

AVC8000X

8x D1 Video Frame Grabber for PC/104-Express systems

The AVC8000X is a high-performance 8-channel video capture and overlay controller on a single PC/104-Express form factor card. The AVC8000X 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 AVC8000X allows each of the 8 video channels to be captured at full D1 size, all at full frame rate. The video can be scaled, cropped and positioned under software control. In addition to the video capture the AVC8000X also provides capture of up to 8 mono audio sources.

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 AVC8000X features hardware color space conversion to present the captured video data in the format best suited to the end application.

The AVC8000X is supported by drivers for Windows XP-Embedded and Linux.

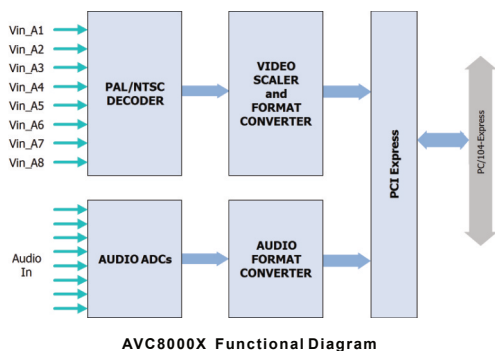


Applications

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 video inputs
 8 x D1 size capture at full frame rate
 8 Mono Audio inputs
 Arbitrary video window sizing, cropping and scaling
 Windows DirectShow/DirectDraw support
 Efficient PCI DMA cycle operation
 Linux Video4Linux support
 Drivers for WinXP-E, Linux
 Robust PC/104-Express construction
 Low Power Operation



AVC8000X Functional Diagram



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

Live Frame Capture

up to 8 full size D1

PAL/NTSC/RS170

video inputs at full

frame rate.

Multi-Camera video

preview to system

VGA

Very Low Latency

Windows

DirectShow

and

Linux V4L

support



AVC8000X

Rev A.00

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Technical Specification

PC/104-Express Bus Interface

Single x1 PCI Express Link
Live video capture to display, memory or disk

Analog Video Input

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

Audio Inputs

8 mono audio inputs
10-bit Analog-to-Digital Converter per channel

Audio Capture Format

8-bit PCM

Video Processing

Arbitrary sizing, cropping, scaling of each video channel

System Requirements

x86 PC-Compatible PC/104-Express Host Computer
PCI VGA Display (if Video Preview to host is required)

Miscellaneous

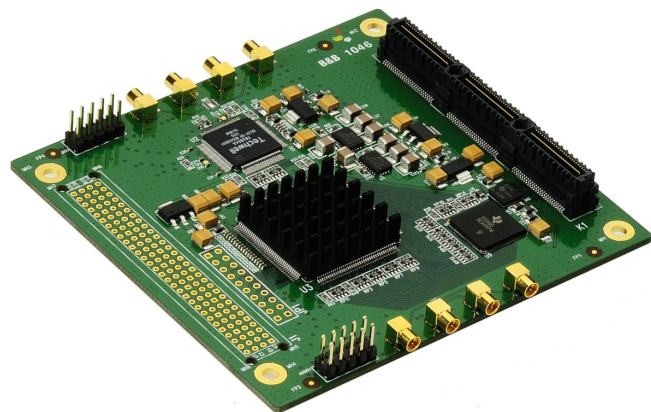
Single +5V supply
Operating temp 0°C to 60°C
Operating temp -40°C to +85°C (extended temp option)
PC/104-Express form factor

Software Drivers

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

Ordering Information

AVC8000X	Video Capture and Overlay Controller (0 to 60°C)
AVC8000X-Ext	Video Capture and Overlay Controller (-40°C to +85°C)



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