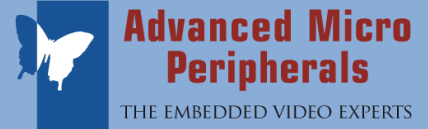


# AVC4000

## Video Capture and Overlay Controller



The AVC4000 is a 4-channel video capture and overlay controller on a single PC/104plus form factor. The AVC4000 provides a powerful and flexible solution for capturing up to four concurrent analogue video inputs for local system display or software analysis and processing.



The AVC4000 features built-in video multiplexers that allow the selection of four sources from up to 8 inputs. The selected inputs can be scaled, cropped and positioned under software control and alpha blended with OSD text and graphics. The captured video data can be captured continuously to system memory or disk for either immediate local display or further processing. The capture engine of the AVC4000 features hardware colour space conversion to present the captured video data in the format best suited to the end application.

Display, capture  
and process  
up to 4 full size D1  
video inputs.

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# AVC4000

## Video Capture and Overlay Controller



The AVC4000 also features composite and S-video analogue outputs for live monitoring and connection to existing DVR systems.



### Applications

High performance image capture

Vehicle-based Video Capture

Situational Awareness

Law Enforcement

Crime Scene Recording

Remote Video Surveillance

Multi-camera Security Application

Asset Monitoring

Traffic Monitoring and Control

Video Acquisition and Analytics

Live video preview  
to system VGA,  
Composite, S-Video  
outputs.

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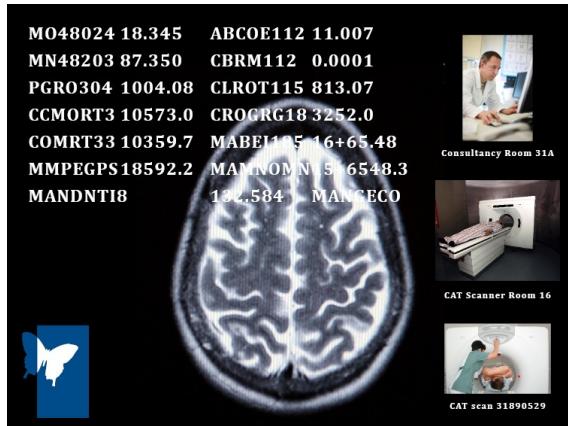
# AVC4000

