

# NVE-1-3G & NVD-1-3G

## JPEG 2000 Encoder / Decoder



### Features

- Video and audio transmission over IP
- JPEG 2000 compression / expansion
- Supports all video standards up to 1080p/60Hz
- Accepts embedded audio via 3G HD-SDI
- Video Signals: 3G HD-SDI, HD-SDI and SDI
- 1 Gbps Ethernet Interface
- USB HID for keyboard and mouse control
- USB programming and control interface

### Applications

- Broadcast Contribution Applications
- Broadcaster to Head-end links
- OB Van Contribution links

### High-Definition JPEG 2000 over IP

EMCORE's NVE-1-3G and NVD-1-3G are professional grade encoder/decoders that simplify the transmission of 3G HD, HD-SDI and SDI with embedded audio over IP. Utilizing JPEG 2000 compression technology, they can transmit high quality video with embedded audio over an IP network with extremely low latency.

The NVE/NVD-1-3G are perfect for distributing High Definition video over IP for a variety of Broadcast contribution applications where the highest quality video and low latency (<50 ms) are required. The built-in switching functionality of the NV encoders and decoders, in conjunction with the IP network, eliminates the need for video matrix switches. High quality HD video from any source can be connected to any display at any time over an IP network.

The NVE-1-3G encoder accepts an HD video signal, slightly compresses the signal and transmits via an IP network. The NVD-1-3G decoder receives the IP stream, decompresses it and outputs the original HD signal for distribution and display.

JPEG 2000 compression allows considerable reduction of the data rate in the network without visible loss of quality. Minimal delay means that the modules are also suitable for use in any mission critical application requiring real-time video and audio over IP. The NV-1-3G encoder and decoder support video input signals with embedded audio.

IP networks may be localized or extended to cover several regions by means of optional WAN technology.

Encoders and decoders are supplied as stand-alone modules. They can be mounted in a 19" 1RU rack enclosure by twos, or singularly in a desktop enclosure. The devices can be configured via a web server, CLI interface or over Telnet. A simple software interface allows direct activation of the devices by any control software.

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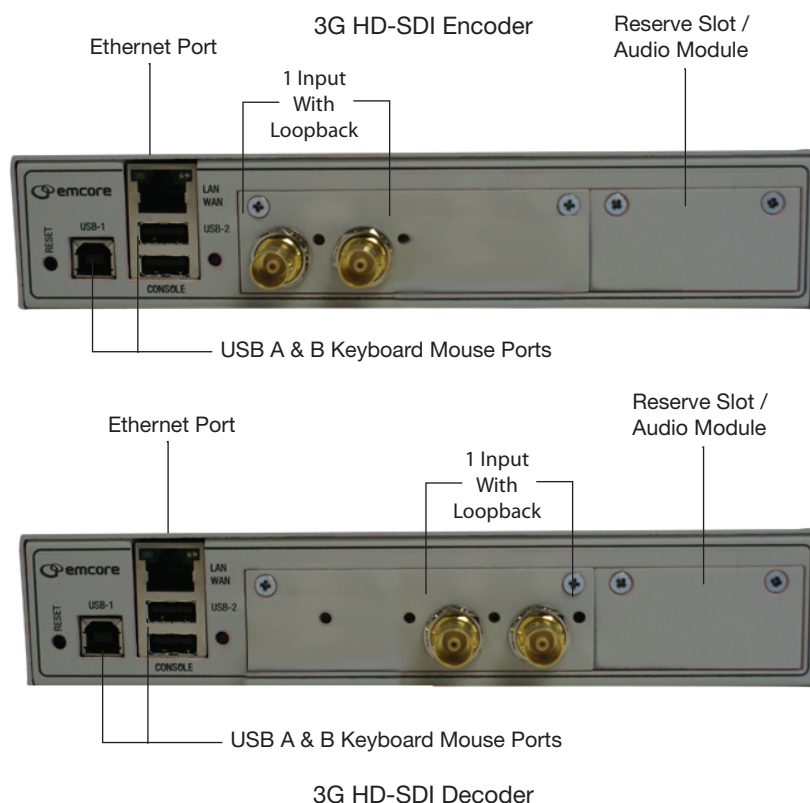
### Ordering Information

Model	Description
NVE-1-3G	Encoder, JPEG 2000, 3G HD-SDI, HD, SMPTE 424M, 292M and 259M, Stand-alone
NVD-1-3G	Decoder, JPEG 2000, 3G HD-SDI, HD, SMPTE 424M, 292M and 259M, Stand-alone
NV-PS	12 VDC Power supply

### Physical Characteristics

Specifications	Values
Input Power	12 VDC +/- 10%
Power Consumption	13 Watts
Weight	6.2 lbs (2.8 kg)
Dimensions	16" W x 9.8" D x 1.77" H (40.5cm x 25cm x 4.5cm) (19" plug-in with 2 cards)
Operating Temperature	-20 to 80° C

### Connection Diagram



### Encoding & Decoding

Specifications	Values
Compression	JPEG 2000
Video Resolutions	1080p, 1080i, 720p, 576i and 480i
Latency	< 50 ms+ network latency
Bit Rate	20 to 800 Mbps
Frame Rate	24 Hz to 60 MHz
Pixel Clock	25 MHz to 150 Hz
Color Depth	12-Bit

### Video

Specifications	Values
Video Inputs	3G HD-SDI, HD-SDI, SDI
Data Rate	2.97, 1.485Gbps and 270 Mbps
Standards	SMPTE 424M, 292M and 259M
Encoder Video interfaces	1 input with loopback
Decoder Video interfaces	1 output
Connector Type	BNC 75 ohm

### Data

Specifications	Values
Data	USB HID (keyboard and mouse)
Connector	USB type A (1), USB type B (1)

### Network

Specifications	Values
Ethernet	1x 10/100/1000 Base TX using RJ45
Data	USB 2.0 for control and programming

### Management

Specifications	Values
Software	Internal web server
Serial Control	CLI over USB console port
Remote Monitoring & Control	SNMP v1, v2, v3

### Compliance

