

AVC8000S

8x D1 Video Frame Grabber for PCIe



The AVC8000S is a high-performance 8-channel video capture and overlay controller on a single PCI Express x1 card. The AVC8000S provides a powerful and flexible solution for capturing up to eight concurrent analog video inputs for software analysis and processing or local system display.



The AVC8000S supports capturing all 8 of the video channels to be captured at full D1 resolution and at full frame rate. The video can be scaled, cropped and positioned under software control.

The capture engine of the AVC8000S features hardware color space conversion to present the captured video data in the format best suited to the end application. The captured video data can then be streamed continuously over the PCI Express bus to system memory or disk for either immediate local display or further processing as required by the application.

The AVC8000S is supported by drivers for Windows and Linux.

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Subject to change without notification

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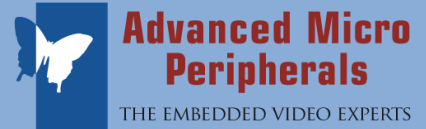
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Live Frame Capture
up to 8 full size D1
PAL/NTSC/RS170
video inputs at full
frame rate.



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Applications

Video overlay for UAV ground station

Vehicle-based Video Capture

Remote vehicle video link

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

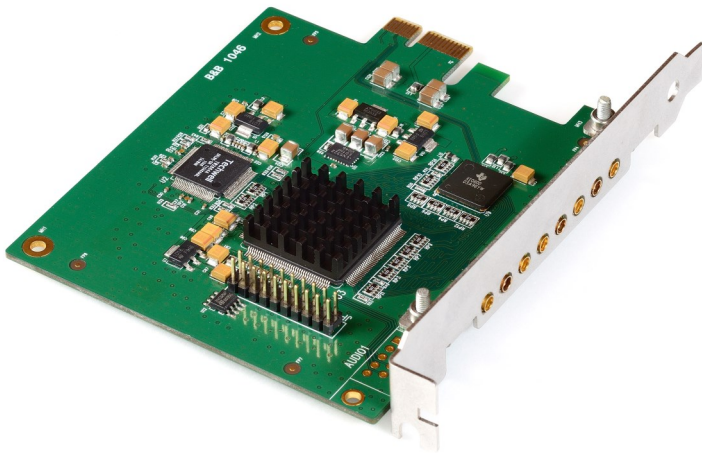
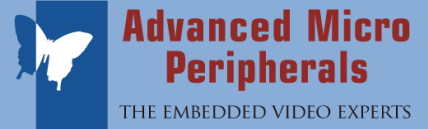
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Features

- 8 Live NTSC/PAL video inputs
- 8 x D1 size capture at full frame rate
- Arbitrary video window sizing, cropping and scaling
- Windows DirectShow/DirectDraw support
- Efficient PCI DMA cycle operation
- Linux Video4Linux support
- Drivers for Windows, Linux
- Industry standard PCI Express x1 card
- Low Power Operation

Windows
DirectShow
and
Linux V4L
support

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PCI 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

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 $+36^\circ$
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

Video Processing

Arbitrary sizing, cropping, scaling of each video channel

System Requirements

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

Miscellaneous

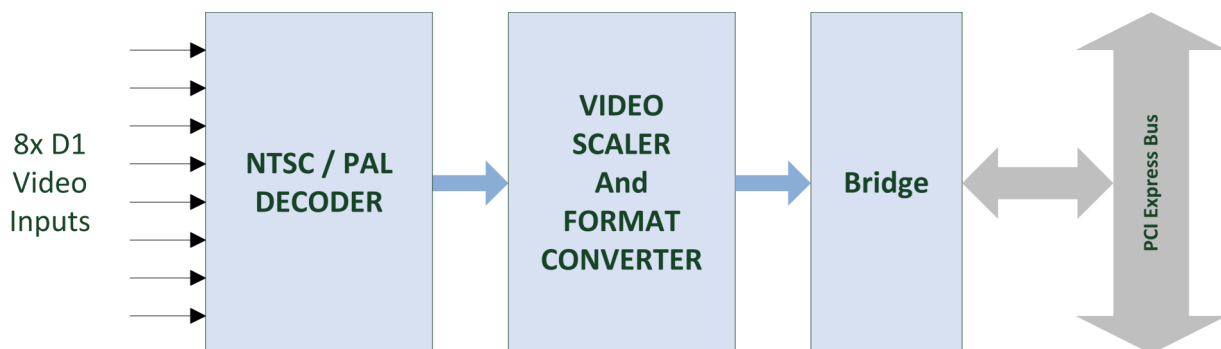
Single +3.3V supply
Operating temp 0°C to 60°C
Operating temp -40°C to $+85^\circ\text{C}$ (extended temp option)

Software Drivers

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

Ordering Information

AVC8000S	Video Capture and Overlay Controller (0 to 60°C)
AVC8000S-Ext	Video Capture and Overlay Controller (-40°C to $+85^\circ\text{C}$)

**AVC8000S Function Diagram**