

XStream-HD

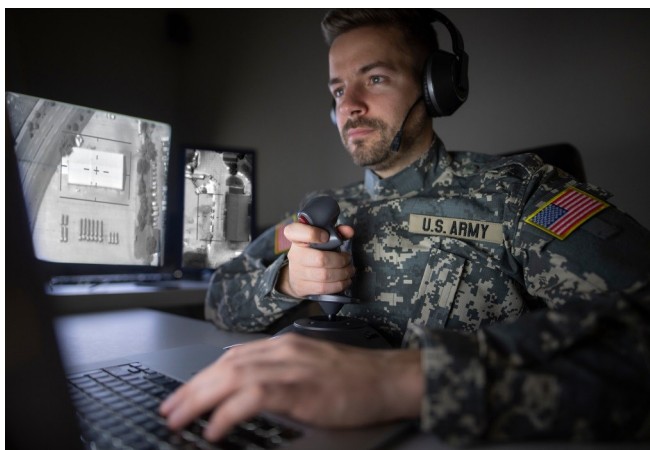
Ultra Low Latency Standalone Dual HD-SDI Video Streamer



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The XStream-HD is an intelligent, stand-alone, ultra low latency H.264/H.265 Streaming solution that accepts dual HD-SDI input and records and streams them over Ethernet. This SWaP optimized solution is ideal for rapid deployment in demanding applications in Military, Communications, Transportation, Mining and Energy industries.



The XStream-HD features a dedicated hardware compression engine capable of encoding both channels at full size and full frame-rate with Ultra Low Latency. The flexible streaming engine can stream each channel direct from the on-board Ethernet port. The XStream-HD supports Intra-refresh encoding for efficient utilization of bandwidth in constrained systems. The XStream-HD is a powerful, flexible platform ideal for rugged systems requiring optimum SWaP in a compact package.

The XStream-HD is an intelligent stand-alone device with it's own on-board CPU and does not require a host CPU or any driver or OS software. A web-interface allows configuration of the streaming and encoding parameters. For mechanical convenience, the module can be mounted on a PC/104 stack without consuming host CPU resources.

PRELIMINARY INFORMATION (Rev A.04)

Subject to change without notification

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Ultra low latency,
Rapid Deployment,
Rugged, solid-state
multi-channel
video streaming



PC/104

Embedded PC Modules

XStream-HD

Ultra Low Latency Standalone Dual HD-SDI Video Streamer



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Dual HD-SDI
video inputs

Applications

Real-time video feedback for remote platforms

Unmanned vehicles (UAV, ROV)

Real-time IP video distribution

Remote Video Surveillance

All-round Real-Time Situational Awareness

Rapid Deployment Video Recording solutions

Rugged video recorders for marine, aviation

Border Security

Traffic Monitoring and Control

Video Acquisition and Analytics

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PC/104

Embedded PC Modules

XStream-HD

Ultra Low Latency Standalone Dual HD-SDI Video Streamer



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XStream-HD

Features

- 2x HD-SDI input at up to 1080p60
- H.264/MPEG-4 AVC (Part 10) Encoder
- H.265/MPEG-H Part 2 HEVC Encoder
- Rugged, real-time video streaming solution
- SATA support for extended local storage
- Gigabit Ethernet for RTSP/RTP streaming
- Operating system neutral
- Web control interface
- Standard PC/104 mechanical form factor

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SWaP optimized for
applications in the

Military,

Transportation,

Mining and

Energy Industries



PC/104

Embedded PC Modules

Digital Video Input

Dual HD-SDI input at up to 1080p60 (SMPTE 292M, SMPTE 424M)
Standard resolutions supported include:
1080p60, 1080p50, 1080p30, 1080p25
720p60, 720p50

H.264 Video Codec

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
Dual channel HD encode at full frame rate
Supports Variable Bit Rate (VBR)
Supports Constant Bit Rate (CBR)
Support Intra-refresh mode with recovery SEI
Real-time multi-stream H.264 ultra low latency encode

H.265 Video Codec

ITU-T H.265 (ISO/IEC 23008-2), supported profiles:
Main profile (I, P frame coding only)
Single channel HD encode at full frame rate
Supports Variable Bit Rate (VBR)
Supports Constant Bit Rate (CBR)
Support Intra-refresh mode with recovery SEI
Real-time multi-stream H.265 ultra low latency encode

Streaming Protocols

RTSP (RFC2326) and RTP (RFC3550) support
RTSP/RTP over TCP
RTP over UDP

Network Interface

Gigabit Ethernet for RTSP/RTP streaming and control

Data Storage

SATA - For external storage
microSD-Card - On-board storage

Power

9V to 20V DC Input

Environmental

Operating temp -40°C to +85°C

Mechanical

Intelligent stand-alone module, does not require host computer
Standard 4.55 x 3.775in PC/104 form factor
Mechanical mounting for PC/104 stack

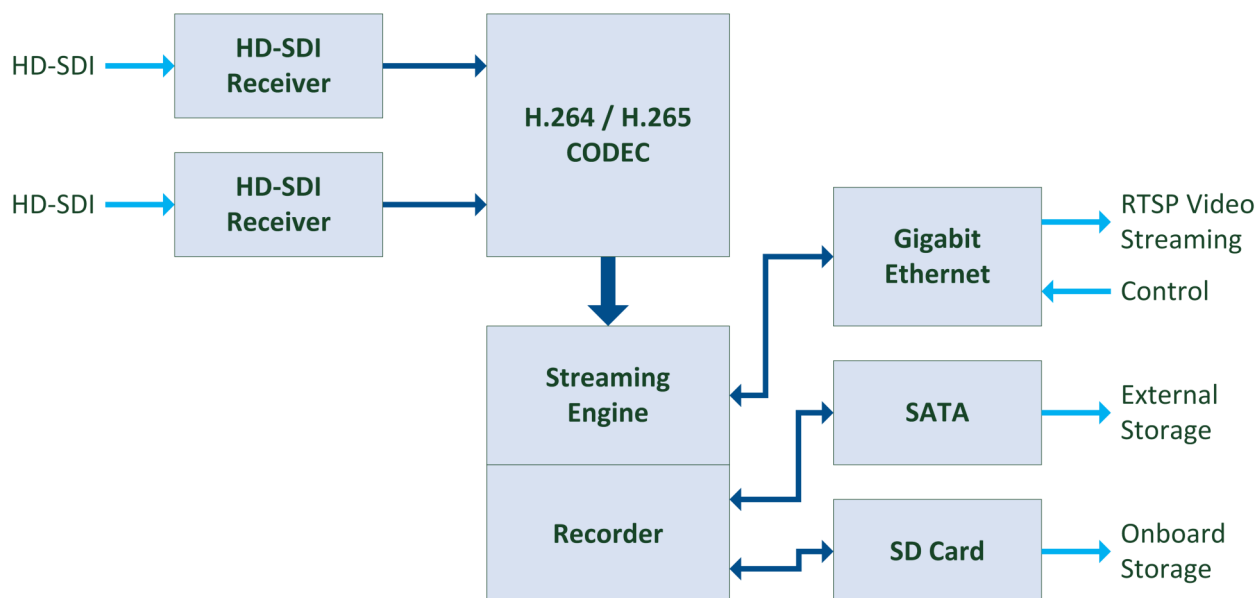
Ordering Information

XStream-HD-EXT-V

Dual HD-SDI Ultra Low Latency Streamer (-40°C to +85°C)

Cable-XStream-HD

Cable set for XStream-HD



XStream-HD Functional Diagram

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