IPtec Incorporated

VNP-200
Video Network Processor

High Performance, low latency leader.

IPtec specializes in facilitating high performance, low latency services over IP networks.

IPtec provides reliable, high quality products for low latency video and telemetry services. These products enable customers to transport high quality vide and telemetry signals over IP networks.

http://www.iptec-inc.com

Standalone Dual Channel Video/ASI/IP Gateway
Broadcast Quality A/V Transmission over IP
J2K Encode/Decode option
Multiple IP Streams Protocol Conversion Gateway
Configuration via user-friendly WEB interface
SNMP Manageability

Broadcast Quality Video & IP Processing

The VNP-200 is a standalone, high-quality ASI/IP & IP/IP Gateway and video codec supporting bidirectional transmission of real-time video, audio and DVB_ASI signals over IP Networks. The system enables two channel or two-way (codec) transmission of Non-compressed SD & HD video or ASI and data over 10Gb/s IP networks. The IPtec VNP-200 also performs three streams in to six streams out with IP encapsulation protocol high speed conversion providing the ideal gateway function between external network where IP packet recovery is needed and internal studio IP LAN infrastructures. The VNP-200 Gateway mediates the effects of network jitter to ensure reliable transport.

JPEG 2000 Options

The VNP-200 has the option to support standalone, high-quality JPEG2000 encoding/decoding operation supporting transmission of real-time video and audio signals over IP Networks. The system enables multiple user configuration options such as Dual J2K Encoding or Decoding or Codec Operation.

Multiple Video/Audio user interfaces

The VNP-200 encoder compresses a Standard- or High Definition video source with accompanying audio signals for transmission over IP Networks.
The Encoder accepts 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-200 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.

Applications:

Broadcast contribution & Distribution
Surveillance (including Real time surveillance)
IP protocol conversion Gateways

Network Interface

The VNP-200 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-200 is remotely manageable via a standard WEB interface and SNMP. Performance monitoring and system configuration capabilities facilitate installation and management in large networks.

VNP-200 Overview and Features

- Video Interfaces: Composite video I/O (NTSC & PAL) & (Auto sensing) SDI, HD-SDI, 3G-SDI with embedded audio up to 8 pairs per video signal
- Audio Interfaces: Analog baseband, AES-EBU and SDI, HD-SDI, 3G-SDI with embedded audio
- Serial data transmission (RS232, RS422 & others, "push to talk functionality")
- IP Encapsulation/De-encapsulation of DVB/ASI Streams or Compressed Video/ audio (TS)
- IP Encapsulation/De-encapsulation of AES/EBU Streams
- Uncompressed & Compressed Video transmission
- Option for Dual Channel J2K Gateway functionality
- Audio embedding and de-embedding
- Bi-directional RS-232/422 data transmission over IP networks
- Electrical & Optical Ethernet network/user interfaces
- UDP, RTP, RTP/w FEC (SMPTE 2022-1) & RTP with ARQ IP (RFC 3366) network protocols
- Uni-cast, Broadcast, and IGMP Multi-cast connections supported for each service.
- Dual Output IP streams capable
- 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, with option for SMPTE 2022-5/6 to J2K Gateway functionality.
- RADIUS Client Authentication
- SCTE 104—35
- SMPTE 302 Audio-Only
- USGv6 Certified

VNP-200 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)

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), DVB/ASI

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
Connector: DB-9

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

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
Connector: DB-9

Compression Options
Video: JPEG-2000

Audio: SMPTE302

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 10.00" (4.45 x 21.59 x 25.54) cm

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

Dual Power Supply
100 – 264V AC (47 – 63Hz)< 50W