DM NVX® AV-over-IP Sales Toolkit
Everything you need to know

The #1 AV-over-IP solution across the enterprise, medical, entertainment, and eSports industries, as well as education and government.
CONTENTS

AV-over-IP.........................................................................................................................01
What is AV-over-IP?............................................................................................................01
How does AV-over-IP work?..............................................................................................01

DM NVX®............................................................................................................................02
DM NVX® AV-over-IP technology ......................................................................................02
Features and Support .........................................................................................................03
Hardware/Accessories ........................................................................................................04
Management and Control.................................................................................................06

DM NVX & AV-over-IP training pathways ........................................................................07
What is AV-over-IP?

AV-over-IP stands for Audio-Visual over Internet Protocol. It is the transmission of audio-visual data over a network (LAN). As the demand for higher quality content sent and received in real-time grows, so does the demand for AV-over-IP solutions.

How does AV-over-IP work?

Unlike traditional AV solutions that employ AV switchers to send and receive audio and video signals, AV-over-IP utilizes standard network equipment to transmit and switch video and audio.
DM NVX®

What is DM NVX?

DM NVX is Crestron’s AV-over-IP solution. Technology that has been successfully deployed throughout the workplace, the world of education, entertainment, medicine, and the public sector.

DM NVX is a 1Gb network AV solution that works with any network, any application, any design, anywhere. It gives every organization the ability to get video, audio, USB, and device control, wherever you need them on the network.

Crestron goes beyond most networked AV solutions. DM NVX units can function as either a network AV encoder or decoder. That means you don’t have to decide in advance whether you’ll need an encoder or decoder for a certain location. Simply deploy the DM NVX units and make your selection during installation from the drop down menu.

Features & Support

Multi-layered technology

DM NVX routes, distributes, and manages all of your video, audio, USB, and device control signals. All of their content (not just some of it) is routed through a single unit. Which provides lower costs, greater flexibility and efficiency.

- **AUDIO**
  - Route any audio signal on the network. Supports the lossless transport of 7.1 surround sound audio signals, and stereo audio breakaway, across your entire network. AES67 is supported across the product range, while Dante® audio networking and downmixing are available on select models.

- **NETWORK CAPABILITIES**
  - The only 1Gb solution that works with any network, any application, any design. Complete with a full range of enterprise and government security features.

- **CONTROL**
  - Uses standard protocols to expand control across entire network, providing greater flexibility. One box provides greater system efficiency and easier management.

- **USB**
  - USB 2.0 routing for use with a wide range of peripherals: keyboards, mouse, gaming controllers.

- **VIDEO**
  - The only network AV solution with Pixel Perfect Processing. Every format including 4k60, 4:4:4 and HDR, is picture perfect every time. DM NVX is the standard for network AV.
DM NVX Hardware

DM NVX is an ecosystem of endpoints, each with unique functionality that act as one. It allows you and your customers to choose the features needed without sacrificing performance or interoperability.

<table>
<thead>
<tr>
<th>Encoder &amp; Decoder</th>
<th>Encoder</th>
<th>Decoder</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Video</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pixel Perfect Processing</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4K60 4:4:4</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4K60 4:2:0</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4K30 4:4:4</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1920x1080p</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Scaler</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HDR</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HDR10+</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dolby Vision® standard</td>
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<td>✓</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereo 2-Channel</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Digital HDMI®</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>DSP Downmix</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dante</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Audio Standards</td>
<td>AES67 • Dolby Digital® • Dolby Digital EX • Dolby Digital Plus • Dolby TrueHD • Dolby Atmos® • DTS® • DTS-ES • DTS 96/24 • DTS-HD • High Res DTS-HD® Master Audio® • LPCM up to 8 channels</td>
<td></td>
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<tr>
<td><strong>Connectivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDMI Input</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>HDMI Output</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Power Supply</td>
<td>PoE+</td>
<td>UPoE</td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td>802.1x / AES-128 / Active Directory® / TLS / HTTPS / SSH / SSL / SFTP</td>
<td></td>
</tr>
</tbody>
</table>
Unite HDBaseT® connectivity with AV-over-IP

DM-NVX-E760 enables the ability to bridge traditional AV systems with AV-over-IP, leveraging existing IP networks – giving you the best of all AV distribution platforms.

- An endpoint that bridges DM and HDBaseT outputs with a DM NVX network
  - Fully interoperable with current DM NVX ecosystem
  - Native integration of Crestron DM®, DMPS, and DM Lite® systems to DM NVX
- 1-Gang wall plate solution
  - 4K60 4:4:4 support when pairing a DM-TX-4KZ-100-C-1G
  - 4K60 4:2:0 when pairing with a HD-TX-101-C1G-E
- Ideal solution for applications that require integrating AV-over-IP into existing HDBaseT systems or expanding an existing room system for broader distribution
- Native support for audio-over-IP to integrate with DM NVX and 3rd party systems

What you need to integrate HDMI® sources with DM NVX AV-over-IP

USB-over-IP Network Extenders transport USB signals over the network

A range of USB Extenders that give you the ability to connect USB peripherals at multiple locations throughout a business or educational facility and route them to one or more different devices or displays over the local Ethernet network. Consider the applications: KVM (keyboards, video, mouse), UC (cameras, mics and headsets), and e-gaming (controllers, and thumb drives).

Management & Control

DM NVX Director®
Switching Appliance

- Route content
- Monitor endpoints
- Visualize your AV network
- Manage at a campus level and create logical groups (domains) for your DM NVX platform. Break them into rooms or groups – whatever suits your business needs
- Visualize your AV network

Crestron XiO Cloud® Technology
Operations Management Platform

- Remote help desk
- Maintain operation standards
- Manage device lifecycles
- Enhance insights
DM NVX & AV-over-IP training pathways

As a sales engineer, you’re responsible for planning and managing the distribution of audio and video signals throughout enterprises, campuses, or organizations. To continue to grow and develop your skills, please see the Training Pathways below. To find out more about training, visit crestron.com/training

DM NVX pathway

Become Crestron DM NVX Certified. Following the completion of this pathway, you will have the skills to successfully design and deploy a DM NVX solution. (Available to Design Engineers, Programmers, Technicians, and Sales.)

<table>
<thead>
<tr>
<th>Course 1</th>
<th>DM NVX Design and Application (DM-NVX)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course 2</td>
<td>DM™ Networking Certification (DM-NVX-N)</td>
</tr>
</tbody>
</table>

Crestron DM NVX Certified

AV-over-IP pathway

Become Crestron AV-over-IP Certified. Following the completion of this pathway, you will have the in-depth technical skills to design a complete Crestron networked-based solution for Audio, Video, and Control. (Available to Design Engineers, Programmers, and Technicians.)

<table>
<thead>
<tr>
<th>Course 1</th>
<th>Crestron Network Solutions - Design (CNS-D)</th>
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<tbody>
<tr>
<td>Course 2</td>
<td>Crestron Network Solutions - Admin (CNS-A)</td>
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<tr>
<td>Course 3</td>
<td>Crestron Network Solutions - Engineer (CNS-E)</td>
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</tbody>
</table>

Crestron AV-over-IP Certified