## Video Capture and Overlay Controller



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Peripherals**

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### Features

4 Live video inputs selectable from 8 composite video sources.

1 x D1 size capture at full frame rate

4 x D1 size capture at 1/4 frame rate

4 x CIF size capture at full frame rate

Flexible video window positioning and sizes

Composite and S-Video output

Text Overlay: Time, Date stamp etc

Up to 4 AVC4000 cards per system

Drivers for Win-NT/2000/XP-E, Linux, QNX

Alpha blend  
text and graphics  
on to  
Live Video

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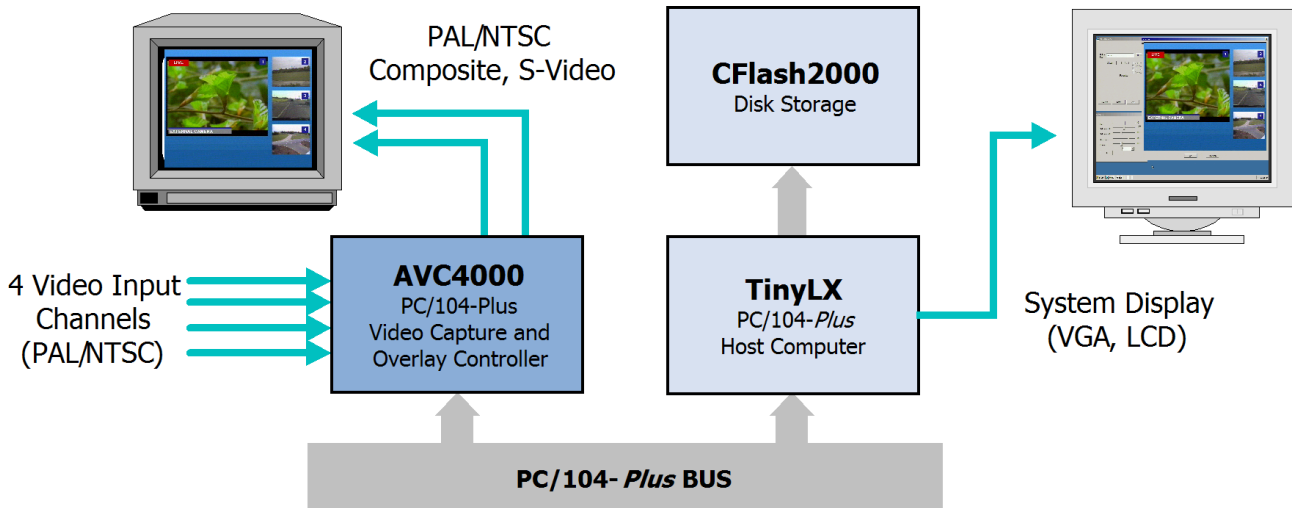
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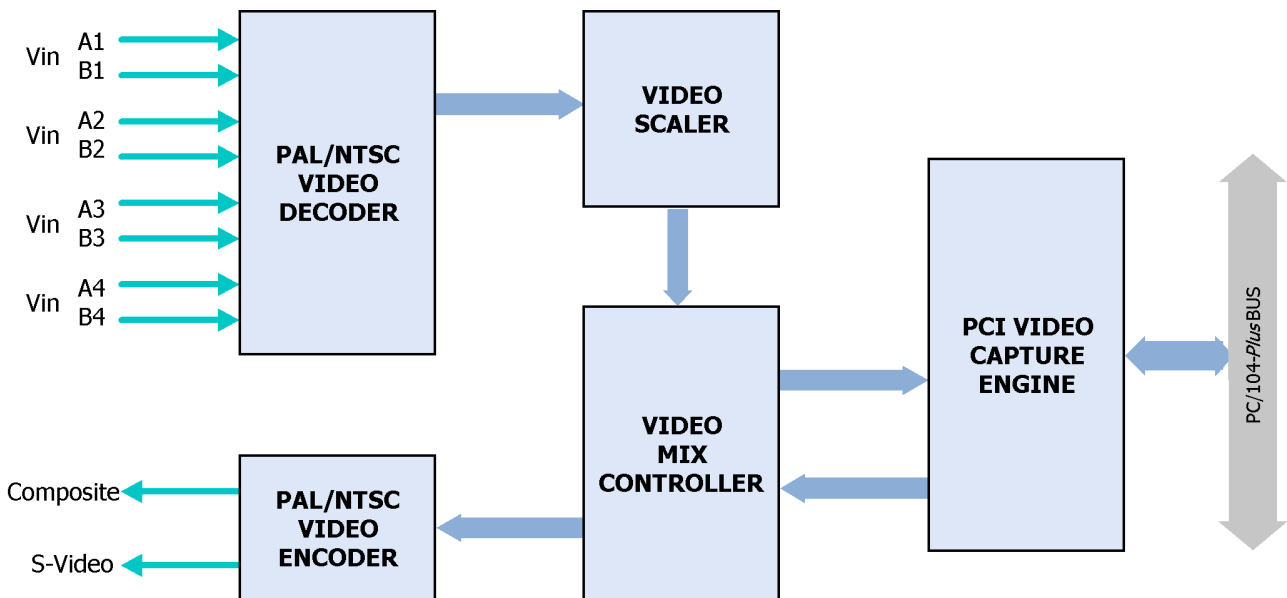
# AVC4000

## Video Capture and Overlay Controller

## Operation Summary



**AVC4000 Application Diagram**



**AVC4000 Block Diagram**



**PC/104plus Bus Interface**

Compliant with PCI Rev 2.1  
132MBytes/sec bandwidth at 33.33 MHz bus speed  
Live video capture to display, memory or disk

**Analogue Video Input**

Up to 4 concurrent composite PAL or NTSC video input channels  
Two input video multiplexer per Channel (up to 8 cameras)  
Four 10-bit Analogue-to-Digital converters  
Anti-aliasing filters on inputs

**Video Input Formats**

Standard CCIR601-NTSC, CCIR-PAL  
NTSC-M, NTSC-Japan  
PAL-B, PAL-D, PAL-G, PAL-H, PAL-I, PAL-M, PAL-N

**Video Input Adjustments**

Contrast (or luma gain) adjustable from 0 - 200% of original value  
Saturation (or chroma gain) adjustable from 0 - 200% of original value  
Hue (or chroma phase) adjustable from -180 to +180  
Brightness (or luma level) can be adjusted from 0 - 255 steps

**Video Formats**

RGB: 24bit, 16bit, 15bit  
YUV: YUV422, YUV411

**Video Processing**

Flexible arrangement of 4 video channels within single D1 video stream at full frame rate  
Multiplexed video mode offering multiple D1 channels at reduced frame rate  
Arbitrary sizing, cropping and positioning of video windows

**Text/Graphics Overlay**

Overlay of computer generated bitmaps on live video  
720x576 bitmap overlay buffer  
64 colour overlay  
Programmable alpha blend level attribute per pixel (0%, 25%, 50%, 75%)

**Video Output options**

Real-time Preview to host VGA display  
Preview to Composite PAL/NTSC output  
Uncompressed RGB/YUV for downstream applications

**System Requirements**

x86 PC-Compatible PC/104+ Computer  
PCI or AGP Display (if Video Preview to host is required)  
Spare REQ/GNT on PC/104+ Bus  
3.3V or 5V signalling PC/104+ bus



**Miscellaneous**

Single +5V at less than 1A  
Operating temp 0 °C to 60 °C or -40 °C to +85 °C (extended temp option)  
Standard 3.6 x 3.8in PC/104-Plus form factor

**Software Drivers**

Drivers for Windows-NT/2000/XP, Linux, QNX  
Sample video overlay and capture application in C/C++ source code

**Ordering Information**

AVC4000 Video Capture and Overlay Controller (0 to 60 °C)  
AVC4000-Ext Video Capture and Overlay Controller (-40 °C to +85 °C)

**AVC4000**

*\* This bulletin contains preliminary product information and is subject to change*