VNP-100
Video Network Processor

Broadcast Quality Video & Audio Processing
The VNP-100 is a standalone, high-quality video encoder/decoder (codec) supporting uni- and bidirectional transmission of real-time video and audio signals over IP Networks. The system enables multiple, user selectable compression algorithms depending on Software and Hardware configuration options. The system also enables transmission of Near-Loss-Less compressed SD & HD video over 10Gb/s IP networks.

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, as well as SDI, HD-SDI, 3G-SDI video signals with embedded audio streams, and AES/EBU Audio signals.

Independent of the encoder configuration, the VNP-100 decoder reconstructs a SD/HD Video signal with accompanying audio signals from an IP packet stream. The recovered video and audio signals are available as baseband NTSC/PAL composite video signals with baseband audio signals, and SDI, HD-SDI, 3G-SDI video signals with embedded audio streams.

Flexible System configurations
The VNP-100 is available in bi-directional codec configuration, as well as single and dual Encoder or decoder configurations for uni-directional video/audio transmission for applications requiring high channel density in a small “foot-print” (up to 4 HD and 2 SD V/A channels per 1 RU). The VNP-100 also supports transcoding between H.264 Profiles and H.264 & MPEG-2 formats.

Applications:
- Broadcast contribution and distribution
- Surveillance (including Real time surveillance)
- Tele-Presence
- Medical imaging
- Tele-robotics
- REMI
- News-Gathering

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 interconnectivity 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.
**VNP-100 Technical Specifications**

**Base System interfaces**

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

**DVI Input & Output Interfaces**
DVI (720x480i30 to 1920x1080p60, with embedded audio support for SD & HD video)

**Baseband Audio**

**Analog Audio Input ports**
Density: 1 stereo or 2 mono
Format: balanced
Impedance: > 10Kohms
Max input level: +21 dBu
Connection: DB-9

**Analog Audio Output ports**
Density: 1 stereo or 2 mono
Format: balanced
Impedance: 25 ohms
Max output level: +21 dBu
Connection: DB-9

**Serial Data port**
Density: 1 port Bi-directional (RS232/422)
Connection: DB-9

**Serial Digital Video/Audio interfaces**

**SDI Video configurable Input or output**
Density: 2 BNC connector
Configurable for: 2 inputs or 2 outputs or 1 input & 1 output
Formats: SDI, HD-SDI, 3G-SDI (with support for embedded audio up to 4 pairs), DVB/ASI

**Digital AES/EBU Audio Interface**
Density: 2 ports
Configurable for: 2 inputs or 2 outputs or 1 input & 1 output
Format: AES/EBU, balanced 110 ohms
Connection: DB-9

**Compression Options (Hardware configurations)**

**Video:** MPEG-2, H264, AVC 50/100, Proprietary Low latency compression

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

**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, ½-width 19". Two units fit in a 19": (H x W x D) 1.75" x 8.50" x 13.00" (4.45 x 21.59 x 33.02) cm

**Environmental Conditions**
Operating Temperature: 0 to 40ºC (32F to 104F)
Storage Temperature: -40 to 70ºC (-40F to 158F)
Relative Humidity: 5% to 90% (Non Condensing)

**Power**
100 – 264V AC (47 – 63Hz) < 60W