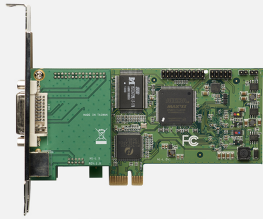


Piccolo HD 3G DVI

3G 60FPS HDMI / DVI High-Definition 1080p Video Capture Card



At a Glance

- Video and audio capture from DVI, Y/Pr/Pb, S-Video or CVBS video sources
- HD 1920x1080p50/60
- SD 525i60 and 625i50
- 16 general purpose IO lines
- PCIe (2.0) Gen2 x1 bus

Benefits

Compatible with a wide range of HD and SD video sources:

- DVI
- Y/Pb/Pr
- S-Video
- CVBS

Audio signal acquisition

- Stereo
- 16-bit linear PCM
- 32, 44.1, 48 KHz

Piccolo HD Studio

- Demonstration and evaluation program compatible with the Piccolo HD series of video capture cards
- Demonstrates the acquisition and live display of HD video, the use of non-destructive overlays, with an option to display a reticle cross or any graphics on the video
- Able to save images, as well as mp4 H.264 video files (Piccolo HD H.264 only)
- Available as an executable application and as source code

16 general purpose IO lines

Analog Y/Pb/Pr, audio and watchdog cables included

Windows drivers

DirectShow and C APIs

Applications

LIFE SCIENCES & MEDICAL

Endoscopy applications

Standard and high-definition image acquisition

Dental applications

Video-guided surgery applications

MICROSCOPY

High-definition image acquisition

Offline inspection stations

Laboratory and measuring microscopes

Specifications

Mechanical

Form Factor	PCI Express card
Format	Low profile, half length, 1-lane PCI Express card with optional "Bypass module" on second slot bracket
Dimensions	L 135 mm x H 68 mm L 5.31 in x H 2.68 in
Weight	73 g, 2.57 oz, without "Bypass module" 108 g, 3.81 oz, with "Bypass module"

Host bus

Standard	PCI Express 2.0
Link width	1 lane
Link speed	5.0 GT/s (PCIe 2.0)
Peak delivery bandwidth	512 MB/s
Power consumption	Max. 4.1 W

Camera / video inputs

Interface standard(s)	<ul style="list-style-type: none">• DVI-D for HD digital video• DVI-A and Y/Pb/Pr for HD analog video• S-Video for SD analog Y/C video• CVBS for SD analog composite video
Connectors	<ul style="list-style-type: none">• DVI-I INPUT: DVI-I socket(female) connector on the bracket for digital and analog video inputs• YCbCr/AVS INPUTS: mini-DIN female connector on the bracket for one of the following cable:<ul style="list-style-type: none">– Y/Pb/Pr/L/R component cable– S-video/CVBS/L/R component cable• The Y/Pb/Pr/L/R component cable provides:<ul style="list-style-type: none">– Y/Pb/Pr: three RCA female connectors for analog HD component video inputs• The S-video/CVBS/L/R component cable provides:<ul style="list-style-type: none">– S-VIDEO: one 4-pin mini-DIN female connector for analog SD component video inputs– CVBS: one RCA female connector for analog SD composite video input
Formats and standards (HD)	Up to 1080p60 / 1080i60 / 720p60
Formats and standards (SD)	<ul style="list-style-type: none">• 525i60 (NTSC M, NTSC J, PAL M)• 625i50 (PAL B/D/G/H/I, PAL N)
Number of cameras	1
Line-scan cameras supported	No

Video delivery

Raw video format(s)	YUY2, Packed YUV 4:2:2
Deliverable video resolution (HD)	<ul style="list-style-type: none">• 1080p or 1080i source : 1920 x 1080 down to 640 x 384• 720p source: 1280 x 720 down to 640 x 384
Deliverable video resolution (SD)	<ul style="list-style-type: none">• 525i60 source: 720 x 480• 625i50 source: 720 x 576

