Tyton™ VS2X

Stand-alone H.265 / H.264 video encoding & streaming solution with four 3G-SDI or CVBS video inputs.

RUGGED VIDEO ENCODER

Standalone H.265/H.264 Video/Audio Encoding & Streaming Solution with 1 Gbps Ethernet.

SUPPORT VARIOUS I/O

Four 3G-SDI or CVBS (NTSC/PAL) Video Inputs, Two Stereo Audio & CoT/KLV Metadata

ALL-IN-ONE SOLUTION

Fully ruggedized to MIL-STD-810 & MIL-STD-461 standards. SWaP optimized

Standalone H.265 / H.264 Video Encoding & Streaming Solution

The Tyton VS2X encodes and streams four 3G/HD/SD-SDI or CVBS (NTSC/PAL) video inputs simultaneously using the highly versatile and widely used video encoding standards H.265 or H.264. H.265 (High Efficiency Video Coding or HEVC) provides increased video quality with a lower bitrate as compared to H.264. Two stereo line-in audio inputs can be merged with the video streams. CoT/KLV metadata can be accepted over two RS-232 ports or over Ethernet and then merged with the video stream. SDI VANC KLV metadata is also supported and the product has the ability to edit/add VANC metadata. Multiple encoded video streams can be created per input. Video/audio data is compressed and delivered in an MPEG2TS container to the dedicated on-board Ethernet output as a UDP/RTSP stream with optional RTP header.

The H.265 encoding parameters are highly configurable with support for main profile and variable and constant bitrate configurations (512 Kbps to 30 Mbps). H.264 can also support baseline, main, and high profile. The unit can be controlled/-monitored over Ethernet in several ways, including SNMP 3.0 as well as a well-defined API. A web-based configuration GUI is also available, that facilitates real-time configuration. The encoded video streams can be output simultaneously over the 1 Gbps Ethernet.

The Tyton VS2X is ruggedized to survive harsh environments (shock, vibration, humidity) and temperatures from -40℃ to 75℃ (MIL-STD-810 & IP67). It comes with dedicated mounting holes and is orientation insensitive. Its rugged small form factor design makes it easy to use and integrate into any system design and meets the SWaP (size, weight & power) requirements for all of the vertical markets.
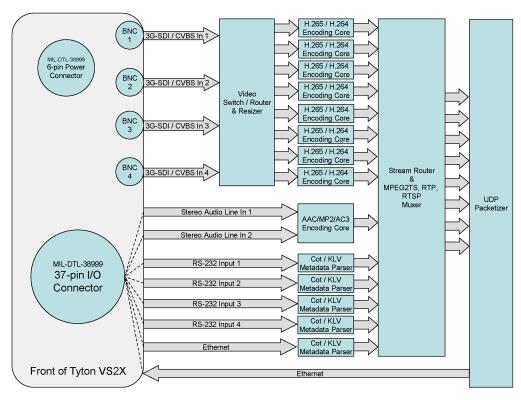
MIL-STD 810 Shock

MIL-STD 810 Temperature

MIL-STD 810 Vibration

SWaP

Tyton VS2X Specifications

Video Encoding	H.265 HEVC (MPEG2TS) H.264 AVC / MPEG-4 Part 10 (MPEG2TS) (Capable of creating multiple encoded video streams per input)
Encoding Profiles	H.265 (HEVC) : Main Profile with Adjustable Bitrate. H.264 (MPEG-4 AVC part 10) : Baseline, Main, and High Profiles (512 Kbps to 30 Mbps; Constant & variable rate control) AAC, MP2 and AC3 Audio Encoding
Inputs	Four 3G/HD/SD-SDI with VANC KLV Metadata (75 Ohm BNC) Four CVBS (NTSC/PAL) (75 Ohm BNC) Two Stereo Audio R/L (37-pin circular MIL spec connector) Four RS-232 for CoT/KLV Metadata (37-pin circular MIL spec connector)
Output Type	MPEG2TS Stream Packetized as UDP with optional RTP header MPEG2TS Stream Packetized as UDP with RTSP H.265 (video only) as UDP with RTSP IP Streams Sent over dedicated on-board Ethernet output
Resolution Support	3G-SDI : SMPTE 424M (1080p60, 50, 59.97) HD-SDI : SMPTE 274M (1080p30) HD-SDI : SMPTE 292M (720p60)
Number of Streams Supported	8 Total Streams (2 per input or various combinations)
Encoder Latency	60 ms or less (image and encoding parameters effect latency)
Power	28 VDC, 30W max, to MIL-STD-1275 E on 6-pin MIL-STD-38999
Operating Temperature (MIL-STD-810)	-40°C to 75°C
Vibration / Shock / Humidity	MIL-STD-810 & IP67
EMI	MIL-STD-461
Dimensions & Weight	152.40mm W x 85.85mm H x 231.9mm D. ≈ 2.59kg

Tyton VS2X Block Diagram

REV: A-7-21

EIZO Rugged Solutions