AVC8000M2

8x D1 Video Frame Grabber M.2 module

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

The AVC8000M2 is a high-performance 8-channel video capture and overlay controller on a single M.2 form factor PCI Express card. The AVC8000M2 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 AVC8000M2 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 AVC8000M2 features hardware color space conversion to present the captured video data in the format best suited to the end application.

The AVC8000M2 is supported by drivers for Windows and Linux.

Live Frame Capture up to 8 full size D1 PAL/NTSC/RS170 video inputs at full frame rate.

Rev A.00
PRELIMINARY INFORMATION - Subject to change without notification

Advanced Micro Peripherals Ltd
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PC/104
Embedded PC Modules

AVC8000M2

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Multi-Camera video preview to system display

Very Low Latency

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

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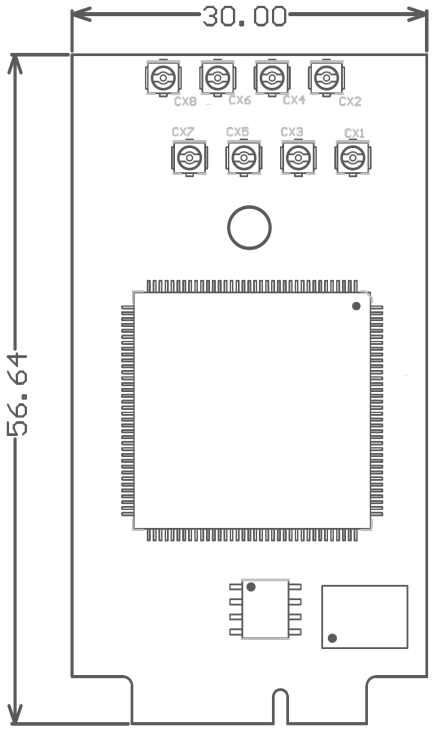

AVC8000M2 Mechanical Drawing

Windows DirectShow and Linux V4L2 support

Features

8 Live NTSC/PAL video inputs

8 x D1 size capture at full frame rate

Windows DirectShow/DirectDraw support

Linux Video4Linux2 support

Efficient PCI DMA cycle operation

Drivers for Windows, Linux

Robust M.2 3056 Type E module (mounting for 3042)

PCIe x1 Host interface

Low Power Operation

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Technical Specification

Host Interface

M.2 Key-E (PCIe Gen 1 x1)
Live video capture to display, memory or disk

Analog Video Input

Up to 8 concurrent composite PAL or NTSC video input channels
u.FL input connector
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 PC-Compatible with M.2 Type E socket
PCIe Display (if Video Preview to host is required)

Mechanical

M.2 Type E 3056 module.
30mm wide, 56.64mm long module.
Rugged mounting compatible with 3042 module mounting.

Miscellaneous

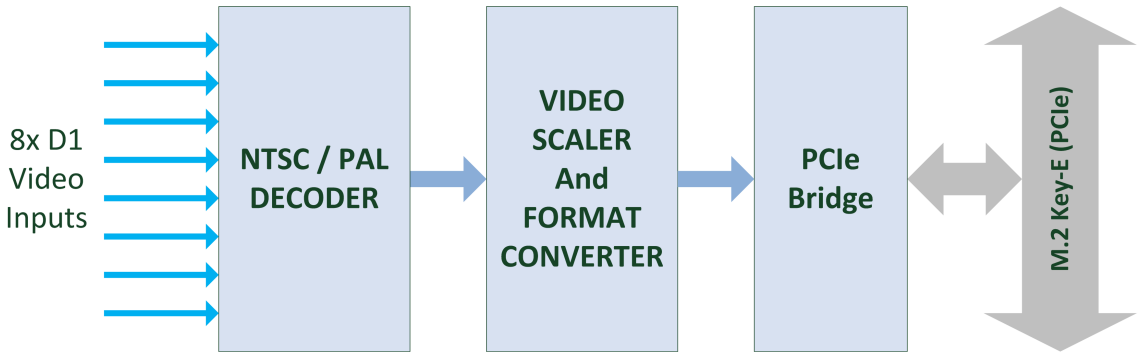
Operating temp –40˚C to +85˚C

Software Drivers

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

Ordering Information

AVC8000M2-EXT	Video Capture and Overlay Controller (-40˚C to +85˚C)



AVC8000M2 Functional Diagram

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