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# JPEG 2000 1080p Low-Latency Decoder with KVM PoE, SFP, HDMI

NMX-DEC-N2235 (FGN2235-SA), Stand Alone

NMX-DEC-N2235-C (FGN2235-CD), Card



## Overview

The SVSI JPEG2000 NMX-ENC-N2135 and NMX-DEC-N2235 encoder and decoder solution provides users with the industry's most versatile solution for distributing AV over a converged network. JPEG2000 compression is the codec of choice for users demanding low-latency cinema grade HD quality video in their system. SVSI video over IP encoders are used to encode and distribute sources of almost any format onto an existing IP network making that stream available to any endpoint in the facility utilizing copper and/or fiber connectivity. SVSI Video over IP Decoders are used to decode Networked AV streams for display. With the ability to direct any source stream to any display, large, low-cost switching and distribution systems are simple to deploy without proprietary cabling or dedicated switching hardware. User selectable bandwidth control (10Mbps-600Mbps) allows for precision tuning considering network load and video quality.

The NMX-ENC-N2135 and NMX-DEC-N2235 both feature keyboard and mouse extension over IP. Users can set security options for device control. Security can be turned off allowing any decoder to connect to any computer connected to an encoder – for example within a call center where security of this type is not an issue and access to all end points is necessary. Security can be set allowing access to only specified computers or defined groups of computers – sensitive environments such as command and control centers benefit from this kind of customized security.

The SVSI solution allows for any number of inputs to connect to any number of outputs creating a video matrix of unlimited size and expandability. Plug-n-play, auto-detect technology reduces installation and programming time and all SVSI encoders and decoders include built in control capability.

**Features**

- **Design Flexibility** – Compatible with all SVSI N2000 series products so designers can choose the right product for each end point
- **Input and Output Scaling** – scaling performed in encoders or decoders for maximum flexibility with sources and displays
- **Power Over Ethernet (POE)** – eliminates requirement for local power supply and speeds installation. Units can still be powered locally from 12VDC allowing for easy rack-mountable, high-density installations
- **Infrared (IR)** – Emitter connection allows control of IR-only display devices
- **Fast Install** – With Phoenix connectors for Power, IR, RS232 serial, and analog audio (balanced and unbalanced) interfaces
- **Balanced and Unbalanced Audio** – Embedded 7.1 audio (balanced and unbalanced)
- **HDMI with HDCP** – Pass protected HDMI content
- **Multiple Connection Options** – RJ-45 and SFP network connectors and HDMI video connections
- **KVM** – Single USB-B and Dual USB-A control for KVM applications
- **Control Flexibility** – Built-in or external control

**Specifications**

VIDEO	
Video Input	Network video over copper via RJ45 port or fiber via 1G SFP port
Video Output	HDMI, DVI-D (through adapter)
Formats	HDMI, DVI-D (through adapter), HDCP content protection support
Input Resolutions	Supports most common HD up to 1920x1200. See website for all supported resolutions.

AUDIO	
Input Signal Types	Network audio over Ethernet
Output Signal Types	Embedded audio on HDMI or DVI-D (through adapter)
HDMI Audio Formats	8ch PCM
Analog Audio Format	Stereo 2-channel

LATENCY	
Latency	50 ms at 60 fps
Note	<ul style="list-style-type: none"> <li>• This is the combined encode plus decode latency. Total latency from source to screen will also include any network latency.</li> <li>• Scaling adds one frame of latency (17ms at 60fps)</li> </ul>

COMMUNICATIONS	
Ethernet	P0 10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP, Auto IP, and Static IP  P1 1 Gbps port which accepts compatible fiber transceivers or direct attach cables (fiber or copper cabling)
HDMI	HDCP, EDID management

PORTS	
+12V 2A	One 12 Volt DC power input
P0	8-wire RJ45 female

	<p>10/100/1000 Mbps 10/100/1000Base-T auto-sensing gigabit Ethernet switch port</p> <p>Provides the network connection, network AV video, and power to the Encoders and Decoders</p>
P1	<p>SFP port (SFP fiber transceiver or direct attach cable not included)</p> <p>Provides the network connection and network AV video</p>
IR	<p>2-pin terminal Phoenix connector</p> <p>Provides Infrared (IR) output only (33-60 kHz; typically 39 kHz). Emitter may be necessary (not included)</p>
RS232	<p>3-pin terminal Phoenix connector</p> <p>Provides a serial control interface. Full duplex communication. Available terminal speed settings: 1200-115200 baud rate</p>
AUDIO	<p>5-pin terminal Phoenix connector</p> <p>Provides user-selectable balanced/unbalanced output. Dedicated audio output</p>
HDMI OUT	HDMI video output
USB connectors (front panel)	One USB-B and two USB-A control inputs

CONTROLS AND INDICATORS – FRONT PANEL	
RESET Button	<p>Recessed pushbutton</p> <p>Press to initiate a 'warm restart' causing the processor to reset, but not lose power. A reset does NOT affect the current settings</p>
ID Button	<p>Recessed pushbutton</p> <p>Press to send a notification out on the network to identify the unit (the notification causes a pop-up dialog in N-Able and N-Command)</p>
POWER LED	<p>On solid (green) when operating power is supplied (via PoE or local power supply)</p> <p>This activity is also shown by the <b>PWR</b> LED on the rear panel</p>
STATUS LED	<p>On flashing (green) when there is software activity</p> <p>This activity is also shown by the STAT LED on the rear panel</p>

