

***Tiny Higher Speed USB 3.0 SCGA 128 fps Camera***  
*1.3 Megapixel Camera with 1/2 Inch CMOS Global Shutter, 1.74 Inches Deep*

### Features

- 1280 x 1024 Active Pixels, 1/2 inch optical format
- Ships with Windows® application
- Maximum 1,280 x 1,024 resolution
- 4.8um x 4.8 um pixels
- 44 x 44 x 22.4 millimeters – less than 1 and 3/4 inches deep
- Weighs 55 grams – less than two ounces
- Global Shutter
- High bandwidth and low CPU usage
- C/CS Mount
- Backward compatible – will support all of your USB 2.0 and USB 1.1 ports
- Power Supply management support
- Operation Temp (-5 C to 45 C)
- Storage Temp (-30 C to 60 C)
- Plug and Play Interface with Microsoft driver
- EZ Inspect App – Optional

### Applications

- Machine Vision
- Motion Monitoring
- Sports Science (Motion Analysis, etc.)
- Barcode Scanning (2D)
- Inspection



### Overview

USB 3.0 has evolved as a reliable high performance physical connection to computers. The connector for USB 3.0 is considerably more reliable and tighter fitting than USB 2.0. As a result USB 3.0 has been accepted as a suitable I/O mechanism for industrial cameras since the USB 3.0 connector exhibits higher retention force characteristics.

The Viewbits SPEEDY USB is a 1.3 megapixel camera with a higher than typical frame rate. It is a tiny, lightweight, high performance 1.3 megapixel industrial camera utilizing a 1/2 inch CMOS (NOIP1SN1300A) sensor coupled to a C and CS Mount lensing mechanism.

USB 3.0 cameras can also transfer video at 5 Gbps which is 10 times faster than USB 2.0. This transfer rate allows us to transfer 1K frames at 128 fps.

The image sensor has 1,310,720 effective pixels. The HD sensor can also be utilized at 512 x 512 resolution which therefore can push out these frames at 256 fps.

The SPEEDY USB also features cable locks for added reliability, and a C/CS Mount, which is back focal length adjustable.

## Specifications

### Sensor Specifications

<b>Image Sensor</b>	1/2" CMOS (NOIP1SN1300A)
<b>Effective Pixels</b>	1,310,720 pixels 1280(H) x 1024 (V)
<b>Picture Size</b>	1280 x 1024
<b>Pixel Size</b>	4.8 $\mu\text{m}$ x 4.8 $\mu\text{m}$
<b>Real Frame Rate</b>	128 (1280 x 1024, Mono 8) 61 (1280 x 1024, Mono 12)
<b>Lens Mount</b>	C/CS Mount
<b>Shutter</b>	Global Shutter
<b>ROI</b>	Partial Scan (Unit: 4x4)
<b>Trigger Mode</b>	Mode 0, 15 (Photo-coupler)
<b>Strobe</b>	Supports Normal Mode (Photo-Coupler)
<b>Memory Save/Load</b>	9 Channels (0:factor, 1-4: feature, 5-8: mode/feature)
<b>Control Functions</b>	Brightness, Sharpness, Gamma, Auto-Exposure, Shutter, Gain, User Defined LUT
<b>Digital Interface/ Transfer Rate</b>	USB 3.0/ 5 Gbps
<b>Gain</b>	0 - 30 dB (Manual or Auto control)
<b>Shutter Speed</b>	1 usec ~ 1000 msec (Manual or Auto control)
<b>Data Depth</b>	10 bit
<b>Dynamic Range</b>	60dB in global shutter mode
<b>S/N Ratio</b>	40dB or better

### Physical and Power

<b>Supply Voltage and Power</b>	Less than 3.0W @ 5 VDC via USB 3.0 Cable
<b>Operating Temperature</b>	-5° C to 45° C (23° F to 113° F)
<b>Storage Temperature</b>	-30° C to 60° C (-22° to 140° F)
<b>Dimensions (W x H x D)</b>	44 x 44 x 22.4 mm 1.733 x 1.733 x .088 inches
<b>Weight</b>	55 grams (1.94 ounces)

Note: Since this is a CMOS sensor it supports area of interest processing. With this you can have 256 fps at 640 x 480, or 512 fps at 320x 240 resolution.

## Ordering Information

**SPEEDY USB 128 FPS:** 1.3 Megapixel USB 3.0 Camera with Windows® application

## Product Size and Measurements

