



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

AV-over-IP

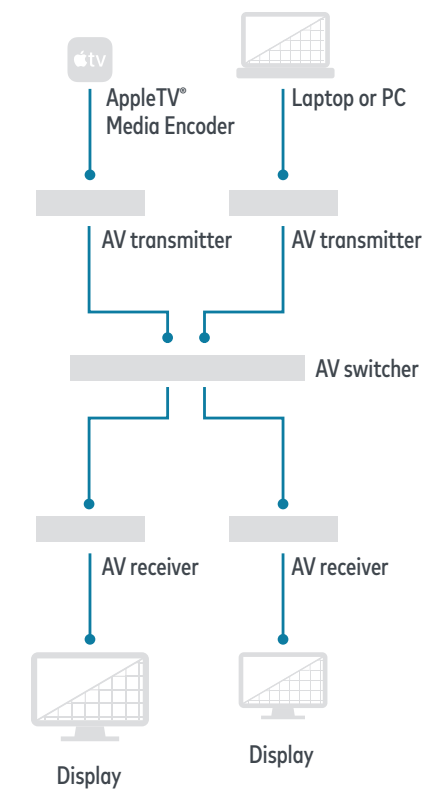
What is AV-over-IP?

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.

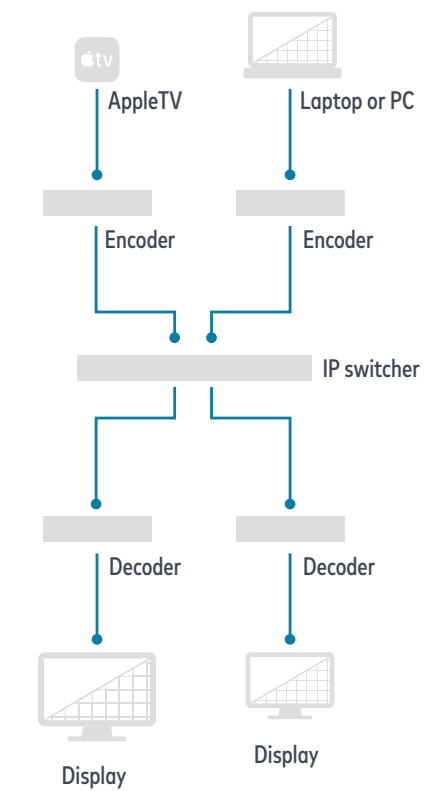
How does AV-over-IP work?

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.

Typical HDBaseT® Setup



Typical AV-over-IP Setup



DM NVX®

What is DM NVX?

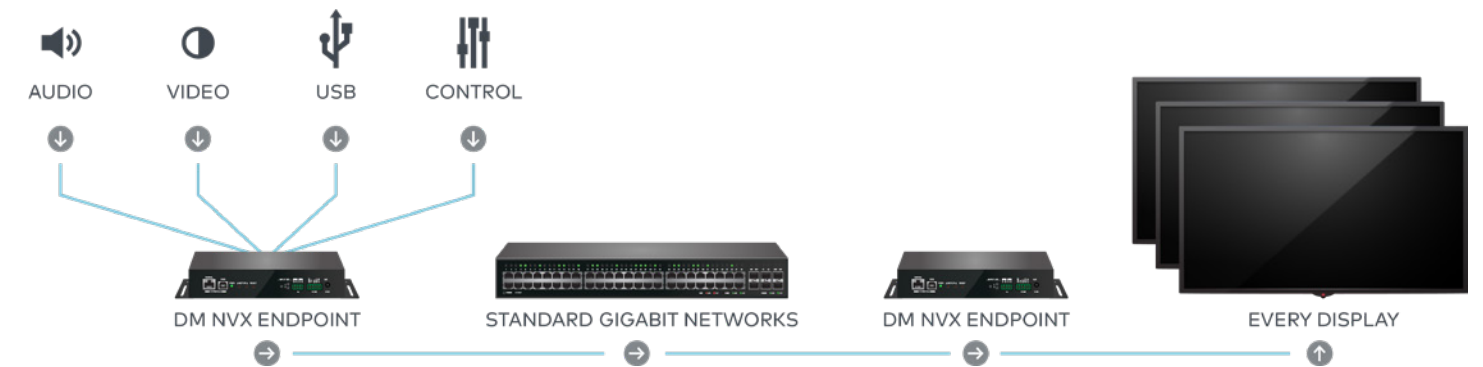
DM NVX is Crestron's AV-over-IP solution. Technology that has been successfully deployed throughout the workplace, the world of education, entertainment, medicine, and the public sector.