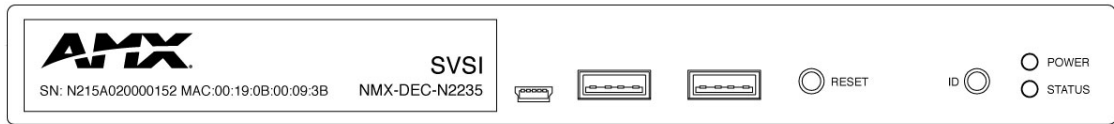
CONTROLS AND INDICATORS – REAR PANEL	
PWR LED	Same as <b>POWER</b> LED described above
HDMI LED	On (green) when there is a connection to a valid display
STAT LED	Same as <b>STATUS</b> LED described above
STRM LED	On (green) when the unit is streaming video

POWER SUPPLY	
Power Supply, External, Optional	2.0 Amp @ 12 Volts DC; 100-240 Volts AC power supply; optional. NMX-ACC-N9312 (FGN9312)
Power over Ethernet (PoE), External, Optional	Can be powered via a PoE switch or other equipment with a PoE source. Conforms to IEEE 802.3af Class 3 (802.3at Type 1)
Note	<p>In order for the unit to receive Power over Ethernet (PoE), it must be connected to a switch or other equipment that has a PoE PSE (Power Sourcing Equipment) port.</p> <p>Warning: Do not run wiring that is connected to a PoE PSE port outside of the building where the PSE resides. It is for intra-building use only. PoE does not pass through the daisy chain (P1) port.</p>

ENVIRONMENTAL	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	Up to ~44 BTU/hr

GENERAL	
Dimensions (HWD)	1.05" x 7.888" x 5" (2.67 cm x 20.04 cm x 12.7 cm)
Weight	1.54 lbs (0.7 kg)
Mounting Options	<p>Stand alone, surface mount, wall mount, or rack mount</p> <p>Surface and wall mounting requires (not included):</p> <ul style="list-style-type: none"> <li>•NMX-ACC-N9101 (FGN9101), Mounting Wings for SVSI N-Series Encoders and Decoders</li> </ul> <p>Rack mounting requires one of the following (not included):</p> <ul style="list-style-type: none"> <li>•NMX-ACC-N9102 (FGN9102), 1RU Rack Shelf for Two Side-by-Side for SVSI N-Series Encoders and Decoders</li> <li>•NMX-ACC-N9206 (FGN9206), 2RU Rack Mount Cage with Power for Six SVSI N-Series Card Units</li> </ul>
Regulatory Compliance	FCC, CE, and NTRL
Recommended Accessories	<ul style="list-style-type: none"> <li>•NMX-ACC-N9312 (FGN9312), Power Supply 12V External</li> <li>•NMX-ACC-N9382 (FGN9382), 1RU Power Supply 16-Channel 12V for up to 16 SVSI N-Series Encoders and Decoders</li> <li>•NMX-ACC-N9101 (FGN9101), Mounting Wings for SVSI N-Series Encoders and Decoders</li> <li>•NMX-ACC-N9102 (FGN9102), 1RU Rack Shelf for Two Side-by-Side SVSI N-Series Encoders and Decoders</li> <li>•NMX-ACC-N9206 (FGN9206), 2RU Rack Mount Cage with Power for Six SVSI N-Series Card Units</li> </ul>

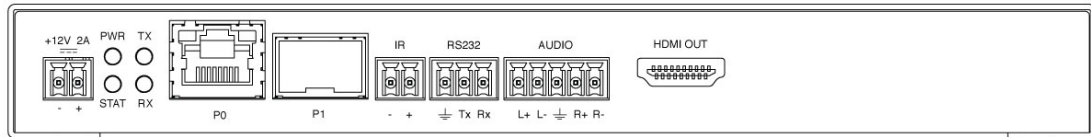
## NMX-DEC-N2235 Front View



- 1) USB-B Control Input
- 2) USB-A Control Input
- 3) USB-A Control Input

- 4) Device reset button
- 5) Device ID discovery button
- 6) Power/Status indicators

## NMX-DEC-N2235 Rear View



- 1) 12VDC Input
- 2) Status Indicators
- 3) RJ-45 auto-sensing gigabit Ethernet switch port
- 4) SFP fiber connector

- 5) Infrared (IR) emitter connection
- 6) RS232 connection
- 7) Analog Audio Input connection
- 8) HDMI Video Output

### About AMX by HARMAN

Founded in 1982 and acquired by HARMAN in 2014, AMX® is dedicated to providing AV solutions for an IT World. AMX solves the complexity of managing technology with reliable, consistent and scalable systems comprising control, video switching and distribution, digital signage and technology management. AMX systems are deployed worldwide in conference rooms, classrooms, network operation/command centers, homes, hotels, entertainment venues and broadcast facilities, among others. AMX is part of the HARMAN Professional Group, the only total audio, video, lighting, and control vendor in the professional AV market. HARMAN designs, manufactures and markets premier audio, video, infotainment and integrated control solutions for the automotive, consumer and professional markets. Revised 3.3.16. ©2016 Harman. All rights reserved. Specifications subject to change.

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