The StreamCorder-SD4 is an intelligent, stand-alone, H.264 Streaming solution that accepts 4x NTSC/PAL/RS-170 composite video sources and records and streams them over 100/1000MBit Ethernet. The single board solution is ideal for rapid deployment in demanding applications in Military, Communications, Transportation, Mining and Energy industries.

The StreamCorder-SD4 features a dedicated hardware compression engine capable of recording all 4 video channels at full size and full frame-rate. The flexible streaming engine can then stream each channel direct from the on-board Ethernet port as well as save direct to locally attached storage for later retrieval. The StreamCorder-SD4 also supports 4 channels of audio that can be captured and streamed with the video channels.

Especially for mobile, UAS and Vetronix applications, the StreamCorder-SD4 has optional on-board features including, Controller Area Network (CAN), 3-Axis Accelerometer, High sensitivity GPS receiver, Altimeter, and a 3-Axis Digital Magnetometer (e-compass). These can integrate with other vehicle systems and data from these sources can be used as meta data embedded within the video and streamed to clients or saved for later analysis.
The StreamCorder-SD4 is an intelligent stand-alone device with its own on-board CPU and does not require a host CPU or any driver or OS software. For mechanical convenience the module can be mounted on a PCI/104 stack without consuming host CPU resources.

Applications

Rapid Deployment Video Recording solutions
Unmanned vehicles (UAV, ROV)
Rugged video recorders for marine, aviation
Situational Awareness
Remote Video Surveillance
Border Security
Traffic Monitoring and Control
Video Acquisition and Analytics
Solid state multi-channel video and sensor recorders
StreamCorder-SD4

Standalone 4xD1 H.264 Video Recorder and Streamer

Features

4x PAL/NTSC/RS-170 composite video inputs
Real-time 4x D1 H.264 encode at full frame rate
4 channels of audio encoding
Single board capture, encode, stream solution
RS-485 port for Camera PTZ control
USB 2.0 OTG support for extended local storage
Low power operation for long endurance
Stand-alone operation
Operating system neutral
Standard PCIe104 mechanical form factor
Optional CAN, GPS, Altimeter, Accelerometer, Compass
**Analog Video Input**
- Up to 4 concurrent PAL / NTSC / RS-170 composite video inputs
- Four 10bit Analog-to-Digital converters
- Anti-aliasing filter on inputs

**Audio Input**
- 4x mono input
- Provides Audio/Video synchronisation

**H.264 Video Encoding**
- ITU-T H.264 (ISO/IEC 14496-10), supported profiles:
  - Baseline profile
  - Main profile (I, P frame coding only)
  - High profile (I, P frame coding only) at level 4.1
- 4x D1 encode @ full frame rate
- CAVLC and CABAC coding
- Supports Variable Bit Rate (VBR)
- Supports Constant Bit Rate (CBR)

**JPEG Encoder**
- JPEG (ISO/IEC 10918-1)
- Baseline JPEG with JFIF support

**Network Interface**
- 100/1000MBit Ethernet
- miniPCIe slot for optional WiFi or 4G Modem

**Vetronix Features**
- RS-485 - For Camera Pan/Tilt/Zoom control
- USB2.0 OTG - For external storage
- SD-Card slot - On-board storage
- CAN2.0B port - For vehicle networks (option)
- High-sensitivity GPS (option)
- 3-axis Digital Magnetometer for eCompass (option)
- 3-axis Accelerometer (option)
- High sensitivity altimeter (option)

**Mechanical**
- Intelligent stand-alone module, does not require host computer
- Standard 3.6 x 3.8in PCIe104 form factor
- Mechanical mounting for PCIe104 stack
- Single +5V supply
- Operating temp 0°C to 60°C
- Operating temp -40°C to +85°C (extended temp option)

**Ordering Information**
- StreamCorder-SD4
  - H.264 Video Streamer (0 to 60°C)
- StreamCorder-SD4-EXT
  - H.264 Video Streamer (-40°C to +85°C)

**Technical Specification**

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**StreamCorder-SD4 Functional Diagram**

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