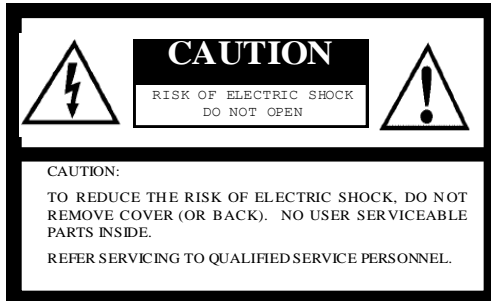




# **STC-POCL152A STC-POCLC152A Product Specification**

**Small Cubic Type, SXGA CCD  
Color / Monochrome PoCL Camera Link Camera**

## Safety Precautions



For U.S.A.

### Warning:

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

For Canada

### Warning:

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

## Product Precautions

- Handle the camera with care. Do not abuse the camera. Avoid striking or shaking it. Improper handling or storage could damage the camera.
- Do not pull or damage the camera cable.
- During camera use, do not wrap the unit in any material. This will cause the internal temperature of the unit to increase.
- Do not expose the camera to moisture, or do not try to operate it in wet areas.
- Do not operate the camera beyond its temperature, humidity and power source ratings.
- While the camera is not being used, keep the lens or lens cap on the camera to prevent dust or contamination from getting in the CCD or filter area and scratching or damaging this area.
- Do not keep the camera under the following conditions:
  - In wet, moist, and high humidity areas
  - Under hot direct sunlight
  - In high temperature areas
  - Near an object that releases a strong magnetic or electric field
  - Areas with strong vibrations
- Use a soft cloth to clean the camera. Use pressured air spray to clean the surface of the glass. DO not scratch the surface of the glass.

## Copyright & Disclaimer

Sensor Technologies America, Inc. (DBA Sentech America) believes the contents and specifications of its website, catalog, documentation and ads are correct; however, Sentech America provides no representation or warranty regarding such information or product(s) contained therein. It is requested that Sentech America be given appropriate acknowledgement in any subsequent use of such work by a third party.

While every effort has been made to ensure that the details contained in Sentech America's website and all documentation are correct and up-to-date, Sentech America assumes no liability, legal or otherwise for any errors in listings, specifications, part numbers, process, software or model applications. Sentech America reserves the right to change specifications, product descriptions, product quality, pricing and application at any time without prior written or oral notice. Any party using such information assumes all risk for any and all damaged caused to themselves, a third party and/or property by virtue of incorrect information and/or failure of these products. By installing and/or using a Sentech America software development kit or other similar product and/or information obtained from Sentech America's website, catalog, documentation or ads, you hereby accept and understand these stated terms and conditions.

