

Piccolo Tetra

Real-time Video Capture Board for Standard Cameras

Features

- Four color video digitizers operating in parallel
- Up to 240fps in 64-bit, 66MHz PCI bus
- Color PAL / NTSC, monochrome CCIR / EIA camera support
- 4 buffered video outputs
- MIO, I/O module compatible



Introduction

General

The Piccolo Tetra is ADLINK's new video capture card allowing real-time image sequencing in parallel. The Piccolo Tetra supports standard composite video acquisition in color (PAL, NTSC) or in monochrome format (CCIR, EIA).

With high-quality hardware scaler, the Piccolo series can acquire images in any format. Arbitrary cropping to regions of interest is built-in. The Piccolo generates bitmaps in all popular color formats such as RGB, YUV, planar or packed.

The Piccolo series video capture boards are designed to drastically simplify the design of video surveillance applications. System integrators benefit from robust and easy-to-use standard connectors. TTL I/O lines are provided for simple system integration. In addition, the Piccolo Tetra is compatible with MIO modules, enabling system integrators to implement isolated inputs and outputs.

Four Simultaneous Video Digitizers

The Piccolo Tetra is able to simultaneously digitize four video signals and transfer the resulting digital data in real time into the PC's memory through the PCI Bus.

64-bit, 66MHz PCI Bus

The Piccolo Tetra bus is capable at transferring data at 64-bit/66MHz making it compatible with most recent PC architectures. The wide PCI bus can support a peak data transfer rate of 528 Mbytes/s.

The Piccolo Tetra is also compatible with conventional PCI architecture, including 32 bits and 33MHz. Signaling voltage is 3V or 5V for maximum versatility.

On-board TTL I/O Lines

TTL I/O lines are provided for easing system integration. An internal 16-pin header connector provides 13 general purpose input / output TTL lines usable for triggering image capture and interfacing to alarm systems.

Video Image Formats

The Piccolo Tetra supports acquisition of full resolution images or any smaller-size formats, such as SIF. Acquisition of full frame (two fields) or single field images is selectable. Individual fields or frames as well as video sequences are captured directly to the PC memory. The Piccolo Tetra ensures an excellent fidelity of the grabbed bitmap in respect of the original video signal.

Bitmap Image Formats

Before storing the acquired images to its located memory buffer, a pixel format conversion takes place in real-time. Numerous color or monochrome formats can be chosen.

PACKED: RGB32, RGB24, RGB16, RGB15, YCrCb 4:2:2, YCrCb 4:1:1, Y8
 PLANAR: YCrCb 4:2:2, YCrCb 4:1:1, YCrCb 4:2:0, YCrCb 4:1:0, YCbCr 4:2:0, YCbCr 4:1:0

Watchdog

Piccolo Tetra offers a hardware watchdog to monitor the software application and to restart the PC after programmable inactivity time-out. This ensures reliable operation of an unattended system.

Expandable Architecture

The Piccolo Tetra is designed to accept up to 3 video input modules, each with four BNC connectors leading to a maximum configuration of 16 connected cameras (including the 4 inputs on the Piccolo Tetra).

MIO I/O Expansion Module

The MIO offers four opto-isolated input and four reed relay output lines. Each input line is interrupt-capable, with independent edge sensitivity control. The status of the lines is monitored by eight dedicated LEDs. The first relay output can be configured as an alarm signal.

Each line is available as a pair of electrical wires on the sixteen-terminal block.



Ordering Information

- **Piccolo Tetra**
Real-time video capture board for standard cameras
- **MIO**
Piccolo I/O expansion module