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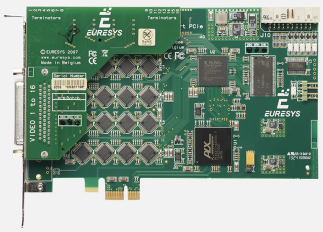
Empowering Computer Vision

Do not use for new design

Picolo Alert Compact PCIe

PCIe video capture card for up to 16 standard PAL/NTSC cameras



At a Glance

- Single 44-pin connector on the bracket to connect up to 16 cameras
- Use the 3120 spider cable which provides 16 BNC connectors
- PCIe x1 bus
- Sixteen shared video decoders, 100/120 images per second (200/240 fields per second)
- Real-time acquisition from 4 cameras, fast switching between up to 16 cameras
- Independently-programmable frame rate and acquisition parameters for each video input

Benefits

Compact design: up to 16 cameras, just one slot/bracket

Video input configurations

- Four cameras: Acquisition at 30 (NTSC) or 25 (PAL) frames per second per camera
- Sixteen cameras: Acquisition at 7.5 (NTSC) or 6.25 (PAL) frames per second per camera

Windows and Linux drivers available

Specifications

Mechanical

Format	Standard profile, half length, 1-lane PCI Express card
Dimensions	L 167.65 mm x H 106.65 mm L 6.6 in x H 4.38 in

Host bus

Standard	PCI Express 1.0

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Link width	1 lane
Link speed	2.5 GT/s (PCIe 1.0)
DMA	32-bit
Peak delivery bandwidth	256 MB/s
Effective (sustained) delivery bandwidth	180 MB/s (Host PC motherboard dependent)
Power consumption	Max. 9.5 W (2.9 A @ +3.3 V)

Camera / video inputs

Interface standard(s)	NTSC-M, PAL-B/G, RS-170, CCIR
Connectors	VIDEO INPUTS: high-density 44-pin sub-D female connector on the bracket
Termination resistor	Selectable using switches on the bracket
Native resolution	Square pixels, broadcast and custom resolutions
Frame rate	• Up to 25/30 images per second, 50/60 fields per second per input • Total 100/120 images per second with up to 16 cameras
Number of cameras	16
Number of cameras (at full frame rate)	4

Video delivery

Raw video format(s)	• Packed RGB color formats: RGB15, RGB16, RGB24, RGB32 • Planar RGB color formats: RGB24PL • Packed YUV color formats: YUV411, YUV422, YUV444 • Planar YUV color formats: YUV411PL, YUV422PL, YUV444PL, YUV411PL, YUV422PL • Monochrome formats: Y8
Deliverable video resolution (SD)	Frame, field, CIF, QCIF and custom image formats

Area-scan camera control

Trigger	• Hardware trigger for up to four cameras • With configurable noise removal filter and optional delay
Strobe	• Hardware strobe signal for up to four cameras • With programmable position and duration

General Purpose Inputs and Outputs

Number of lines	9 I/O lines: • 4 contact closure inputs (IN) • 5 solid-state relay outputs (OUT)
Connectors	I/O: 20-pin dual-row 0.1" shrouded header on the PCB
Usage	General purpose IO
Electrical specifications	• IN: Polarity-free inputs, compatible with TTL, 12V and 24V signals, opto-couplers, relays and switches • OUT: Opto-isolated potential-free and polarity-free solid-state outputs, compatible with signals up to 30V, with 4 µs fall time, isolated up to 500V
Watchdog	Yes

Software

Host PC Operating System	• Microsoft Windows 10, 8.1, 7 for x86 (32-bit) and x86-64 (64-bit) processor architectures • Linux for x86 (32-bit) and x86-64 (64-bit) processor architectures Refer to release notes for details

APIs	• MultiCam 32- and 64-bit binary libraries (Windows and Linux), for ISO-compliant C/C++ compilers • DirectShow 32- and 64-bit filters (Windows only), for Microsoft Visual C++ compilers

Environmental conditions

Operating ambient air temperature	0 °C to +50 °C / +32 °F to +122 °F
Operating ambient air humidity	10% to 90% RH non-condensing
Storage ambient air temperature	-20 °C to +70 °C/ -4 °F to +158 °F
Storage ambient air humidity	10% to 90% RH non-condensing

Certifications

Electromagnetic - EMC standards	• European Council EMC Directive 2004/108/EC • United States FCC rule 47 CFR 15
EMC - Emission	• EN 55022:2010 Class B • FCC 47 Part 15 Class B
EMC - Immunity	• EN 55024:2010 Class B • EN 61000-4-2 • EN 61000-4-3 • EN 61000-4-5 • EN 61000-4-6
Flammability	PCB compliant with UL 94 V-0
REACH	European Union Regulation 1907/2006
WEEE	Must be disposed of separately from normal household waste and must be recycled according to local regulations

Ordering Information

Product code - Description	• 6003 - Picolo Alert Compact PCIe
Optional accessories	• 3120 - Spider Cable

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