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.

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.

CONTROL

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

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.

USB

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

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.

	DM-NVX-363	DM-NVX-351	DM-NVX-360	DM-NVXE760	DM-NVX-E30	DM-NVX-E20	DM-NVX-E10	DM-NVX-D80	DM-NVX-D30	DM-NVX-D20	DM-NVX-D200	DM-NVX-D10
	Encoder & Decoder			Encoder				Decoder				
Video												
Pixel Perfect Processing	✓	✓	✓	✓	✓			✓	✓			
4K60 4:4:4	✓	✓	✓	✓	✓			✓	✓			
4K60 4:2:0	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
4K30 4:4:4	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
1920x1080p	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Scaler	✓	✓	✓								✓	
HDR	✓	✓	✓	✓	✓			✓	✓			
HDR10+	✓		✓		✓				✓			
Dolby Vision® standard	✓		✓		✓				✓			
Audio												
Stereo 2-Channel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digital HDMI®	✓		✓			✓	✓			✓	✓	✓
DSP Downmix	✓	✓										
Dante	✓											
Audio Standards	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											
Connectivity												
 HDMI	HDMI Input	1	2	1		1	1	1	Direct-to-Display			
	HDMI Output	1	1	1	1DM 8GB+ HDBaseT	N/A				1	1	1
Power Supply	PoE+	UPoE	PoE+	PoE++/UPoE	PoE+	PoE	PoE	via Display	PoE+	PoE	PoE	PoE
Security	802.1x / AES-128 / Active Directory® / TLS / HTTPS / SSH / SSL / SFTP											

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-C-1G-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).

Card Chassis



Cables



USB Extenders



Fiber Solutions



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



Crestron
XiO CLOUD

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.)



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.)



World Headquarters

15 Volvo Drive
Rockleigh, NJ 07647
800.237.2041
201.767.3400
crestron.com

Latin America

Blvd. Manuel Avila Camacho 37-1A
Col. Lomas de Chapultepec
CP 11560
México
+ (305) 290.4978
+52 (55) 9159.5900
crestron.com.mx

Crestron Europe B.V.

Oude Keerbergebaan 2
B-2820
Rijmenam
Belgium
+32.15.50.99.50
crestron.com

Australia

Level 5
15 Help Street
Chatswood NSW 2067
Australia
+61.1800.555.040
ANZHQ@crestron.com
crestron.com

New Zealand

Unit 18
144-160 Beaumont Street
Westhaven, Auckland 1010
New Zealand
+64.800.273.787
ANZHQ@crestron.com
crestron.com

Israel

14 Hata'as Street
Kfar Saba, 4442514
Israel
+972.9.7685556
crestron.co.il

India

Unit 101 & 102 RMZ Ecoworld
Campus 6B Sarjapur Marathalli Outer Ring Road
Bangalore 560103
1.800.3005.8822
INDIAsalesupport@crestron.com
crestron.com

NE Asia

Suite 3101-02, 31/F Oxford House,
Taikoo Place 979 Kings Road
Hong Kong
+852 800 969 996
NEAsalesupport@crestron.com
crestron.com

China

487 Tian Lin Road Gems Park
Block 25 Xu Hui District
P.R.C. Shanghai 200233
Toll Free Phone: 400.880.9700

SE Asia

31 Kaki Bukit Road 3
#01-04 & #01-05
Techlink
Singapore 417818
+65.6394.9380
crestron.com

Japan

1736-3 Higashitsuda-Cho
Matsue City 690-0011
Japan
+81.852.60.5185
crestronjapan.com

Learn more at crestron.com/nvx