

# AVC8000nano

8x D1 Video Frame Grabber for mini PCI Express



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The AVC8000nano is a high-performance 8-channel video capture and overlay controller on a single Mini PCI Express card. The AVC8000nano 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 AVC8000nano 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 AVC8000nano features hardware color space conversion to present the captured video data in the format best suited to the end application.

The AVC8000nano is supported by drivers for Windows and Linux.

#### Rev A.03

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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## 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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Multi-Camera video  
preview to system

VGA

Very Low Latency



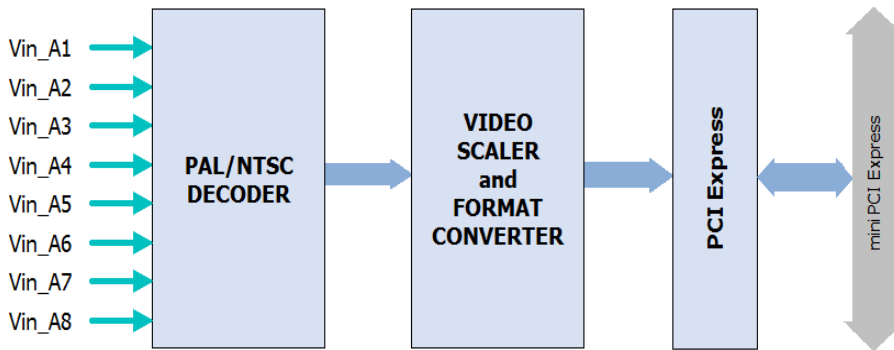
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**AVC8000nano Functional Diagram**

Windows  
DirectShow  
and  
Linux V4L  
support

## Features

- 8 Live NTSC/PAL video inputs
- 8 x D1 size capture at full frame rate
- Windows DirectShow/DirectDraw support
- Efficient PCI DMA cycle operation
- Linux Video4Linux support
- Drivers for Windows, Linux
- Robust PC/104-Express construction
- Low Power Operation

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### Mini PCI Express Bus Interface

Full height Mini PCI Express card  
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  $-36^{\circ}$  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

### System Requirements

x86 PC-Compatible with mini PCI Express socket  
PCI VGA Display (if Video Preview to host is required)

### Miscellaneous

Operating temp  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
Standard Full Height Mini PCI Express form factor

### Software Drivers

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

### Ordering Information

AVC8000nano-EXT Video Capture and Overlay Controller  
( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )



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