STALWART

C-mount USB2.0 CMOS Camera
STC1D-Series

Description

STC1D-1200C (with IMX577 Sensor) cameras adopt ultra-high performance CMOS sensor as the image-capture device. USB2.0 is used as the data transfer interface.
STC1D- Series cameras' hardware resolutions ranges from 2.1MP to 12MP and come with the zinc aluminum alloy compact housing. STC1D come with advanced video & image processing application ImageView; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API; The STC1D can be widely used in bright field light environment and microscope image capture and analysis with moderate frame rate.

Features

- Standard C-Mount camera with Sony or OnSemi CMOS sensor;
- With hardware resolution among 2.10MP to 12MP;
- USB2.0 interface ensuring high speed data transmission;
- Integrated with large capacity memory chip ensures data synchronous transmission, low latency, high frame rate and stability;
- Compatible with Microsoft USB Video Class protocol and support the third-party software development;
- Built in Ultra-fine hardware ISP engine ensures high color restoration;

1. Support automatic/manual exposure switching, accurate exposure time control, and real-time adjustment of exposure target area;
2. Support automatic/manual/ROI white balance;
3. Support color adjustment/color mode selection/image flipping;
4. Support histogram adjust/flat field correction/dark field correction/video ROI;

- High performance MJPEG compression algorithm, combined with the unique decoding method of image restoration algorithm ensure highest frame rate of USB2.0 camera in the industry. The FPS for 5MP and 8MP can be up to 30FPS; the FPS for 12MP can be up to 15FPS;
- Comply with CE and FCC agreements;
- CNC aluminum alloy housing;
- With advanced video & image processing application ImageView;
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Very competitive pricing.

Specification

Order Code	Sensor & Size(mm)	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
STC1D-1200C	12M/IMX577(C) 1/2.3" (5.95×4.71)	1.55×1.55	250LSB 70dB 43dB	20@3840×3040 20@1920×1520 20@960×760	1×1 1×1 1×1	0.1-2000 ms

STC1D-830C	8.3M/IMX274(C) 1/2.5“ (6.22×3.50)	1.62×1.62	236mV 70dB 43dB	30@3840×2160 30@1920×1080 30@1280×720 30@960×540	1×1 1×1 1×1	0.1-2000 ms
STC1D-510AC	5.1M/AR0521(C) 1/2.5“ (5.70×4.28)	2.2×2.2	18.8ke-/lus 73dB 40dB	30@2592×1944 30@1280×960 30@640×480	1×1 1×1 1×1	0.1-1000 ms
STC1D-510BC	5.1M/IMX335(C) 1/2.8“ (5.18×3.89)	2.0×2.0	505mV 70dB 43dB	25@2592×1944 25@1280×960 25@640×480	1×1 1×1 1×1	0.1-2000 ms
STC1D-310C	3.1M/Aptina(C) 1/2.5“ (5.73×4.3)	2.8×2.8	18.8ke-/lus 73dB 40dB	30@2048×1536 30@1024×768	1×1 1×1	0.1-1000 ms
STC1D-200C	2.1M/IMX307(C) 1/2.8“ (5.73×4.3)	2.9×2.9	1300mV 73dB 43dB	38@1920×1080 38@1024×768	1×1 1×1	0.1-2000 ms

C: Color; M: Monochrome;

Other Specification for STC1D Camera	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto/Manual/ROI White Balance/Manual Temp Tint Adjustment/NA for Monochromatic Sensor
Color Technique	Ultra-fine hardware ISP engine /NA for Monochromatic Sensor
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture and Movie
Cooling System*	Natural

Operating Environment	
Operating Temperature (in Centidegree)	-10~ 50
Storage Temperature (in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB Port
Software Environment	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 (32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory:2GB or More
	USB Port:USB2.0 High-speed Port
	Display:17” or Larger
	CD-ROM

Dimension

The STC1D body, made from tough, aluminum alloy, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT to protect the camera sensor. No moving parts included. This design ensures a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.

Accessories

F	Adjustable lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108001/AMA037 108002/AMA050 108003/AMA075
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108008/ATA037 108009/ATA050 108010/ATA075
G	Fixed lens Adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108005/FMA037 108006/FMA050 108007/FMA075
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108011/FTA037 108012/FTA050 108013/FTA075
	Note: For F and G optional items, please specify your camera type(C-mount, microscope camera or telescope camera) , Our engineer will help you to determine the right microscope or telescope camera adapter for your application;		
H	108015(Dia.23.2mm to 30.0mm Ring)/Adapter rings for 30mm eyepiece tube		
I	108016(Dia.23.2mm to 30.5mm Ring)/ Adapter rings for 30.5mm eyepiece tube		
J	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube		
K	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X,Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)	

Packing List

Standard Camera Packing List	
A	Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo
B	Gift box L:15cm W:15cm H:10cm (0.5~0.55Kg/ box)
C	STC1D series USB2.0 C-mount CMOS camera
D	High-speed USB2.0 A male to B male gold-plated connectors cable /2.0m
E	CD (Driver & utilities software, Ø12cm)