



Rugged H.264 Video Encoder with two 3G-SDI Inputs and CoT/KLV Metadata

Tyton VS1 is a powerful H.264 video encoding and streaming solution that is designed to serve video transmission needs in harsh field environments. With bypass video outputs, low latency encoding and low power consumption, Tyton VS1 is non intrusive and feature rich.

Tyton VS1 is ruggedized to survive harsh environments (shock, vibration, humidity) and temperatures from -45°C to 85°C (MIL-STD-810 & IP67). It comes with dedicated mounting holes and is orientation insensitive.

Tyton VS1 encodes and streams two 3G-SDI, HD-SDI or SD-SDI video inputs simultaneously using the highly versatile and widely used video encoding standard H.264. The encoding parameters are highly configurable with support for baseline, main, and high profiles, all with variable bitrate configurations (512 Kbps to 15+ Mbps)

CoT and KLV metadata insertion is supported via RS-232 or Ethernet. CoT data can be forwarded out via a dedicated socket or converted to KLV and multiplexed into the MPEG-2 TS container. The resulting MPEG-2 TS video is then streamed out over UDP with optional RTP/RTSP support headers. This standardization ensures interoperability with the decoders and displays retrieving the encoded stream.

Control of encoding settings and retrieval of Tyton VS1 health information are all performed using an API built around SNMP for simple and secure communication. This API is built for easy integration into existing customer applications. Several sample applications are provided to ensure prompt integration into a working system.

In the standard configuration, the product accepts two high definition video inputs in 3G/HD/SD-SDI format through BNC connectors. Audio, 1Gbps Ethernet & RS-232 are connected over a 22-pin rugged connector.

To accommodate other video input formats and connector types small modifications to the design are possible even for low volume opportunities.

Tech Source has provided graphics solutions for over 28 years. Responsiveness has been the key to our success. Product customizations or new designs can be developed in a short time to meet your needs. The product comes with Tech Source's commitment of availability for up to 10 years from the date of release and product support up to 15 years.

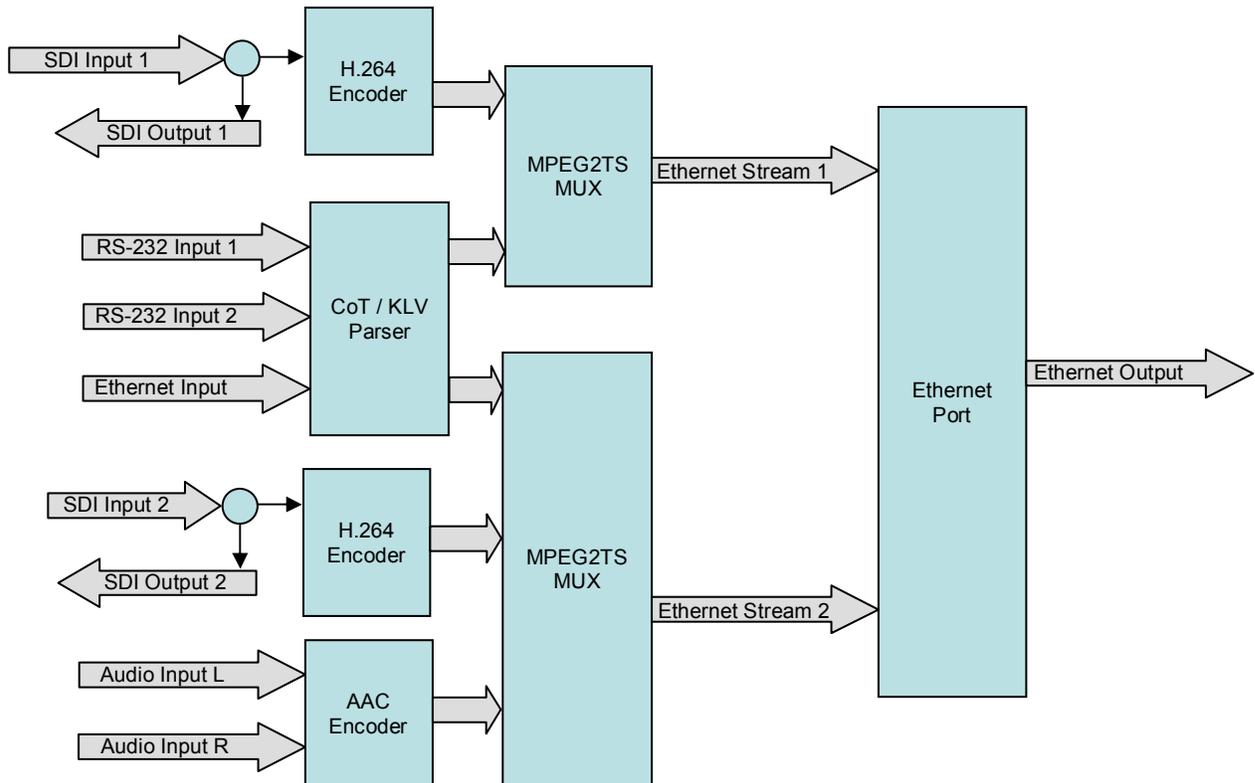
Key Features

- Fully Ruggedized 103 Cubic Inch LRU
- Low Size, Weight and Power (SWaP)
- Two 3G-SDI Video Inputs
- H.264 Video Encoding and Streaming
- MPEG-4 Part 10. Baseline, Main, High Profiles
- CoT & KLV Metadata Insertion
- 1Gbps Ethernet Output
- Bypass 3G-SDI Video Outputs
- AAC Audio Encoding
- MPEG-2 TS Muxing of Video, Audio and CoT/KLV metadata
- Low Power & Low Latency
- -45°C to 85°C Operating Temperature
- Ruggedized for Vibration, Shock and Humidity (MIL-STD-810 & IP67)
- SNMP Control Support
- Small Compact Form Factor
- Control API for Windows XP/7 & Linux
- Long Term Product Availability
- MTBF >45,000 Hours MIL-HDBK-217F AUF

Tyton VS1 Specifications

Video Encoding	H.264 AVC / MPEG-4 Part 10. MPEG-2 Transport Stream
Encoding Profiles	High, Main and Baseline with Adjustable Bitrate. AAC Audio Encoding
Inputs	Two 3G-SDI, HD-SDI or SD-SDI Video Inputs (75Ohm BNC connectors) One Stereo Audio R/L (22-pin circular MIL spec connector) Two RS-232 for CoT/KLV Metadata (22-pin circular MIL spec connector)
Video Outputs	Two Bypass 3G-SDI Video Outputs (75Ohm BNC connectors)
Ethernet Output	1Gbps w/ Two MPEG-2 TS RTP/UDP Streams (22-pin circular MIL spec connector)
Resolution Support	3G-SDI SMPTE 424M (1080p60, 50, 59.97 [Single-Link]) 3G-SDI SMPTE 425M (1080p60, 50, 59.97 [Single-Link]) HD-SDI SMPTE 274M (1080p30) HD-SDI SMPTE 292M (1080i60, 720p60) SD-SDI SMPTE 259M (480i,576i)
Operating Temperature	-45°C to 85°C
Shock / Vibration / Humidity	MIL-STD-810F & IP67
MTBF	>45,000 Hours MIL-HDBK-217F AUF
Power Consumption	15W Max
Input Voltage	28VDC on 5-pin circular MIL spec connector
Dimensions and Weight	6" W x 2.11" H x 8.13" D. ≈1.25 kg

Tyton VS1 Block Diagram



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