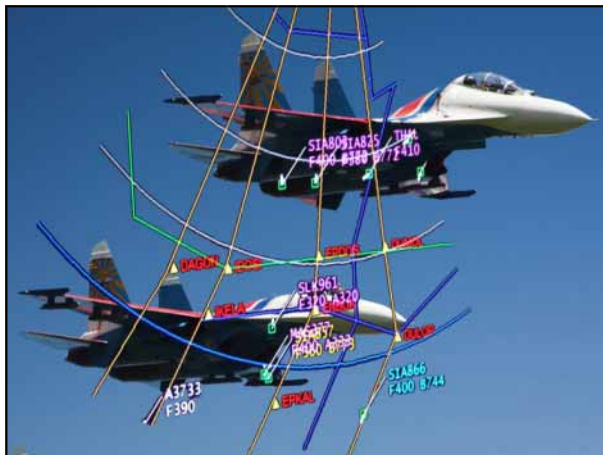


# VACPCI

PCI Video Annotation Controller



The VACPCI is a real time PCI video annotation controller. It accepts live video from PAL/NTSC analogue sources and generates computer graphics which are blended with the video source.



Mix live video  
with computer  
graphics

The VACPCI can drive a DVI-connected High Resolution TFT Flat Panel or standard VGA display, and provides composite and S-Video PAL/NTSC video outputs for driving a TV monitor.

The built-in graphics buffer allows high resolution graphical and alphanumeric information to be placed on the live video stream for real time labelling, titling and annotation applications. The VACPCI supports per-pixel synchronisation and



# VACPCI

## PCI Video Annotation Controller



256 levels of Alpha Blending of graphics with the live video. The combined annotated information may be recorded on a VCR.

The VACPCI provides two PAL/NTSC inputs: one composite and one S-video, of which one source is selectable for display under software control.



Composite,  
S-Video and  
DVI/VGA output  
as standard

## Applications

Multimedia Displays

Live Video Labelling

Avionics and Radar Display

Video Annotation and Titling

Advertising Message Insertion

Medical and Industrial Imaging

Mobile Entertainment Systems (MES)

Advanced Micro Peripherals Ltd  
Cambridge, CB6 2HY, England  
Tel (+44) 1353 659500  
Tel (+44) 1353 659600  
[sales@ampltd.com](mailto:sales@ampltd.com)  
<http://www.ampltd.com>



# VACPCI

## PCI Video Annotation Controller



**Text and graphics overlay on live video**

Built-in

VGA

Graphics Card

### Features

8 Mbytes memory

Standard PCI 2.1 card

Output to TFT flat panel

Single +5V power supply

Composite and S-Video input

24-bit color annotation graphics

Up to 256 levels of alpha-blending

Composite and S-Video PAL/NTSC output

High performance 2D graphics accelerator

Live video input from analogue PAL/NTSC

# VACPCI

## PCI Video Annotation Controller

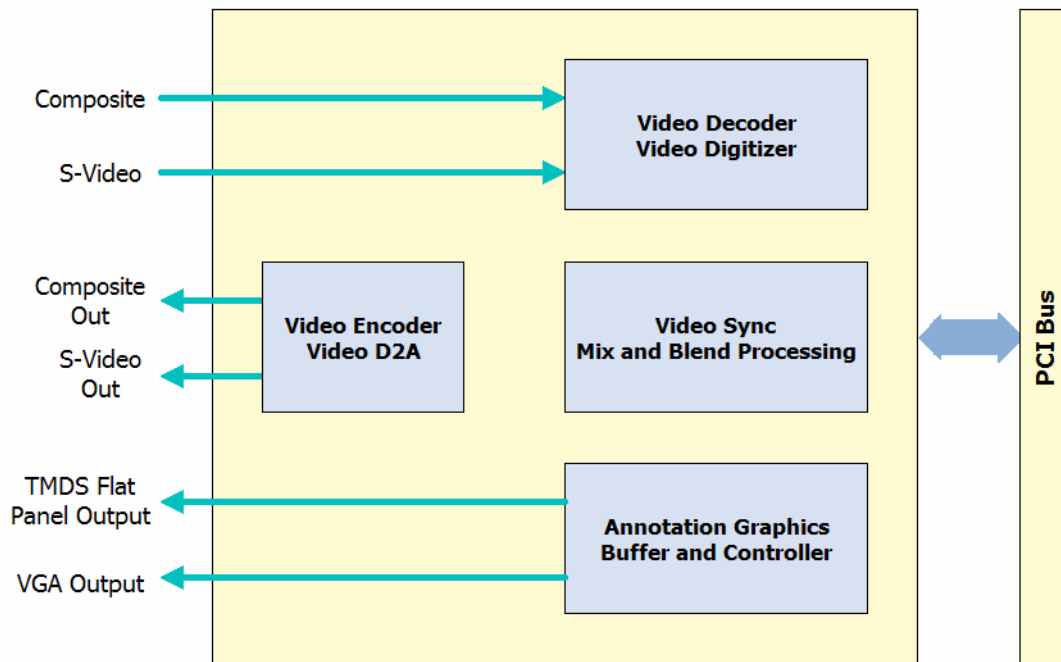
## Operation Summary



Single-channel VACPCI showing live video overlaid with semi-transparent tiles displaying text. Note how the blue road sign on the left is visible through the tile with M25 printed on it.



