

## VENTURA

VS906-E1

# E1 Transport over IP

**The VS906-E1 is a modular, multichannel E1 contribution codec for IP/Ethernet networks.**

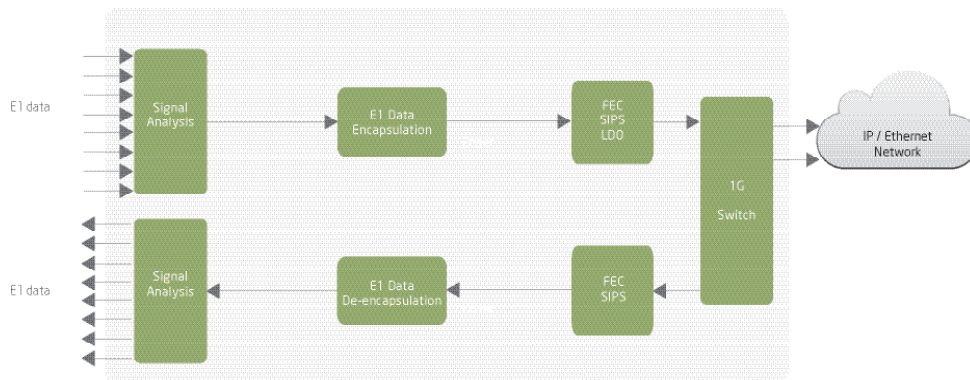
With the VS906-E1, users can deploy multiple data circuits in point-to-point local loop applications or over long-distance packetized networks. This flexible platform enables highly cost-efficient data transport and with companion video transport cards, provides a comprehensive media delivery platform for virtually any environment including—long distance, metro area and campus networks.

## Applications

- Professional broadcast contribution
- Studio-to-studio media exchange
- Managed data services over IP
- Radio distribution networks

## Key features

- Multichannel E1 data encapsulation and circuit emulation over IP
- Streaming Intelligent Packet Switching (SIPS) providing perfect video over IP protection switching using dual network feeds
- Encoder partner protection (EPP) for 1+1 hardware redundancy in combination with SIPS
- Dual Gigabit Ethernet networks interfaces using SFP technology for up to 80km of reach. Gigabit Ethernet or Fast Ethernet electrical network interface option



VS906-E1

### High Density

Simultaneous linear encapsulation and de-encapsulation of 8 x Bi-directional E1 data circuits over Gigabit Ethernet

### Launch delay offset (LDO)

User defined delay to bridge short duration simultaneous loss to both network flows

### SFP networking

Onboard SFP cage for the installation of electrical and optical Ethernet components supporting distances from 100m to 80km.

### IP/Ethernet toolset

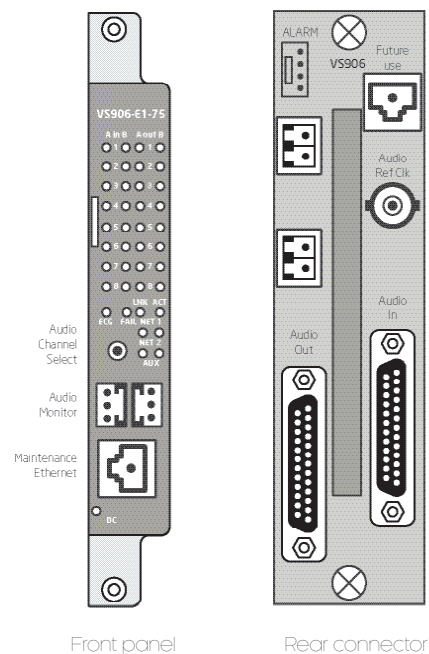
Supports VLAN tagging for segregation of traffic and Quality of Service differentiation via PCP and TOS/ DSCP.

### Remote upgrade

Supports remote firmware upgrades via the AEMS (Ventura shelf element manager) for the latest in function upgrades and fault resolution.

### NEBS Level 3

Certified to perform in Telecommunication installations providing reliable performance in harsh environments.



## E1 inputs and outputs

Standard	E1, (ITU-T G.703)
Number of ports	8 x input, 8 x output
Connector type	2 x 25pin DB-25 with breakout cable or panel options to 16 BNC (75 Ohm) or RJ48 (120 Ohm), 8 Tx and 8 Rx
Data rate	2.048Mbps
Encoding	HDB3
Framing	Unframed or framed

## IP interfaces

Number of ports	2 x Network interface ports; 1 x maintenance port
Connector type	2 x SFP (optical or CU) network interfaces, 1 x RJ45 (front panel maintenance port)
Interface type	Gigabit Ethernet (GbE) IEEE 802.3ab (Electrical) or IEEE 802.3z (optical) Fast Ethernet (FE) IEEE 802.3u, Ethernet IEEE 802.3i
Protocols	IP/UDP/RTP, ARP, IGMPv2/v3, Diffserv/TOS, 802.1p (PCP), 802.1Q (VLAN)

