

# PCI-RTV24

## 4-CH Real-time Video Capture Card for Standard Cameras



### Features

- Four color video digitizers operating in parallel
- Up to 120fps in 32-bit, 33MHz/66MHz PCI bus
- Color (PAL / NTSC), monochrome (CCIR / EIA) camera
- Up to 16 channels extension
- On-board TTL I/O lines
- Built-in watchdog timer
- User friendly ViewCreator utility
- Software trigger supported

### Applications

- PC-based surveillance system
- Digital Video Recorder (DVR)
- Factory monitoring system
- Machine vision inspection system
- Scientific research instrumentation
- Medical research instrumentation

### Software Support

#### WDM driver

The driver's supports VC++/VB/C++ Builder/Delphi programming under Windows Vista/XP/XPe platforms with DLL.

#### LabVIEW driver

Angelo-LVIEW

#### Linux driver

Red Hat 7.3, kernel 2.4.18 above

#### ViewCreator

ViewCreator assists developers to evaluate initial tests and functions.



### Ordering Information

PCI-RTV24

4-CH real-time video capture board for standard cameras

### Introduction

#### General

The PCI-RTV24 acquisition board is designed without compromise for security and video surveillance applications. It's the ideal device for PC based multiple-channel digital video recording.

This 32-bit, 33MHz/66MHz PCI bus frame grabber can capture simultaneously four analog video streams in real time. It accepts standard composite colors (PAL, NTSC) or monochrome video formats (CCIR, EIA).

The resolution is programmable including square-pixel (640 x 480 or 768 x 576) and broadcast resolution. Before captured images are transferred to the PC's memory, images can be scaled down using available selectable ratios.

Arbitrary cropping to regions of interest is possible. The PCI-RTV24 generates bitmaps in all popular color formats such as RGB, YUV, planar or packed.

System integrators also benefit from a watchdog for fault-tolerant applications and easy-to-use standard connectors.

#### Image Acquisition

- **Frame Rate:** 30 full-frame images acquired per second for each channel.
- **Color Image:** Color video format is compatible with the following composite video input formats: NTSC-M, NTSC-Japan, PCL-B, PAL-D, PAL-G, PAL-H, PAL-I, PAM-M, PAL-N and SECAM
- **Monochrome Image:** The monochrome video acquisition is compatible with CCIR and EIA (RS-170).
- **Optional Scaling:** The acquire images or portions of images can be optionally scaled:
  - ◆ Acquisition of a programmable area of interest
  - ◆ Scaling of the image (down to 1:16)
  - ◆ Adjustment of hue (for NTSC signals), contrast (0 to 200%), brightness and saturation (0 to 200% for U and V signals)
  - ◆ Automatic chrominance gain control

#### RTV-E4 Extension Board (Optional)

- Channel Extension
  - ◆ Expandable up to 16 channels
  - ◆ Channel extension interface
    - ★ 10-pin ribbon cable to onboard 10-pin header connector for channel extension. Each header adds 4 video input channels.
    - ★ Three 10-pin header connectors onboard.



#### I/O Lines

The PCI-RTV24 is fitted with TTL compatible I/O lines, supporting 4 inputs, 4 outputs and 4 soft trigger lines with protection against overloads and electrostatic discharges.

Every line maybe configured as an input or output or can be used to trigger an acquisition or report an alarm condition.

#### PCI-RTV24 Isolated GPIO Board (Optional)

- General Purpose I/O Lines.
  - ◆ All I/Os are TTL compatible and support 4 inputs, 4 outputs, and 4 soft trigger lines.
  - ◆ I/O interface.
    - ★ Two on-board 10-pin header connectors.
    - ★ The I/O lines are pulled high internally and have the following characteristics:



Voltage	Min.	Max.
Input High Voltage (20μA)	2.0V	5.25V
Input Low Voltage (-0.2μA)	0.0V	0.80V
Output High Voltage (-1.0mA)	5.0V	--
Output Low Voltage (100mA)	--	0.50V

#### Watchdog

A hardware watchdog is available on the PCI-RTV24. The watchdog is able to monitor the PC's application operation and will automatically reset the PC after a programmable inactivity time-out. This ensures a reliable operation of remote systems.

1  
Software

2  
GEME  
Series

3  
DPAC

4  
Motion  
Control

5  
Vision

6  
HSL

7  
Industrial  
Communication

8  
CompactPCI  
system &  
Industrial  
Computers

9  
NuDAM