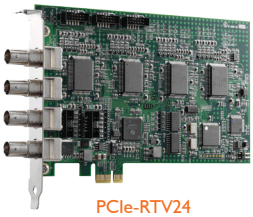
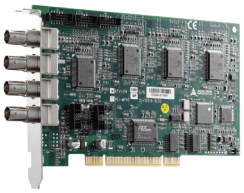
PCIe-RTV24 / PCI-RTV24

4-CH PCI Express® / PCI Real-time Video Capture Cards for Standard Cameras



PCIe-RTV24



PCI-RTV24

Features

- **PCI Express® x1 compliant (PCIe-RTV24) , up to 120 fps**
- **Four color video digitizers operating in parallel**
- **Color (PAL / NTSC), monochrome (CCIR / EIA) camera supported**
- **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 systems**
- **Digital Video Recorder (DVR)**
- **Factory monitoring systems**
- **Machine vision inspection systems**
- **Scientific research instrumentations**
- **Medical research instrumentations**

Software Support

- OS Information
  - Windows® 8/7/XP
  - Linux
- Software Compatibility
  - Microsoft® DirectX
  - C#/.NET/VC++/VB/C++ Builder/Delphi
  - Sample program included
- Software Recommendations
  - ADLINK ViewCreatorPro™

Ordering Information

- **PCIe-RTV24**
  PCI Express® 4-CH real-time video capture card for standard cameras
- **PCI-RTV24**
  PCI 4-CH real-time video capture card for standard cameras

Introduction

General

The PCIe-RTV24/PCI-RTV24 acquisition board are designed without compromise for machine vision and video surveillance applications. They are the ideal devices for PC-based multiple-channel vision application.

The PCIe-RTV24 PCI Express® x1 lane 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 supported resolution is programmable and includes 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 PCIe-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 (at RGB16 mode)
- Color Image: Color video format is compatible with the following composite video input formats: NTSC-M, NTSC-Japan, PCL-B, PALD, 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)

- Expandable up to 16 channels (3.5 fps/channel at 16 channel inputs)
- 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 PCIe-RTV24/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.

RTV-I4 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.
  - 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 (20 μA)	2.0 V	5.25 V
Input Low Voltage (-0.2 μA)	0.0 V	0.80 V
Output High Voltage (-1.0 mA)	5.0 V	--
Output Low Voltage (100 mA)	--	0.50 V

Watchdog

A hardware watchdog is available on the PCIe-RTV24/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.