

# VNP-100

Encoder, Transcoder & Decoder



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Encoder, Transcoder &  
Decoder Standalone  
Chassis with Enhanced FEC

(Unit in picture includes  
optional Features)



- Broadcast quality A/V transmission over IP
- Stream reliably through public and private networks using enhanced FEC technology
- Low Latency Video/Audio transmission
- MPEG 2, H 264 AVC-I 50/100 & Uncompressed
- Integrated Loopbacks, Test Patterns & Alarms
- Configuration via user-friendly WEB interface
- SNMP Manageability

## Broadcast Quality Video & Audio Processing

The VNP-100 is a standalone, high-quality MPEG 2, H 264 AVC-I 50/100 and Uncompressed video encoder, transcoder and decoder supporting transmission of real-time video and audio signals over the public Internet and private IP Networks. The system enables multiple compression algorithms selectable with configuration options.

## Multiple Video/Audio user interfaces

The VNP-100 encoder compresses a Standard- or High Definition video source with accompanying audio signals for transmission over IP Networks. The Encoder accepts NTSC, PAL composite video formats with analog audio, HDMI video with embedded audio streams as well as SDI/HD-SDI/3G-SDI video signals with embedded audio streams, and AES/EBU audio signals.

## Flexible System configurations

The VNP-100 is also available in bi-directional codec configuration as well as single and dual Encoder or decoder configurations for uni-directional video/audio transmit for applications requiring high channel density in a small "foot-print" (up to 4 HD and 2 SD V/A channels per 1 RU).

## Applications:

Reliably stream broadcast quality HD video over the Internet

Broadcast contribution and distribution

Surveillance (including Real time surveillance)

Tele-Presence, Medical imaging and Tele-robotics

## Network Interface

The VNP-100 is equipped with both optical (1/10Gb/s) and electrical network interfaces, supporting 10/100/1000Mbps. Multiple bridged Ethernet interfaces provide flexible installation and inter-connectivity options.

## Powerful Management

The VNP-100 is remotely manageable via a standard WEB interface and SNMP. Performance monitoring and system configuration capabilities facilitate installation and management in large networks.



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# VNP-100 Specifications & Features:

## TECHNICAL SPECIFICATIONS

### Base System interfaces

#### Baseband Video Input

Composite 1Vp-p Video (PAL B/D/G/H/I/M/N & NTSC M), 75 Ohms unbalanced, BNC connector

#### HDMI Input Interfaces

HDMI (720X480i30 to 1920X1080@60, with embedded audio support for SD & HD video)

### Baseband Audio

#### Analog Audio Input ports

Density: 1 stereo or 2 mono

Format: balanced

Impedance: > 10Kohms or 600 ohms, user selectable

Max input level: +21 dBu

Connection: DB-9

#### Serial Data port

Density: 1 port Bi-directional (RS232/422)

Connector: DB-9

### Serial Digital Video/Audio interfaces

#### SDI Video configurable Input

Density: 2 BNC connector

Configurable for: 2 inputs or 1 input

Formats: SDI, HD-SDI, 3G-SDI (with support for em-bedded audio), DVB/ASI

#### Digital AES/EBU Audio Interface

Density: 2 ports

Configurable for: 2 inputs or 1 input

Format: AES/EBU, balanced 110 ohms

Connector: DB-9

### Compression Options (Hardware configurations)

Video: No-compression, MPEG-2, H264, AVC-I 50/100, Proprietary Low latency compression

**Audio:** SMPTE302, MPEG-1 Layer 2, AAC-LC, HE-AAC, AC-3

### Remote Management

Built-in Web-based GUI and SNMPv2 and v3

### Ethernet Network Interface

One pluggable SFP+ module. 1/10Gb/s Base-X

Two RJ45.10/100/1000Base-T

### Physical Dimensions

1RU, 1/2-width 19". Two units fit in a 19": (H x W x D) 1.75" x 8.50" x 10.00" (4.45 x 21.59 x 25.54) cm

### Environmental Conditions

Operating Temperature: 0 to 40°C (32F to 104F)

Storage Temperature: -40 to 70°C (-40F to 158F)

Relative Humidity: 5% to 90% (Non Condensing)

### Power

100 – 264V AC (47 – 63Hz) < 60W

## FEATURES

Video Interfaces: HDMI and composite video inputs (NTSC & PAL), optional (Auto sensing SDI/HD-SDI/3G-SDI with embedded audio)

Audio Interfaces: Analog baseband, HDMI with embedded audio, AES-EBU and SDI/HD-SDI/3G-SDI with embedded audio

Close Caption and VITC (SMPTE 12M) data serviced supported

Transmission and/or VANC/TS insertion of IRIG, SMPTE & NTP timing information including Timing offset for coding & video processing delay

Serial data transmission (RS232, RS422 & others, "push to talk functionality")

IP Encapsulation/De-encapsulation of DVB/ASI Streams or Compressed Video/audio (TS)

Multiple Video and Audio Compression algo-rithms

Compression Latency: 2mS for Low latency compression schemes (Proprietary encoding) for MPEG2/H.264/AVC-I 50 compression system Latency: Encoding 150mS, 200mS & 650mS

Integral analog and digital video format conversion

Video picture scaling

Audio embedding Electrical & Optical Ethernet network/user interfaces

UDP, RTP, RTP/w FEC IP network protocols

Uni-cast, Broadcast, and IGMP Multi-cast connections supported for each service.

Remote Management

Small "foot-print" with high Video/Audio channel density

Multiple System configurations: Bi-directional video Codec (Encoder/Decoder), Uni-directional Single & Dual Encoders or decoders, and Transcoding. Note for H.264 Encoding of 1080p60 video formats and appropriate software must be installed.

