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.
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
### 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
AVC4000
Video Capture and Overlay Controller

AVC4000 Operation Summary

AVC4000 Block Diagram

AVC4000 Application Diagram
AVC4000
Video Capture and Overlay Controller

**Technical Specification**

**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

**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
**AVC4000**

**Video Capture and Overlay Controller**

**Technical Specification**

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**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)

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

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