Rugged H.265 (HEVC) Video Encoder with two 3G-SDI Inputs and CoT/KLV Metadata

Tyton VS2 is a powerful H.265 (HEVC) 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 VS2 is non intrusive and feature rich.

Tyton VS2 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.265. It can create multiple encoded video streams per input. The encoding parameters are highly configurable with support for main (H.265/H.264), high & baseline profile (H.264) all with variable bitrate configurations (64 Kbps to 30 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 VS2 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.

Key features of this product:
- Fully Ruggedized 103 Cubic Inch LRU
- Low Size, Weight and Power (SWaP)
- Two 3G-SDI, HD-SDI or SD–SDI Video Inputs
- H.265 / H.264 Video Encoding and Streaming
- CoT & KLV Metadata Insertion
- 1 Gbps Ethernet Output
- Bypass 3G-SDI Video Outputs
- AAC Audio Encoding
- Low Power & Latency
- MIL-STD-810, MIL-STD-461 & IP67
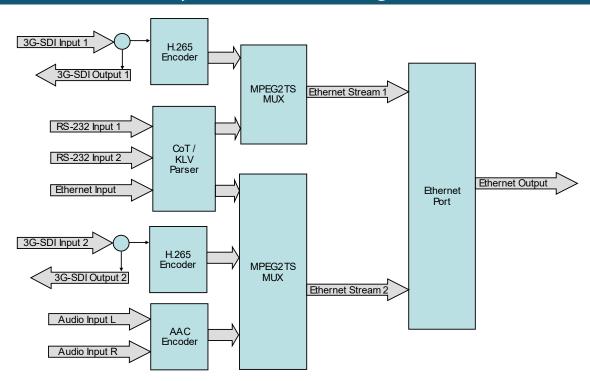
Fully Ruggedized

Tyton VS2 Specifications

Video Encoding	H.265 HEVC. MPEG-2 Transport Stream H.264 AVC / MPEG-4 Part 10. MPEG-2 Transport Stream (Capable of creating multiple encoded video streams per input)
Encoding Profiles	H.265 (HEVC) - Main with Adjustable Bitrate. AAC Audio Encoding H.264 (MPEG-4 AVC) - High, Main and Baseline with Adjustable Bitrate. AAC Audio Encoding
Inputs	Two 3G-SDI, HD-SDI or SD-SDI Video Inputs (75 Ohm 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)
Output Type	Two Bypass 3G-SDI Video Outputs (75 Ohm BNC connectors)
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)
Ethernet Output	1Gbps w/ Two MPEG-2 TS RTP/UDP Streams (22-pin circular MIL spec connector)
Power	15W
Operating Temperature (MIL-STD-810)	-40°C to 85°C
Vibration / Shock / Humidity	MIL-STD-810 & IP67
EMI	MIL-STD-461
Input Voltage	28VDC on 5-pin circular MIL spec connector
Dimensions & Weight	6"W x 2.75"H x 6.80"D. ≈ 3.5 lbs

Tyton VS2 Block Diagram