

AVC8000X

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



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

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.

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Subject to change without notification

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



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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

Multi-Camera video
preview to system

VGA

Very Low Latency

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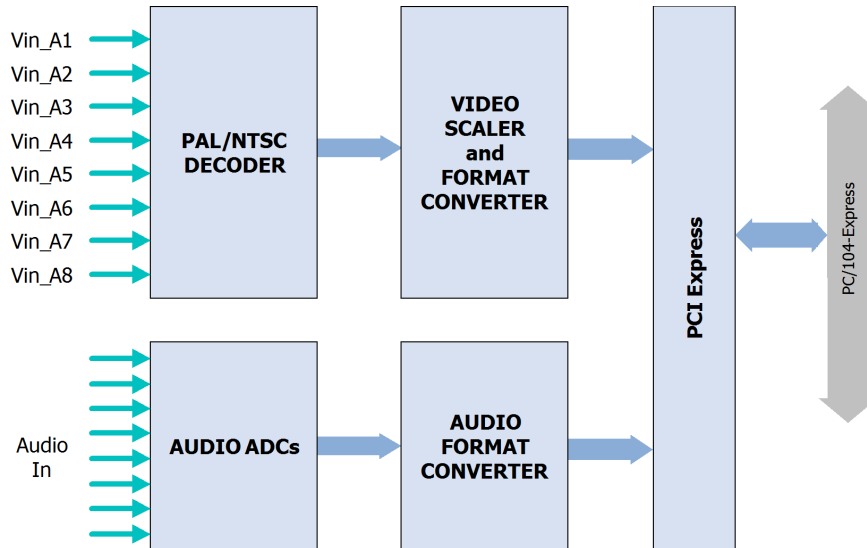
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AVC8000X Functional Diagram

Windows
DirectShow
and
Linux V4L
support

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

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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

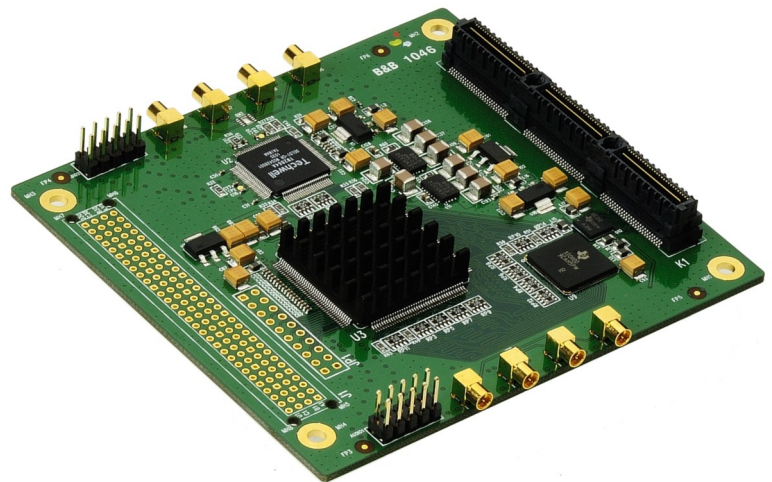
Single +5V supply
Operating temp 0°C to 60°C
Operating temp -40°C to +85°C (extended temp option)
PC/104-Express form factor

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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