DATA SHEET

JPEG 2000 4K UHD Video over IP Decoder with KVM

NMX-DEC-N2251 (FGN2251-SA), Stand Alone

NMX-DEC-N2251-C (FGN2251-CD), Card

Overview

The NMX-ENC-N2151 4K Encoder and NMX-DEC-N2251 4K Decoder provide users with the industry's most versatile solution for distributing AV over a converged network at resolutions up to 4096×2160. JPEG2000 compression allows Ultra HD media to be switched and distributed over standard Gigabit Ethernet networks. Ultra HD signals from the NMX-ENC-N2151 encoder are provided simultaneously as: 1) a JPEG 2000-compressed 200-600 Mbps stream through the RJ-45 connector or SFP+ port and 2) an uncompressed stream through the small-form-pluggable (SFP+) connector (via a fiber SFP+ module). Any source can be sent to any number of displays by routing through layer-3 switches. System scalability is limited only by uplink and stacking connector bandwidths but can accommodate up to 100 Ultra HD video sources at once.

Standard features like output scaling (decoder), bi-directional serial, IR, embedded 7.1 audio, and KVM-over-IP extension are included. The NMX-ENC-N2151-C and NMX-DEC-N2251-C form-factors are compatible with the NMX-ACC-N9206 card cage for high-density applications.

Common Applications

- The NMX-ENC-N2151 and NMX-DEC-N2251 together create the perfect solution for video matrix applications where resolutions up to 4K are required. Common applications include classrooms, conference rooms, performing arts centers, and sports bars.

Features

- **Output Scaling** – Video scaling at output allows seamless switching from any source, at any resolution, to any display or projector, while preserving video fidelity.
- **Infrared (IR)** – Infrared emitter connection allows control of low-cost, IR-only display devices.
- **Onboard Control** – All N-Series encoders and decoders have on-board, built-in control capability via events that can trigger any number of TCP/UDP commands to other IP controllable devices.
- **Unlimited Scalability**
- **Stand Alone or Card** – Available as a stand alone device, or card for use with NMX-ACC-N9206.

Specifications

VIDEO	
Video Input	Network video over Ethernet via RJ45 port
Video Output	HDMI, DVI-D (through adapter)
Formats	HDMI, DVI-D (through adapter), HDCP content protection support
Output Resolutions	Supports most common HD up to 4096x2160. See website for all supported resolutions.

AUDIO	
Input Signal Types	Network audio over Ethernet via RJ45
Output Signal Types	Embedded audio on DVI-D or HDMI (through adapter)
HDMI Audio Formats	8ch PCM
Analog Audio Format	Stereo 2-channel
Digital-to-Analog Conversion	16-bit 32 kHz, 44.1 kHz and 48 kHz (matched to network audio stream settings)

LATENCY	
Latency	Uncompressed: • 25 ms at 60 fps • 50 ms at 30 fps JPEG2000: • 50 ms at 60 fps • 100 ms at 30 fps
Note	• This is the combined encode plus decode latency. Total latency from source to screen will also include any network latency • Scaling adds one frame of latency (17ms at 60fps)

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

PORTS	
+12V 2A	One 12 Volt DC power input
P0	8-wire RJ45 female 10/100/1000 Mbps 10/100/1000Base-T auto-sensing gigabit Ethernet switch port Provides network control connections and compressed network AV output
P1	SFP+ port (SFP+ fiber transceiver or direct attach cable not included) for uncompressed or compressed networked AV and allows network control connections
IR	2-pin terminal Phoenix connector Provides Infrared (IR) output only (33-60 kHz; typically 39 kHz). Emitter may be necessary (not included)
RS232	3-pin terminal Phoenix connector Provides a serial control interface. Full duplex communication. Available terminal speed settings: 1200-115200 baud rate
AUDIO	5-pin terminal Phoenix connector Dedicated audio output
HDMI OUT	HDMI video output
USB connectors (front panel)	USB-B control input and two USB-A control inputs Currently only the USB-A connectors are supported in software for HID devices

