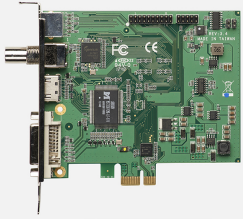


# Piccolo HD One

SDI / HDMI / DVI High-Definition 1080p Video Capture Card



## At a Glance

- Video and audio capture from SDI, HDMI, DVI or Y/Pr/Pb video sources
- HD 1920x1080p25/30
- PCIe x1 bus

## Benefits

### Compatible with a wide range of video sources:

- HD-SDI
- HDMI
- DVI
- Y/Pb/Pr

### Audio signal acquisition

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

### 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	Standard profile, half length, 1-lane PCI Express card
Dimensions	L 114 mm x H 101 mm L 4.51 in x H 3.98 in
Weight	96 g, 3.39 oz

### **Host bus**

Standard	PCI Express 1.0
Link width	1 lane
Link speed	2.5 GT/s (PCIe 1.0)
Peak delivery bandwidth	256 MB/s
Power consumption	Max. 2.1 W

### **Camera / video inputs**

Interface standard(s)	<ul style="list-style-type: none"><li>• SDI and HDMI for HD digital audio/video</li><li>• DVI-D for HD digital video</li><li>• DVI-A and Y/Pb/Pr for HD analog video</li></ul>
Connectors	<ul style="list-style-type: none"><li>• DVI-I: DVI-I socket(female) connector on the bracket for digital and analog video inputs</li><li>• HDMI: HDMI type A (full size) receptacle (female) connector on the bracket for digital audio and video inputs</li><li>• SDI: BNC female connector on the bracket for digital audio and video inputs</li><li>• COMPONENTS: mini-DIN female connector on the bracket for expansion with the Y/Pb/Pr/L/R component cable</li><li>• The Y/Pb/Pr/L/R component cable provides:<ul style="list-style-type: none"><li>– Y/Pb/Pr: 3 RCA female connectors for analog HD component video</li></ul></li></ul>
Formats and standards (HD)	Up to 1080p30 / 1080i60 / 720p60
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"><li>• 1080p or 1080i source : 1920 x 1080 down to 640 x 384</li><li>• 720p source: 1280 x 720 down to 640 x 384</li></ul>

## Audio inputs

Number of inputs	3, Stereo
Type	<ul style="list-style-type: none"><li>• SDI: Two 16-bit LPCM 48 kHz embedded digital audio channels</li><li>• HDMI: Two 16-bit LPCM 32/44.1/48 kHz embedded digital audio channels</li><li>• L/R Audio: Two line-level analog audio inputs</li></ul>
Audio format	<ul style="list-style-type: none"><li>• 16-bit Linear PCM</li><li>• 32 kHz, 44.1 kHz or 48 kHz</li></ul>
Connectors	<ul style="list-style-type: none"><li>• HDMI: HDMI type A (full size) receptacle (female) connector on the bracket for digital audio and video inputs</li><li>• SDI: BNC female connector on the bracket for digital audio and video inputs</li><li>• COMPONENTS: mini-DIN female connector on the bracket for expansion with the Y/Pb/Pr/L/R component cable</li><li>• The Y/Pb/Pr/L/R component cable provides:<ul style="list-style-type: none"><li>– L/R: 1 twin RCA female connector for analog audio</li></ul></li></ul>

## General Purpose Inputs and Outputs

Number of lines	16 I/O lines (IO)
Connectors	<ul style="list-style-type: none"><li>• I/O: 20-pin dual-row 0.1" header on the PCB</li><li>• WATCHDOG: 4-pin dual-row 0.1" header on the PCB</li></ul>
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"><li>• Minimum: Core 2 Duo or better</li><li>• Recommended: Intel 2nd/ 3rd Generation Core i3/i5/i7</li></ul>
System memory	<ul style="list-style-type: none"><li>• Minimum: 2GB DDR3</li><li>• Recommended: 4GB DDR3 (dual channel) or better</li></ul>
Graphic card	<ul style="list-style-type: none"><li>• Minimum: Supports DirectX 9 or higher</li><li>• Recommended: Intel HD2000/2500/3000/4000 or better</li></ul>

## Software

Host PC Operating System	<ul style="list-style-type: none"><li>• Microsoft Windows 8, 7, XP</li><li>• Microsoft Windows Server 2012, 2008 R2</li><li>• 32- and 64-bit versions</li></ul>
APIs	<ul style="list-style-type: none"><li>• MultiCam 32-bit and 64-bit binary libraries for ISO-compliant C/C++ compilers</li><li>• DirectShow filters for Microsoft Visual C++ compilers, for 32-bit and 64-bit applications</li><li>• DirectShow .NET C#</li></ul>

## 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	<ul style="list-style-type: none"><li>• The European Council EMC Directive 2004/108/EC</li><li>• The Unites States FCC rule 47 CFR 15</li></ul>
EMC - Emission	<ul style="list-style-type: none"><li>• EN 55022:2010 Class B</li><li>• FCC 47 Part 15 Class B</li></ul>
EMC - Immunity	<ul style="list-style-type: none"><li>• EN 55024:2010 Class B</li><li>• EN 61000-4-2</li><li>• EN 61000-4-3</li><li>• EN 61000-4-4</li><li>• EN 61000-4-5</li><li>• EN 61000-4-6</li><li>• EN 61000-4-8</li><li>• EN 61000-4-11</li></ul>
RoHS	Compliant with the European Union Directive 2011/65/EU (ROHS2)
REACH	Compliant with the European Union Regulation No 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	1840 - Picolo HD One
Included accessories	<ul style="list-style-type: none"><li>• 1844 - Picolo HD Y/Pb/Pr/L+R Analog A/V Cable</li><li>• 1846 - Picolo HD Watchdog Cable</li></ul>
Optional accessories	<ul style="list-style-type: none"><li>• 1844 - Picolo HD Y/Pb/Pr/L+R Analog A/V Cable</li><li>• 1846 - Picolo HD Watchdog Cable</li></ul>



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