Audio / Video Outputs

Loop-through	All digital and analog, audio and video input signals are replicated on the connectors of the bypass module
Connectors	<ul style="list-style-type: none">• DVI-I OUTPUT: DVI-I socket(female) connector on the bypass module bracket for digital and analog video outputs• YCbCr/AVS OUTPUTS: mini-DIN female connector on the bypass module bracket for one of the following cables:<ul style="list-style-type: none">– Y/PB/Pr/L/R component cable– S-video/CVBS/L/R component• The Y/PB/Pr/L/R component cable provides:<ul style="list-style-type: none">– Y/Pb/Pr: 3 RCA female connectors for analog HD component video outputs• The S-video/CVBS/L/R component cable provides:<ul style="list-style-type: none">– S-VIDEO: 1 4-pin mini-DIN female connector for analog SD component video outputs– CVBS: 1 RCA female connector for analog SD composite video

Audio inputs

Number of inputs	1, Stereo
Type	<ul style="list-style-type: none">• L/R Audio: Two line-level analog audio inputs
Audio format	<ul style="list-style-type: none">• 16-bit Linear PCM• 32 kHz, 44.1 kHz or 48 kHz
Connectors	<ul style="list-style-type: none">• YCbCr/AVS INPUTS: mini-DIN female connector on the bracket for one of the following cable:<ul style="list-style-type: none">– Y/Pb/Pr/L/R component cable– S-video/CVBS/L/R component cable• The Y/Pb/Pr/L/R component cable provides:<ul style="list-style-type: none">– L/R : one twin RCA female connector for analog audio inputs• The S-video/CVBS/L/R component cable provides:<ul style="list-style-type: none">– L/R: two RCA female connectors for analog audio inputs

Audio outputs

Connectors	<ul style="list-style-type: none">• YCbCr/AVS INPUTS: mini-DIN female connector on the bracket for one of the following cables:<ul style="list-style-type: none">– Y/PB/Pr/L/R component cable– S-video/CVBS/L/R component cable• The Y/PB/Pr/L/R component cable provides:<ul style="list-style-type: none">– L/R : 1 twin RCA female connector for analog audio outputs• The S-video/CVBS/L/R component cable provides:<ul style="list-style-type: none">– L/R: 2 RCA female connectors for analog audio outputs
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General Purpose Inputs and Outputs

Number of lines	16 I/O lines (IO)
Connectors	<ul style="list-style-type: none">• I/O: 20-pin dual-row 0.1" header on the PCB• WATCHDOG: 4-pin dual-row 0.1" header on the PCB
Usage	General purpose IO
Electrical specifications	IO: Quasi-bidirectional I/O lines, individually configurable as input or output

Host system requirements

Processor	<ul style="list-style-type: none">• Minimum: Core 2 Duo or better• Recommended: Intel 2nd/ 3rd Generation Core i3/i5/i7
System memory	<ul style="list-style-type: none">• Minimum: 2GB DDR3• Recommended: 4GB DDR3 (dual channel) or better
Graphic card	<ul style="list-style-type: none">• Minimum: Supports DirectX 9 or higher• Recommended: Intel HD2000/2500/3000/4000 or better

Software

Host PC Operating System	<ul style="list-style-type: none">• Microsoft Windows 10, 8.1, 8, 7 for x86 (32-bit) and x86-64 (64-bit) processor architectures
APIs	<ul style="list-style-type: none">• MultiCam 32- and 64-bit binary libraries for ISO-compliant C/C++ compilers• DirectShow filters for Microsoft Visual C++ compilers, for 32- and 64-bit applications• DirectShow .NET C#

Environmental conditions

Operating ambient air temperature 0 to +50 °C / +32 to +122 °F

Operating ambient air humidity 10 to 90% RH non-condensing

Storage ambient air temperature -20 to +70 °C / -4 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 61000-4-4
- EN 61000-4-8

RoHS European Union Directive 2011/65/EU (ROHS2)

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

- 1843 - Picolo HD 3G DVI

Included accessories

- 1844 - Picolo HD Y/Pb/Pr/L+R Analog A/V Cable
- 1845 - Picolo HD S-Video/CVBS/L+R Analog A/V Cable
- 1846 - Picolo HD Watchdog Cable

Optional accessories

- 1844 - Picolo HD Y/Pb/Pr/L+R Analog A/V Cable
- 1845 - Picolo HD S-Video/CVBS/L+R Analog A/V Cable
- 1846 - Picolo HD Watchdog Cable



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