Minimal Compression HD-SDI Video over IP Encoder, AES67 Support

NMX-ENC-N1134A (FGN1134A-SA), Stand Alone
NMX-ENC-N1134A-C (FGN1134A-CD), Card

Overview

The NMX-ENC-N1134A provides the excellent encoding capabilities of the N1000 line for HD-SDI inputs. Integrate SDI directly onto the network without the extra cost or hassle of an added SDI to HDMI converter. In addition, while most Networked AV solutions with SDI connections operate using H.264 or H.265, introducing a substantial amount of compression and latency, our minimally compressed IP format maintains high video quality and delivers it with imperceptible latency. Once on the network, the SDI feed can be decoded using any N1000 Decoder. Added USB connectivity will enable users to extend USB over IP for touch-enabled and KVM applications.

The N1000 Series Encoders and Decoders are an affordable local AV over IP switching solution that packetizes video into a minimally compressed IP format to create anywhere from a small 2×1 seamless presentation switcher up to a large 32×32 matrix switcher using off-the-shelf layer-3 network switches. Any source can be sent to one or more displays by routing through layer-2 / layer-3 switches utilizing standard Cat5e cable.

Common Applications

An ideal solution for live camera inputs in lecture halls, corporate town hall meetings and training spaces.

Features

- **SDI Input** – Distribute video from an SDI source using N1000 Networked AV technology without adding a SDI-to-HDMI converter

- **Sub-Frame Latency** – Combined encode and decode latency of 10 ms at 60 fps, so low it's below human perception, making it ideal for live video feed content
- **Minimal Proprietary Compression (MPC)** – Visually lossless MPC algorithm applied to all resolutions
- **PoE Powered** – Eliminates requirement for local power supply and speeds installation
- **Native NetLinx** – Simplifies integration with AMX control to reduce cost of installation
- **SFP Fiber/RJ45 Ports –** Encoder features SFP fiber/RJ45 copper network ports with USB control inputs for KVM-over-IP keyboard and mouse operation.

Specifications

VIDEO	
Video Input	HD-SDI
Video Output	N1XXX compatible stream, + passthrough HD-SDI
Formats	Formats associated with SMPTE 425, SMPTE 424, SMPTE 292, and SMPTE 259-C
Output Resolutions	Matched to input
Pass Thru Resolutions	Matched to input

AUDIO	
Input Signal Types	Analog Audio Formats: Stereo 2-channel Analog-To-Digital Conversion: 16-bit 32 kHz, 44.1 kHz and 48 kHz Embedded audio following formats associated with SMPTE 425, SMPTE 424, SMPTE 292, and SMPTE 259-C
Output Signal Types	Ethernet at 48-kHz (standard SVSI audio stream or AES67, user selectable)

LATENCY	
Video Latency	10 ms at 60 fps
Audio Latency	Standard SVSi audio stream = synched to video ; AES67 = 1-msec adjustable to 17-msec
Note	Video and audio latency values are the combined encode plus decode latency. Total latency from source to screen will also include any network latency.

COMMUNICATIONS	
Ethernet	RJ45 10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP, Auto IP, and Static IP
SFP	1 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 the network connection, network AV video, and power to the Encoders and Decoders

P1 (SFP Port)	SFP port (SFP fiber transceiver or direct attach cable not included)
	Provides the network connection and network AV video
	Designed for use with an SFP module (sold or sourced separately) AMX compatible modules: •NMX-SFP-1GRJ, RJ45 Module for N1X33/ N2X35 SFP Cage (FGNVSFP-RJ-1G) •NMX-SFP-1GSM, Single Mode Module for N1X33/ N2X35 SFP Cage (FGNVSFP-LR-1G) •NMX-SFP-1GMM, Multimode Module for N1X33/ N2X35 SFP Cage (FGNVSFP-SR-1G)
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: 9600-115200 baud rate
AUDIO	5-pin terminal Phoenix connector Provides user-selectable balanced/unbalanced input. Dedicated audio input
	BNC for embedded audio on video stream
HD-SDI In	BNC
HD-SDI Out	BNC for HD-SDI pass through
USB connectors (front panel)	One USB-B and two USB-A control inputs

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
	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

SDI LED	On (green) when there is a connection to a valid video source
STAT LED	Same as **STATUS** 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	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. 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.

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 5.5" (2.67 cm x 20.04 cm x 13.8 cm)
Weight	1.55 lbs (0.7 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-N9312 (FGN9312), Power Supply 12V External •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-SFP-1GRJ, RJ45 Module for N1X33/ N2X35 SFP Cage (FGNVSFP-RJ-1G)

	•NMX-SFP-1GSM, Single Mode Module for N1X33/ N2X35 SFP Cage (FGNVSFP-LR-1G) •NMX-SFP-1GMM, Multimode Module for N1X33/ N2X35 SFP Cage (FGNVSFP-SR-1G)

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