

# microGrabber

Quad D1 Video Frame Grabber for mini PCI systems



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The microGrabber is a 4-channel video capture and overlay controller on a single Type-III mini PCI card. The microGrabber provides a powerful and flexible solution for capturing up to four concurrent analog video inputs for local system display or software analysis and processing, ideal for compact embedded Situational Awareness systems.



The microGrabber allows each of the 4 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 microGrabber also provides capture of up to 4 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 microGrabber 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 4 concurrent  
full size D1  
PAL/NTSC/RS170  
video inputs at Full  
Frame Rate.



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The QuadGrabber is supported by a set of well-documented comprehensive SDKs that minimize development risk and shorten time-to-market. The SDKs are available on popular embedded operating systems such as 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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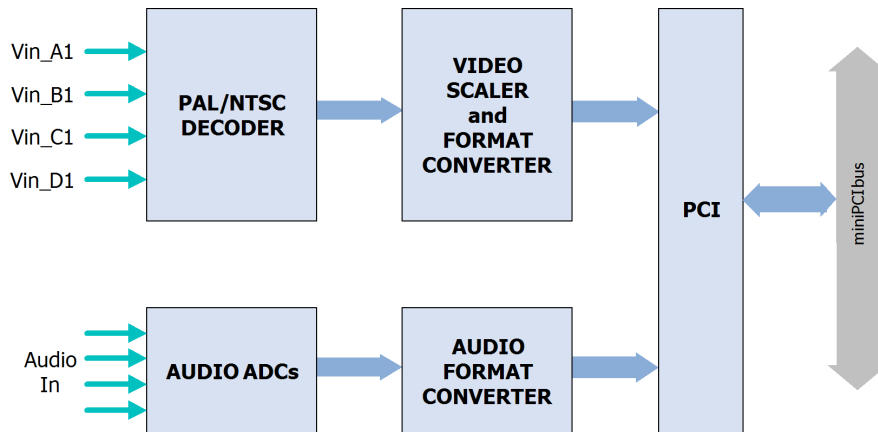
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**microGrabber Functional Diagram**

Windows  
DirectShow  
and  
Linux V4L  
support

## Features

- 4 Live NTSC/PAL video inputs
- 4 x D1 size capture at full frame rate
- 4 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
- Low Power Operation
- Compact mini PCI form factor

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**Mini PCI Bus Interface**

Type III mini PCI card  
 132MBytes/sec bandwidth at 33.33 MHz bus speed  
 Live video capture to display, memory or disk

**Analog Video Input**

Up to 4 concurrent composite PAL or NTSC video input channels  
 Four 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  $127$   
 Software adjustable Sharpness, Gamma and noise suppression

**Video Capture Formats**

RGB  
 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

**Video Processing**

Arbitrary sizing, cropping, scaling of each video channel

**System Requirements**

x86 PC-Compatible Host Computer  
 Mini PCI type III slot.  
 PCI or AGP Display (if Video Preview to host is required)

**Miscellaneous**

Single +3.3V supply  
 Operating temp  $0^\circ\text{C}$  to  $60^\circ\text{C}$   
 Operating temp  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$  (extended temp option)  
 Mini PCI type IIIB form factor

**Software Drivers**

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

**Ordering Information**

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

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