVX-DIR-ENT: DM NVX Director™ Virtual Switching Appliance, 1000 Endpoints

Accessories

For a list of accessories, visit the [DM-NVX-DIR-ENT](#) 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 or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

The specific patents that cover Crestron products are listed online at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, visit www.crestron.com/opensource.

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