Contents

I. Electronic Specifications/Mechanical Specifications/Environmental Conditions .....5

II. Connector Specifications .....6

    A. Camera Link Connector..... 6

    B. Interface Connector ..... 6

III. Pin Assignments .....6

    A. Camera Link Connector..... 6

    B. Interface Connector ..... 6

IV. Dimensions .....7-9

    A. Camera Dimensions ..... 7

    B. Tripod Dimensions ..... 8

    C. Camera Dimensions with Tripod..... 9

## I. Electronic Specifications / Mechanical Specifications / Environmental Conditions

Product			STC-POCLC152A	STC-POCL152A
Electronic Specifications	Imager		1/2” Interline SXGA Color Progressive CCD: ICX205AK	1/2” Interline SXGA Monochrome Progressive CCD: ICX205AL
	Total Picture Elements		1434 (H) x 1050 (V)	
	Effective Picture Elements		1392 (H) x 1040 (V)	
	Active Picture Elements		SXGA: 1360 (H) x 1040 (V)	
	Chip Size		7.6 (H) x 6.2 (V) mm	
	Cell Size		4.65 (H) x 4.65 (V) μm	
	Scanning System		Progressive	
	Scanning Method		Full Scanning, Partial Full Scanning, ½ Partial Scanning, ¼ Partial Scanning, Variable Partial Scanning	Full Scanning, Partial Full Scanning, ½ Partial Scanning, ¼ Partial Scanning, Variable Partial Scanning, Binning, Binning Partial Scanning, Binning ½ Partial Scanning, Binning ¼ Partial Scanning, Binning Variable Partial Scanning
	Vertical Frequency (Frame Rate)		15.28 (15fps) / 19.3 (19fps) Hz	
	Horizontal Frequency		15.996 (15fps) / 20.57 (19fps) kHz	
	Pixel Frequency		28.6363 (15fps) / 36.8181 (19fps) MHz	
	S/N Ratio (Standard Deviation)	@8bit output	<= 3 Digit (Gain 0 dB)	
		@10bit output	<= 10 Digit (Gain 0 dB)	
	Minimum Scene Illumination		0.13 Lux at F1.2	0.11 Lux at F1.2
	Sync. System		Internal / External	
	Video Output		Digital 8 or 10 bit Camera Link (Base Configuration)	
	Tap		1 Tap	
	Shutter Speed		OFF, 1/3 to 1/93,000 sec. (Variable at every H and clock) (15fps) OFF, 1/5 to 1/120,000 sec. (Variable at every H and clock) (19fps)	
	Gain		0 to 27 dB	
	Gamma		1.0	
	Power Supply	Input Voltage	DC 12V± 10% via Camera Link connector	
		Consumption	Less than 2.5W	
	Trigger Mode		Edge Preset Trigger (V-reset, Non-reset); Pulse Width Trigger (V-reset, Non-reset)	
	Communication		RS232 via Camera Link connector	
Mechanical Specifications	Dimensions		28 (W) x 28 (H) x 29.5 (D) mm (Not including lens mount and the connector) 28 (W) x 28 (H) x 40 (D) mm (Not including the connector)	
	Optical Filter		No IR cut filter	
	Optical Center Accuracy		Positional accuracy in H and V directions: +/- 0.31 mm Rotational accuracy of H and V: +/- 2.1 deg.	
	Materials	Case	Front, base, and rear: Aluminum die cast (ADC 12); Cover: Steel sheet covered with zinc	
		Tripod	Polycarbonate ABS	
	Lens Mount		C mount	
	Interface Connector		HR 10A-7R-6PB (Hirose) or equivalent	
	Tripod		Tripod can be attached to 4 plates (4 screws on the bottom plate, 3 screws on the other 3 plates)	
	Weight		Approximately 52g (Camera: 43g, Tripod: 9g)	
Environmental Conditions	Temperature and Humidity	Operational	Temperature: -5 to 45°C; Relative Humidity: 0 to 85% (No condensation)	
		Storage	Temperature: -30 to 65°C; Relative Humidity: 0 to 90% (No condensation)	
	Vibration		20Hz to 200Hz to 20Hz (5min./cycle); Acceleration 10G, 3 directions 30 min. each	
	Shock		Acceleration 70G, half amplitude 6ms, 3 directions 3 times each	
	Standard Compliancy		EMS: EN61000-6-2, EMI: EN55011 (Class B)	
	RoHS		RoHS Compliant	

## II. Connector Specifications

**A. Camera Link Connector:** SDR (3M) equivalent

**CAUTION:** This product is a PoCL type. Therefore, please use this camera with the cable and the frame grabber board for the PoCL model.

**B. Interface Connector:** HR10A-7R-6PB (Hirose) or equivalent. This connector is the input and output signals. Trigger input and sync input/output signals can be assigned through the camera setting communication.

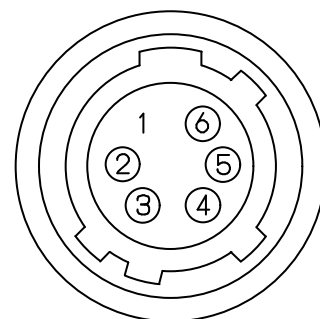
## III. Pin Assignment

**A. Camera Link Connector**

Pin No.	Signal Name	Pin No.	Signal Name
1	+12V	14	GND
2	X0-	15	X0+
3	X1-	16	X1+
4	X2-	17	X2+
5	Xclk-	18	Xclk+
6	X3-	19	X3+
7	SerTC+	20	SerTC-
8	SerTFG-	21	SerTFG+
9	CC1-(TRG)	22	CC1+(TRG)
10	CC2+	23	CC2-
11	CC3-	24	CC3+
12	CC4+	25	CC4-
13	GND	26	+12V

**B. Interface Connector**

Pin No.	Signal Name	IN / OUT	Voltage		
				Low Voltage	High Voltage
1	GND	IN	0V		
2	I/O – 1	IN / OUT	IN	0 to +0.5V	+2.5 to +5.0V
			OUT	0V	+3.3V
3	I/O – 2	IN / OUT	IN	0 to +0.5V	+2.5 to +5.0V
			OUT	0V	+3.3V
4	I/O - 3	IN / OUT	IN	0 to +0.5V	+2.5 to +5.0V
			OUT	0V	+3.3V
5	TRG OUT	OUT	OUT	0V	+3.3V
6	N.C.				



