DM-NVX-SW-C310

DM NVX® 4K60 Network AV Encoder/Decoder CPU-Based Software, Single Stream

- *DM NVX® encoder/decoder software*
- *Interoperability with DM NVX encoder/decoder hardware devices[1]*
- *Easy installation onto a computer running the Microsoft® Windows 10 or Windows 11 operating system (64 bit)*
- *Single-stream 4K60 video over standard Gigabit Ethernet*
- *Real-time video performance over the network*
- *Pixel Perfect Processing technology*
- *Enterprise-grade security including TLS and AES-128 (802.1X and Active Directory® credential management dependent on Windows® operating system settings)*
- *4K60 video scaling capability integrated with Windows operating system setting*
- *Test pattern generator*
- *Fixed bit rate*
- *2-channel PCM audio*
- *Interoperability with a Crestron 3-Series® or later control system*
- *XiO Cloud® service support*
- *API for full control of DM NVX encoder/decoder software*
- *License required per computer for one DM NVX stream*

DM NVX® software is a flexible, IT-friendly companion to the DM NVX AV-over-IP hardware portfolio. The DM-NVX-SW-C310 encoder/decoder offers a software solution that is interoperable with DM NVX encoder/decoder hardware devices, providing the flexibility to mix DM NVX software and hardware endpoints in a DM NVX system.[1] The platform enables visually lossless compression for crystal-clear video. Installation of DM-NVX-SW-C310 software on a computer enables DM NVX 4K60 encoding or decoding of a single AV stream over a Gigabit Ethernet network.[2]

Windows® Application

DM-NVX-SW-C310 software runs on the 64-bit version of the Microsoft® Windows 10 or Windows 11 operating system. The DM NVX software package has modest system requirements and runs on most modern Windows computers.

Real Time 4K60 Video Performance

Engineered for demanding conference room and classroom applications, DM NVX technology ensures real-time, full-motion 4K60 video performance for the presentation of multimedia, videoconferencing, and live camera images. Interactive inputs from a gamepad or a mouse function seamlessly over DM NVX.

A DM NVX system also provides stability and reliability. Line-synchronized outputs ensure perfect synchronization of content across multiple displays for applications such as digital signage. Variable Multicast TTL (Time To Live) enables traversing multiple network routers for optimal flexibility.

Pixel Perfect Processing Technology

Pixel Perfect Processing technology provides flawless video transport in all applications. Depending on the operating mode, DM-NVX-SW-C310 software can encode or decode a video signal to achieve imperceptible end-to-end latency. The source image quality is maintained across a 1-Gigabit network at any resolution up to 4K60.

Enterprise-Grade Security

A DM NVX system delivers a true enterprise-grade network AV solution. DM-NVX-SW-C310 software uses advanced security features and protocols such as AES-128 content encryption, PKI authentication, TLS, and HTTPS. Support for 802.1X authentication and Active Directory® credential management is dependent on the Windows operating system settings.

Encoder or Decoder Functionality

DM-NVX-SW-C310 software is configurable to operate as either a network AV encoder or decoder. As an encoder, DM-NVX-SW-C310 software enables the user to select the screen to be transmitted over the network to one or more decoders. As a decoder, DM-NVX-SW-C310 software receives the signal from a DM NVX encoder and feeds it to the viewer window. The decoder can quickly and easily switch between multiple encoders on the network. Encoder and decoder operating modes can be changed dynamically in less than 1 minute by using a web browser or a control system.

Test Pattern Generator

When DM-NVX-SW-C310 software is configured as an encoder, the built-in test pattern generator can be used during setup to ensure that video streaming is functional and can also be used as a tool for the adjustment, calibration, and alignment of displays and projectors. The DM NVX encoder can send the test pattern to any routed DM NVX decoder.

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Fixed Bit Rate

In DM NVX encoder mode, a web interface or control system can be used to set a fixed bit rate ranging from 150Mbps to 500 Mbps.

Network Adapter Selection

Network adapter selection enables network traffic to be segregated based on traffic type. For an encoder and decoder, the desired management network adapter can be selected for management traffic on the network. For an encoder only, the desired stream network adapter can be selected for the transmitted AV stream.

Web Interface for Software Configuration

DM-NVX-SW-C310 software configuration is accomplished by using a web browser. Full control and monitoring of the software is enabled through control system integration.

Licensing

A license is required for DM-NVX-SW-C310 software on a per-computer basis for a single stream. DM-NVX-SW-C310 provides two licensing options: online licensing via the XiO Cloud® service or offline licensing via the USB-OFFLINE dongle.

For online licensing via the XiO Cloud service, the DM-NVX-SW-C310 requires access to XiO Cloud to validate its licenses. An active XiO Cloud account is required, subject to the terms of the Crestron Cloudware License. However, a paid XiO Cloud subscription is not required to manage licenses for the DM-NVX-SW-C310.

For offline licensing via the USB-OFFLINE dongle, the dongle must be connected to the computer to validate the license. The license must be ordered and the Offline License form must be completed prior to validating the license. For more information, refer to the DM-NVX-SW-C310 Product Manual.

Any existing DM-NVX-SW-C310 licenses within the XiO Cloud service cannot be converted to offline licenses. If switching your DM-NVX-SW-C310 installation from online to offline licensing mode, a new license must be purchased.

Specifications

System Requirements - Minimum

Hardware	Processor: Intel® Core™ i7, 12th generation with 12 cores; RAM: Dual-channel memory, 2 x 8 GB; Wired Ethernet Network Interface: 1 Gb
Operating System	Windows 10 or Windows 11, 64 bit

Encoding/Decoding

Stream Type	Pixel Perfect Processing
Video Resolutions	Up to 4096x2160@60Hz (DCI 4K60)
Audio Format	2-channel PCM
Bit Rates	150 to 500 Mbps
Streaming Protocols	RTP, SDP
Container	MPEG-2 transport stream (.ts)
Session Initiation	Multicast via secure RTSP
Copy Protection	AES-128, PKI

Video

Scaler	Scaling capability integrated with Windows operating system setting

Communications

Ethernet	Auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, variable Multicast TTL, HTTPS web browser setup and control, Crestron 3-Series® or later control system integration; IEEE 802.1X, Active Directory® credential management, and IPv4 dependent on Windows operating system settings
DM NVX via Ethernet	AES-128 AV content encryption with PKI authentication, RTP, secure RTSP, SDP, ONVIF, IGMPv2, SMPTE 2022

Model

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Notes:

1. DM-NVX-SW-C310 software is not interoperable with the DM-NVX-E10/D10 and DM-NVX-E20/D20/D200 Series encoders and decoders.
2. The minimum cable required for DM NVX transport over 1000BASE-T Ethernet (copper) is unshielded CAT5e. A nonblocking network is required.

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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 contact us for additional information by visiting www.crestron.com/contact/our-locations for your local contact.

The original language version of this document is U.S. English.
All other languages are a translation of the original document.

The product warranty can be found at www.crestron.com/warranty.

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

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

Specifications are subject to change without notice.

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