

# StreamCorder-SD4

Standalone 4xD1 H.264 Video Recorder and Streamer



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

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.

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Subject to change without notification

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Rapid Deployment,  
Rugged, solid-state  
multi-channel  
video and  
sensor recording

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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

Low Power,  
Long Endurance  
remote video  
Surveillance

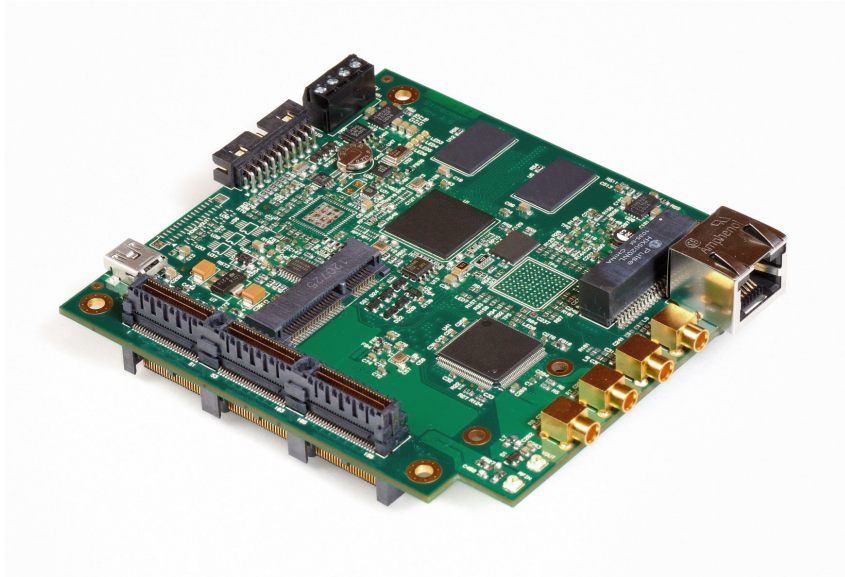
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**StreamCorder-SD4**

## 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 simple control of recording
- 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

Ideally suited to  
the demanding  
applications, space  
requirements and  
environmental  
conditions of  
**Military,**  
**Transportation,**  
**Mining and**  
**Energy Industries**

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**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

**Other Interfaces**

RS-485 - For simple control of recording  
 USB2.0 OTG - For external storage  
 SD-Card slot - On-board storage

**Vetronix Features (option)**

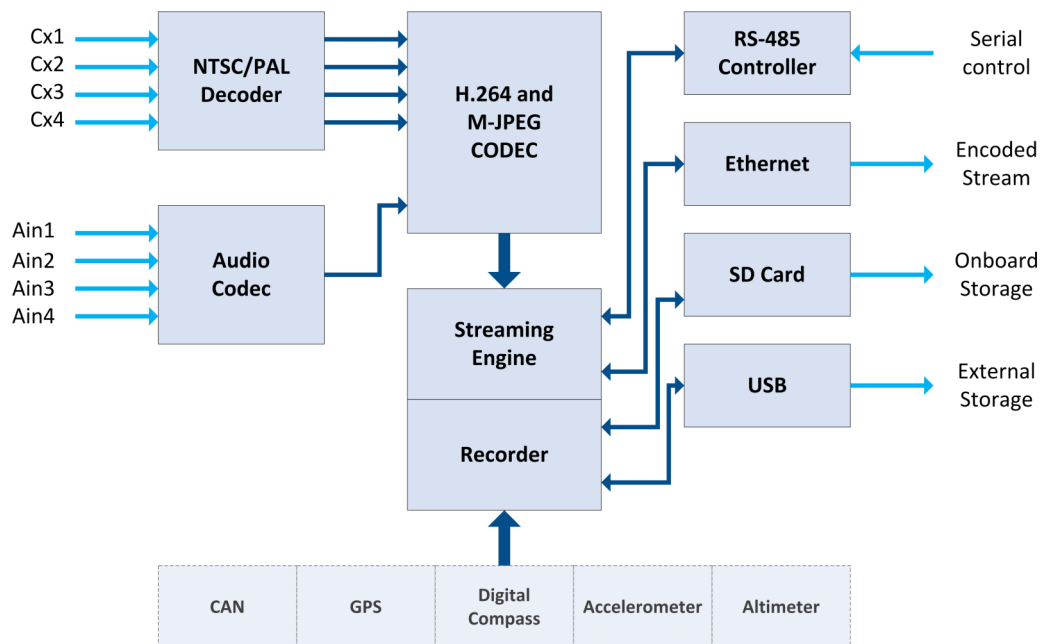
CAN2.0B port - For vehicle networks  
 High-sensitivity GPS  
 3-axis Digital Magnetometer for eCompass  
 3-axis Accelerometer  
 High sensitivity altimeter

**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 @ 600mA Max (3W)  
 Operating temp -40°C to +85°C

**Ordering Information**

**StreamCorder-SD4-EXT** -  
 H.264 Video Streamer (-40°C to +85°C)  
**StreamCorder-SD4-VX-EXT**  
 H.264 Video Streamer + Sensors (-40°C to +85°C)

**StreamCorder-SD4 Functional Diagram**