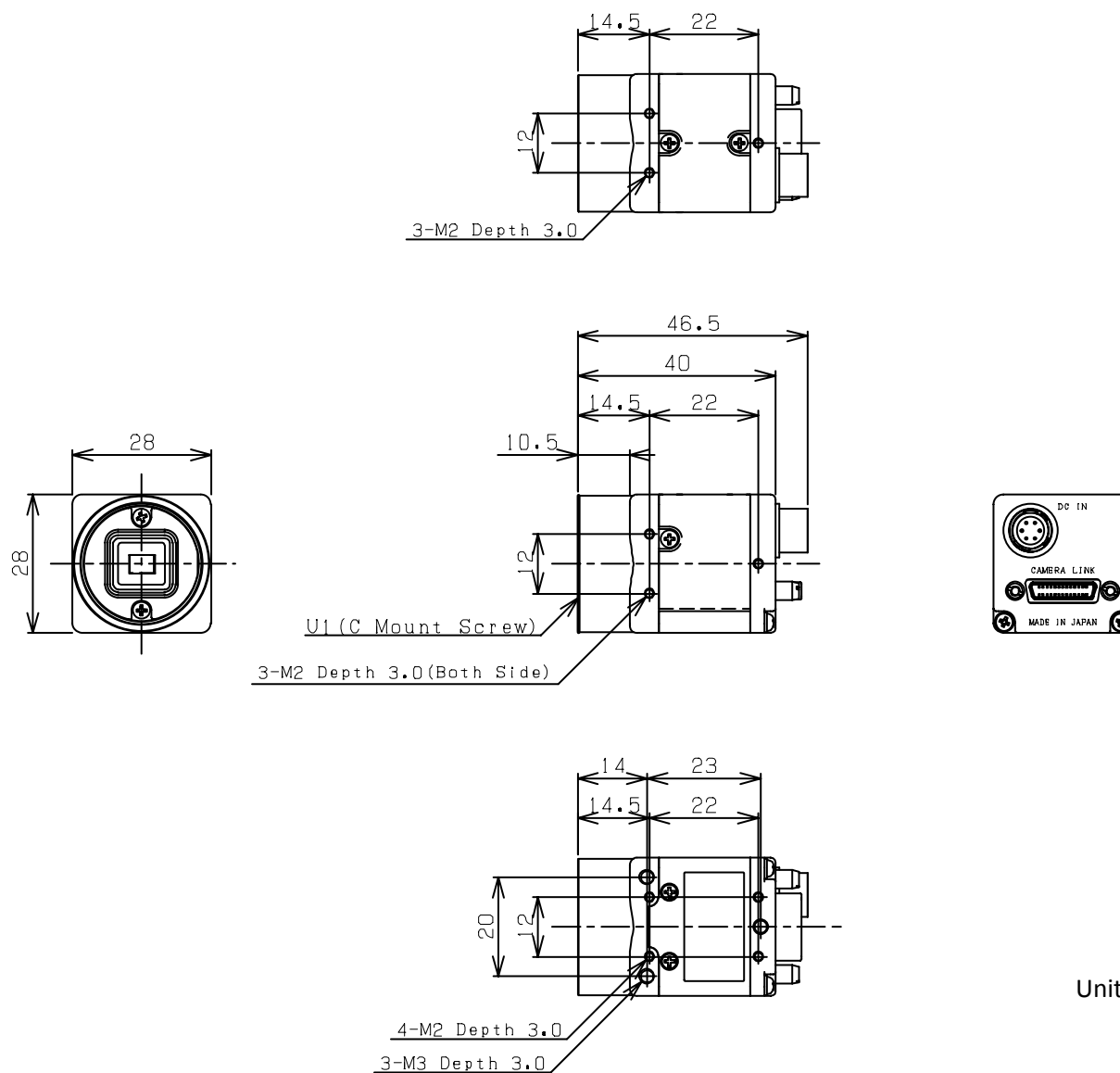
**Note 1:** Trigger input signal can be assigned either on Camera Link connector (CC1) or on the No. 2 pin of the interface connector through the camera setting communication.

**Note 2:** The external sync signals (HD and VD) can be assigned on the following connectors through the camera settings communication.

