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.

Rev A.02
Subject to change without notification
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
AVC8000S

8 x D1 Video Frame Grabber for PCIe

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
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

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

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°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
- AVC8000S-Ext Video Capture and Overlay Controller
- (0 to 60°C)
- (–40°C to +85°C)

AVC8000S Function Diagram