

DM NVX Director™ Virtual Switching Appliance for 160 Endpoints

- 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 160 endpoints and 20 domains
- Enables grouping of endpoints in up to 20 independent subsystems
- Fully scalable for any sized network
- Intuitive web-based graphical user interface
- Ethernet control system interface¹
- 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
- Four Gigabit Ethernet LAN ports
- Single-space 19" rack-mountable
- Universal 100-240V internal power supply

Virtual DM® Switcher

The DM-NVX-DIR-160 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-160 supports a total of 160 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 switchers², 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-160 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-160 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-160 supports a maximum of 20 domains. For larger systems, use multiple units or use model **DM-NVX-DIR-ENT**, which supports 240 domains and includes additional "enterprise" features. Refer to the DM-NVX-DIR-ENT spec sheet for more information.

Easy Web-Based Setup and Control

The DM-NVX-DIR-160 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 box² 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.

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 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>.

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Specifications

Device Support

Endpoints: Supports 160 DM NVX devices, each configured as an encoder or decoder

Domains: Supports 20 domains (allows grouping of endpoints in up to 20 individual subsystems)

Communications

Ethernet: 100/1000 Mbps, 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 2.0 (front): (2) USB Type A connectors, female, black; USB 2.0 host ports for factory use only

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

LAN 1 – 4 (front): (2) 8-pin RJ45 connectors, shielded, female; 100Base-TX/1000Base-T Ethernet ports for web browser, endpoint, and control traffic

100-240V~ 2-4A 50/60Hz (rear): (1) IEC 60320 C14 main power inlet; Mates with removable power cord, included

Controls & Indicators

MSG: (1) Blue LED, identifies the device when "unit identification" is initiated

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 – 4: (1) Amber LED & (1) bi-color green/orange LED per each of (4) ports; each pair indicates Ethernet activity, speed, and link status for the corresponding LAN port

Power

Main Power: 4 Amps @ 100-120 Volts AC, 50/60 Hz; 2 Amps @ 220-240 Volts AC, 50/60 Hz

Power Consumption: 35 Watts at 100% CPU usage and fan speed

Environmental

Operating Temperature: 50° to 95° F (10° to 35° 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: 119.4 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 (rack ears included)

Dimensions

Height: 1.72 in (44 mm)

Width: 17.21 in (437 mm) without rack ears; 19.00 in (483 mm) with rack ears

Depth: 10.49 in (267 mm) without rack ears

Compliance

IC, CE, FCC Part 15 Class B digital device

Models & Accessories

Available Models

DM-NVX-DIR-160: DM NVX Director™ Virtual Switching Appliance for 160 Endpoints

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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)

Notes:

1. Compatible with Crestron 3-Series® (or later) control systems only.
2. Search box navigation and the ability to route signals between units are future features that will be enabled via firmware update.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

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

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

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