

nanoAVC8

8x D1 Video Frame Grabber with Audio for Mini PCI Express



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The nanoAVC8 is a high-performance 8-channel video capture and overlay controller on a single Mini PCI Express card. The nanoAVC8 provides a powerful and flexible solution for capturing up to eight concurrent analog video inputs and 4 audio inputs for local system display or software analysis and processing, ideal for embedded Situational Awareness systems in the most demanding environment.



The nanoAVC8 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 nanoAVC8 features hardware color space conversion to present the captured video data in the format best suited to the end application.

The nanoAVC8 also offers capture of up to 4 mono audio inputs to 8bit raw PCM. All signals are connected to the card via a single high density IDC connector that carries the 8 video and 4 audio inputs.

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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.

4 mono audio
capture channels



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The nanoAVC8 is supported by drivers for Windows and Linux.



Photo credit: U.S. Government

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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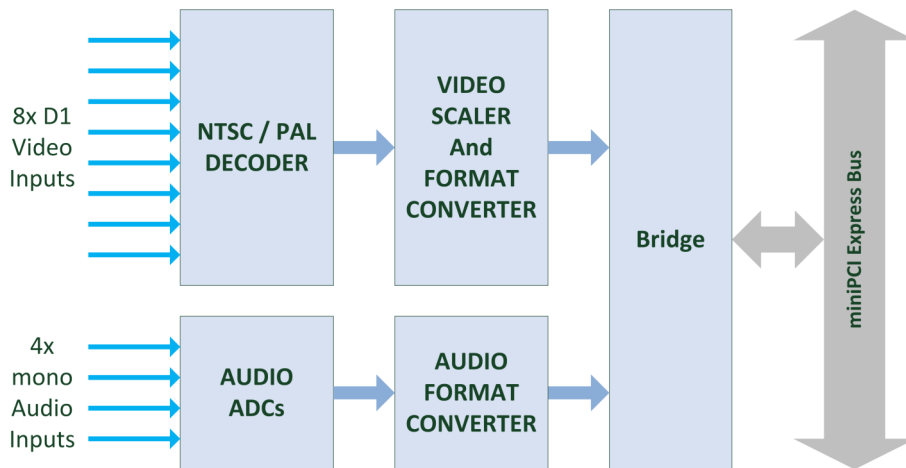
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nanoAVC8 Functional Diagram

Windows
DirectShow
and
Linux V4L2
support

Features

- 8 Live NTSC/PAL video inputs
- 8 x D1 size capture at full frame rate
- 4x mono audio inputs
- Windows DirectShow/DirectDraw support
- Efficient PCI DMA cycle operation
- Linux Video4Linux2 support
- Drivers for Windows, Linux
- Compact Mini PCI Express form factor
- 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° 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

Audio Inputs

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

Audio Capture Format

8-bit PCM

System Requirements

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

Miscellaneous

Operating temp 0°C to 60°C
Operating temp -40°C to $+85^{\circ}\text{C}$ (extended temp option)
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**nanoAVC8**

8 channel video capture controller with audio (0 to 60°C)

nanoAVC8-EXT

8 channel video capture controller with audio (-40°C to $+85^{\circ}\text{C}$)

Cable-nanoAVC8

Cableset for nanoAVC8 for connecting 8x video, 4x audio.



*Image for illustration only.
Please see text for full product description*

