

AVC8000XMC

8x D1 Video Frame Grabber XMC PCI-Express card

The AVC8000XMC is a high-performance 8-channel video capture and overlay controller on a single XMC Expansion module. The AVC8000XMC provides a powerful and flexible solution for capturing up to eight concurrent analog video inputs for local system display or software analysis and processing, ideal for embedded Situational Awareness systems in the most demanding environment.

The AVC8000XMC allows each of the 8 video channels to be captured at full D1 size, all at full frame rate. The captured video data can be streamed continuously to system memory or disk for either immediate local display or further processing.

The capture engine of the AVC8000XMC features hardware color space conversion to present the captured video data in the format best suited to the end application.

The AVC8000XMC is a standard compliant single width CMC card using the switched XMC, PCI -Express fabric for maximum performance.

The AVC8000XMC is supported by drivers for Windows and Linux.

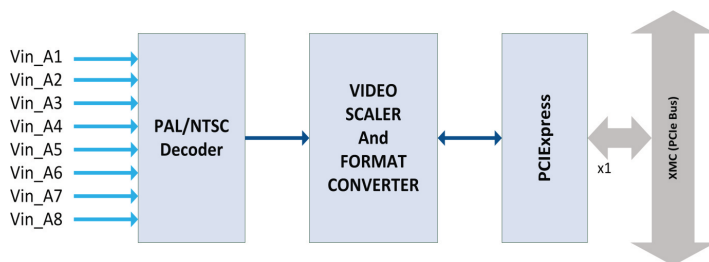


Applications

High performance image capture
 Vehicle-based Video Capture
 Real-time Situational Awareness
 Law Enforcement
 Crime Scene Recording
 Remote Video Surveillance
 Multi-camera Security Application
 Asset Monitoring
 Traffic Monitoring and Control
 Video Acquisition and Analytics

Features

8 Live NTSC/PAL/RS-170 video inputs
 8 x D1 size capture at full frame rate
 Windows DirectShow/DirectDraw support
 Efficient PCI DMA cycle operation
 Linux Video4Linux support
 Drivers for Windows, Linux
 Robust XMC Expansion card
 Low Power Operation



AVC8000XMC Functional Diagram



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

Live Frame Capture

up to 8 full size D1

PAL/NTSC/RS-170

video inputs at full

frame rate.

Multi-Camera video

preview to system

VGA

Very Low Latency

Windows

DirectShow

and

Linux V4L

support



AVC8000XMC

Rev A.00

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Technical Specification

XMC Interface

- PCI Express 2.0 compliant
- x1 PCI Express port
- Live video capture to display, memory or disk

Analog Video Input

- Front I/O via 8x MMCX connectors.
- Up to 8 concurrent composite PAL or NTSC video input channels
- Eight 10-bit Analog-to-Digital converters
- Anti-aliasing filters on inputs

Video Input Formats

- NTSC-M, NTSC-Japan, NTSC (4.43), RS-170
- PAL-B, G, N, PAL-D, PAL-H, PAL-I, PAL-M, PAL-CN, PAL-60
- SECAM

Video Input Adjustments

- Contrast (or luma gain) adjustable from 0 - 255% of original
- Saturation (or chroma gain) adjustable from 0 - 200% of original
- Hue (or chroma phase) adjustable from -36° to +36°
- Brightness (or luma level) can be adjusted from -128 to 127 steps
- Software adjustable Sharpness, Gamma and noise suppression

Video Capture Formats

- RGB555, RGB565
- YCbCr 4:2:2
- YCbCr 4:1:1

System Requirements

- x86 host with XMC socket
- Host VGA display (if video preview to host is required)

Environmental

- Operating temp 0°C to 60°C
- Operating temp -40°C to +85°C (extended temp option)

Mechanical

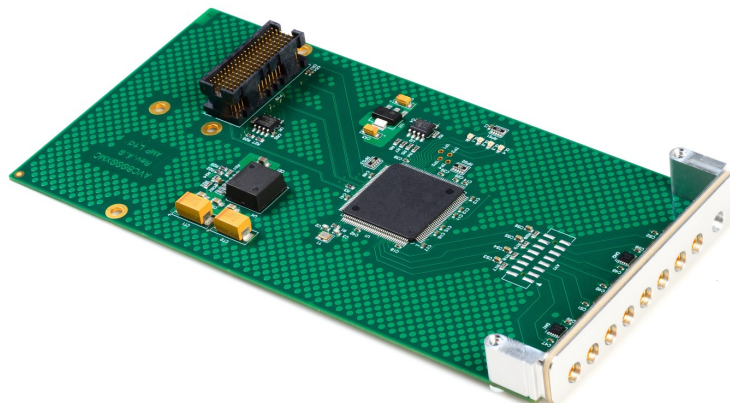
- Single-width CMC (Common Mezzanine Card)
- IEEE 1386 form factor (74mm x 149mm)

Software Drivers

- Drivers for Windows, Linux
- Sample video overlay and capture application in C/C++ source code

Ordering Information

AVC8000XMC	Video Capture and Overlay Controller (0 to 60°C)
AVC8000XMC-EXT	Video Capture and Overlay Controller (-40°C to +85°C)



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