- Camera Link connector (CC2: HD signal input, CC3: VD signal input) or
- 6pin interface connector (No.4: HD signal input / output, No.3: VD signal input / output)

## IV. Dimensions

### A. Camera Dimensions

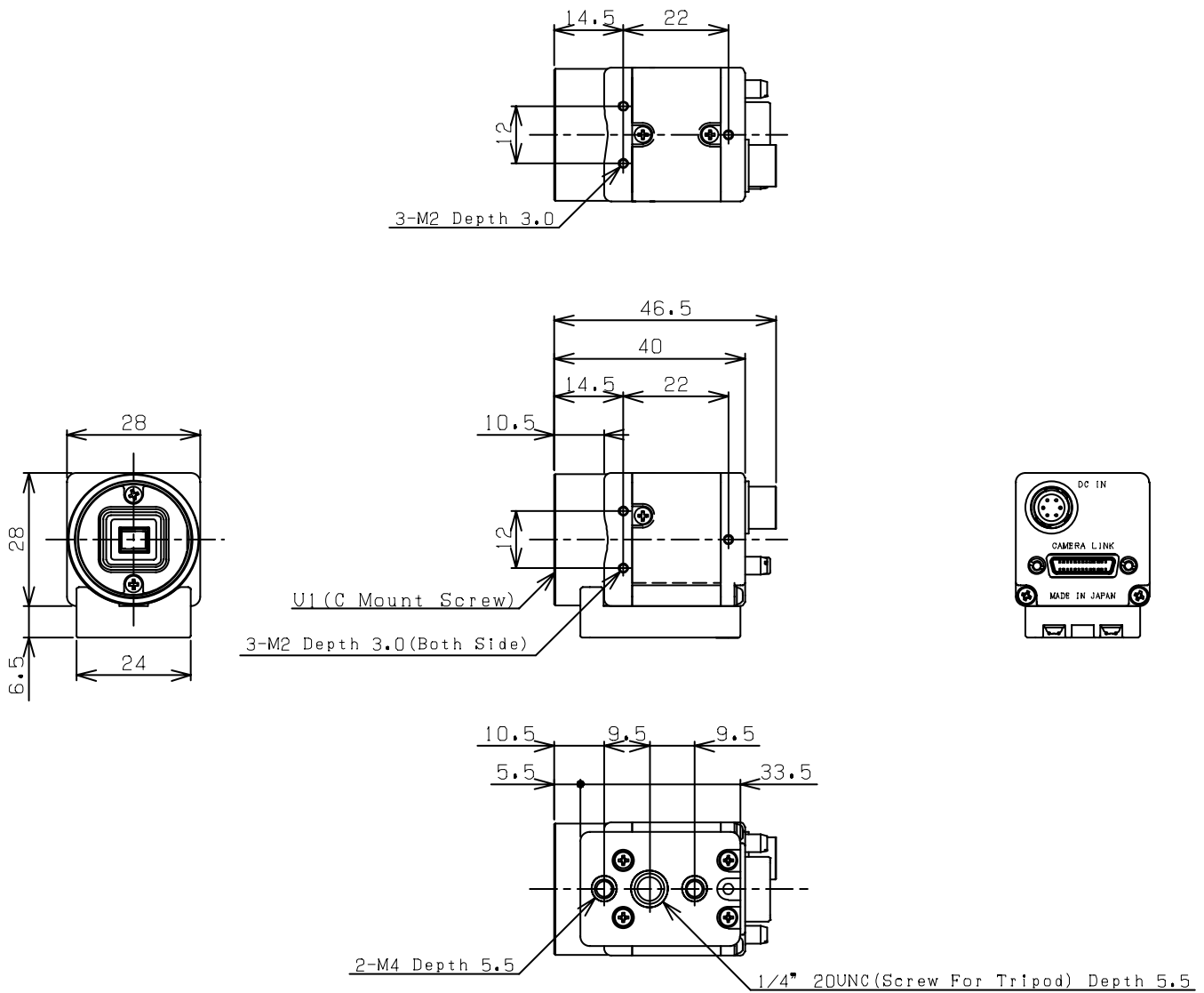


Unit: mm





## C. Camera Dimensions with Tripod



Unit: MM

## Revisions

Rev	Date	Changes	Notes
1.0	2008/12/09	STJ Created Document	
	2009/3/12	Created English version	
1.1	2009/3/17	Update Electronic Spec (Changed Shutter Speed)	Rev 1.1 through 1.4 were submitted to STA by STJ on the 2 <sup>nd</sup> week of Sept 2009.
1.2	2009/5/8	Update Pin Assignment (Add the connector drawing)	
1.3	2009/5/8	Update Electronic Spec (Changed minimum illumination)	
1.4	2009/8/18	Update Electronic Spec (Changed S/N ratio) Mechanical Spec (Changed description of the dimensions)	