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

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

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)

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