## Processing

Data encapsulation	E1 over RTP/UDP/IP
Forward error correction (FEC)	Non-block aligned XOR FEC similar to SMPTE-2022-1 with maximum 8 columns and 20 rows
Streaming Intelligent Packet Switching (SIPS)	Dual stream protection switching buffers up to 1000 msec of differential delay (200 ms in auto mode)
Launch delay offset (LDO)	Delays secondary flow up to a maximum of 150 msec

## Front panel LED status indicators

AUD1	Input 1 Local	In 1-Partner	Output 1-A	Output 1-B
AUD2	Input 2 Local	In 2-Partner	Output 2-A	Output 2-B
AUD3	Input 3 Local	In 3-Partner	Output 3-A	Output 3-B
AUD4	Input 4 Local	In 4-Partner	Output 4-A	Output 4-B
AUD5	Input 5 Local	In 5-Partner	Output 5-A	Output 5-B
AUD6	Input 6 Local	In 6-Partner	Output 6-A	Output 6-B
AUD7	Input 7 Local	In 7-Partner	Output 7-A	Output 7-B
AUD8	Input 8 Local	In 8-Partner	Output 8-A	Output 8-B
NWA	Network A Link			
NWB	Network B Link			
AUX	Auxiliary Link			
ECG	Card Status			
FAIL	Card Fail			
DC	Power			

## External alarms

Normally open relay contacts. Closed for major alarm signals.

## Element management

The Ventura AEMS shelf element managers, FCS183-AEMS and FCS101-AEMS, provide a comprehensive set of status, control and alarm variables through a Web interface. The AEMS is a powerful Linux based embedded management system that also supports SNMP and XML. It also acts as an agent for card upgrades, storing

multiple images for each card in the VS103 or VS101 chassis. Users can apply these images to install upgrades from a remote location.

## Physical and environmental

Resides in a single slot of a VS101 or VS103 Ventura series chassis	
Power consumption	25W max
Operating temperature	0°C to 40°C chassis ambient
Storage temperature	-40°C to 85°C ambient
Relative humidity	5% to 85%
Compliance	NEBS Level 3, UL, CSA, CE, FCC (Part 15, Class A), C-Tick, RoHS

## Ordering options

VS906-HW-E1-120+	Multi-channel E1 data transport over IP/GigE. Basic hardware that can be licensed for up to 8 bidirectional E1 data circuits. Backplane with 120 Ohm interfaces (2x DB25), and 2 SFP cages. SFP's not included.
VS906-HW-E1-75+	Multi-channel E1 data transport over IP/GigE. Basic hardware that can be licensed for up to 8 bidirectional E1 data circuits. Backplane with 75 Ohm unbalanced interfaces (2x DB25), and 2 SFP cages. SFP's not included.
VS906-SW-CHI-BI	Software option for VS906-DA/E1 enabling 1 bidirectional channel (provides 1 transmit and 1 receive)
VS906-SW-CH2-BI	Software option for VS906 enabling 2 bidirectional channels (provides 2 transmit and 2 receive).
VS906-SW-CH4-BI	Software option for VS906 enabling 4 bidirectional channels (provides 4 transmit and 4 receive)
VS906-SW-CH6-BI	Software option for VS906 enabling 6 bidirectional channels (provides 6 transmit and 6 receive)
VS906-SW-CH8-BI	Software option for VS906 enabling 8 bidirectional channels (provides 8 transmit and 8 receive)
VS906-SW-EAPT-X	Software option for VS906-AA/DA enabling Enhanced apt-X audio compression (ultra low latency fixed 4:1 high quality compression, 48kHz 24-bit processing)
VS906-SW-EPP	Software option for VS906 enabling Encoder Partner Protection (EPP) for 1+1 sender redundancy.
VS906-SW-FEC	Software option for VS906 enabling Forward Error Correction for IP input/output.
VS906-SW-LDO	Software option for VS906 enabling Launch Delay Offset (LDO) for adding latency to one of two redundant IP streams transmitted by a sender device.
VS906-SW-SIPS	Software option for VS906 enabling SIPS protection and RTP seamless switching according to SMPTE 2022-7. This license is required only on receiver devices.
VS906-DB25M-8BNCM	Break out cable, DB25 male to 8 BNC male connectors
VS906-DB25M-BNC-PANEL	Break out cable with patch panel termination, 2x DB25 male to BNC patch panel.
VS906-DB25M-RJ48-PANEL	Break out cable with patch panel termination, 2x DB25 male to RJ48 patch panel.



## CONTACT INFORMATION

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