Single-channel VACPCI displaying a mix of MS-Windows graphics, Internet Explorer, live video and MPEG movie playback.



**VACPCI Block Diagram**



### Bus Interface

32-bit PCI Rev 2.1 bus  
Linear mapped Graphics/Annotation frame buffer in memory space

### Analogue Video Inputs

2 input PAL/NTSC software selectable multiplexer  
Digital Line video technology for reliable locking to any video source  
One Composite and one S-Video inputs  
Dual flash Analogue-to-Digital converters

### Video Input Formats

NTSC-M, NTSC-Japan  
PAL-B, PAL-D, PAL-G, PAL-H, PAL-I, PAL-M, PAL-N  
SECAM

### 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  
Brightness (or luma level) can be adjusted from 0 - 255 steps

### Annotation Graphics

1024 Kbytes annotation buffer (dependent upon display resolution)  
720 x 480 (NTSC) or 720 x 576 (PAL) by 16 bits per pixel  
5-6-5 internal RGB coding  
256-level alpha-blending from transparent to full overlay

### Video output Adjustments

Contrast adjustable from 0 - 156% of input  
Saturation from 0 - 200% of input  
Brightness from 0 - 128% of input  
Hue adjust from 0 to 358deg Subcarrier shift

### VGA Output

Main System display output  
640x480 to 2048x1024 by 16M colours  
8MBytes display buffer

### Video output

PAL/NTSC composite output  
PAL/NTSC S-Video output

### Flat Panel Output

640x480, 800x600, 1024x768 Resolution TMDS to flat panels

### Miscellaneous

Single +5V at less than 1A  
Operating temp 0 °C to 60 °C  
Standard PCI 2.1 card

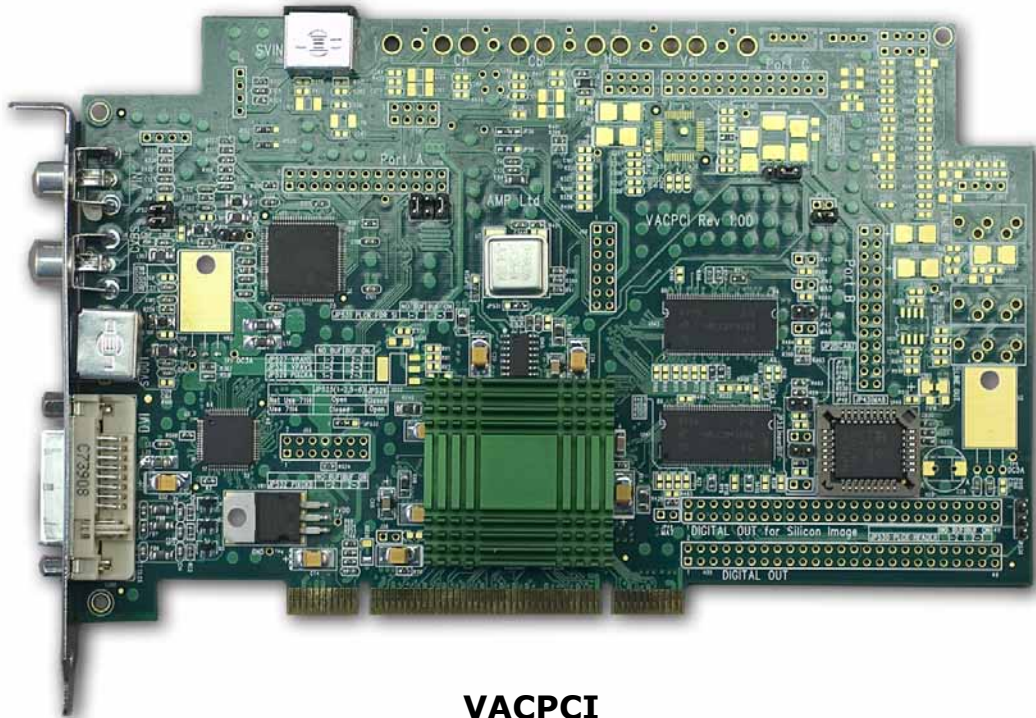
### Software Drivers

Comprehensive Video Overlay and Annotation SDK for Windows 2000/XP, Linux, QNX

### Ordering Information

VACPCI-I-A/O-VT

VACPCI PCI Video Annotation Controller



**VACPCI**