CONTROLS AND INDICATORS – FRONT PANEL	
RESET Button	Recessed pushbutton Press to initiate a 'warm restart' causing the processor to reset, but not lose power. A reset does NOT affect the current settings
ID Button	Recessed pushbutton Hold 30 seconds for a factory reset of all settings, including IP address settings 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)
POWER LED	On solid (green) when operating power is supplied (via PoE or local power supply) This activity is also shown by the **PWR** LED on the rear panel
STATUS LED	On flashing (green) when there is software activity This activity is also shown by the STAT LED on the rear panel

CONTROLS AND INDICATORS – REAR PANEL	
PWR LED	Same as **POWER** LED described above

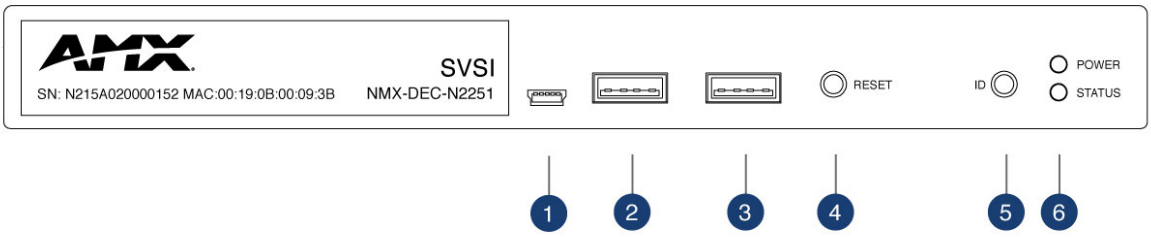
HDMI LED	On (green) when there is a connection to a valid display
STAT LED	Same as **STATUS** LED described above
STRM LED	On (green) when the unit is receiving its assigned video stream

POWER SUPPLY	
Power Supply, External, Included	2.0 Amp @ 12 Volts DC; 100-240 Volts AC power supply; **included in shipment.** NMX-ACC-N9312 (FGN9312)

ENVIRONMENTAL	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	Up to ~62 BTU/Hr

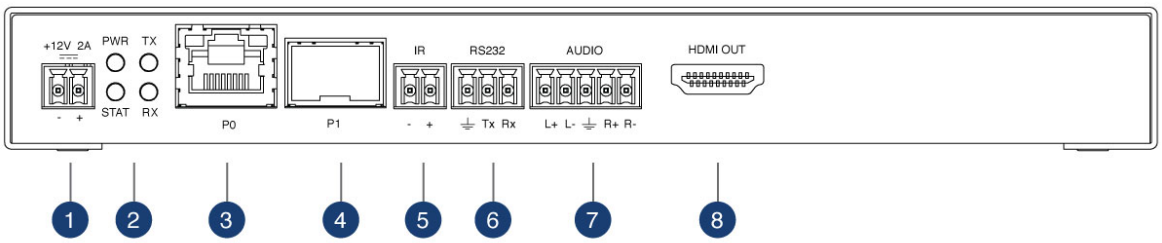
GENERAL	
Dimensions (HWD)	1.05” x 7.888” x 5” (2.67 cm x 20.04 cm x 12/7 cm)
Weight	1.4 lbs (0.64 kg)
Mounting Options	Stand alone, surface mount, wall mount, or rack mount Surface and wall mounting requires (not included): •NMX-ACC-N9101 (FGN9101), Mounting Wings for SVSI N-Series Encoders and Decoders Rack mounting requires one of the following (not included): •NMX-ACC-N9102 (FGN9102), 1RU Rack Shelf for Two Side-by-Side for SVSI N-Series Encoders and Decoders •NMX-ACC-N9206 (FGN9206), 2RU Rack Mount Cage with Power for Six SVSI N-Series Card Units
Regulatory Compliance	FCC, CE, and NTRL
Recommended Accessories	•NMX-ACC-N9382 (FGN9382), 1RU Power Supply 16-Channel 12V for up to 16 SVSI N-Series Encoders and Decoders •NMX-ACC-N9101 (FGN9101), Mounting Wings for SVSI N-Series Encoders and Decoders •NMX-ACC-N9102 (FGN9102), 1RU Rack Shelf for Two Side-by-Side SVSI N-Series Encoders and Decoders •NMX-ACC-N9206 (FGN9206), 2RU Rack Mount Cage with Power for Six SVSI N-Series Card Units

NMX-DEC-N2251 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-N2251 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 3.2.16. ©2015 Harman. All rights reserved. Specifications subject to change.

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