

**SENTECH**

**STC-CL83A**  
**STC-CLC83A**  
**Product Specification**

**Small Cubic Type – XGA CCD**  
**Color / Monochrome Camera Link Camera**

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## I. Specifications

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

Product		STC-CLC83A	STC-CL83A	
Electronic specifications	Imager	1/3" interline XGA color progressive CCD: ICX204AK	1/3" interline XGA monochrome progressive CCD: ICX204AL	
	Total picture elements	1077 (H) x 788 (V)		
	Effective picture elements	1034 (H) x 779 (V)		
	Effective picture elements	XGA: 1024 (H) x 768 (V)		
	Chip size	5.8 (H) x 4.92 (V) mm		
	Cell size	4.65 (H) x 4.65 (V) $\mu$ m		
	Scanning system	Progressive		
	Scanning method	Full scanning, Partial full scanning, 1/2 partial scanning, 1/4 partial scanning, Variable partial scanning	Full scanning, Partial full scanning, 1/2 partial scanning, 1/4 partial scanning, Variable partial scanning, Binning, Binning partial scanning, Binning 1/2 partial scanning, Binning 1/4 partial scanning, Binning variable partial scanning	
	Vertical frequency (Frame rate)	29.59 Hz		
	Horizontal frequency	23.23 kHz		
	Pixel frequency	29.5 MHz		
	S/N ratio (standard deviation)	$\leq 10$ Digit (Gain 0 dB)		
	Minimum scene illumination	2 Lux at F1.4	1 Lux at F1.4	
	Sync. System	Internal / External		
	Video output	Digital 8 or 10 bit Camera Link (Base configuration)		
	Tap	1 Tap		
	Shutter speed	OFF, 1/2 to 1/100,000 sec. (Variable at every H and clock)		
	Gain	0 to 27 dB		
	Gamma	1.0		
	Power supply	Input voltage	DC12V $\pm$ 10%	
		Consumption	Less than 1.8 W	
	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 46.5 (D) mm including lens mount and the connector		
	Optical filter	No IR cut filter		
	Optical center accuracy	Positional accuracy in H and V directions: $\pm$ 0.31 mm Rotational accuracy of H and V: $\pm$ 2.1 deg.		
	Material	Case	Front, base and rear: Aluminum die cast (ADC12) Cover: Steel sheet covered with zinc	
		Tripod	Polycarbonate ABS	
	Lens mount	C mount		
	Interface connector	HR10A-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 52 g (Camera: 43 g, tripod: 9 g)		
	Environmental conditions	Temperature and humidity	Operational	Temperature: -5 to 50 deg. C, RH: 0 to 85% (No condensation)
Storage			Temperature: -30 to 65 deg. C, RH: 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 3times each		
Standard compliancy		EMS: EN61000-6-2, EMI: EN55011 (Class B)		
RoHS		RoHS compliance		

## B. Connector Specifications

1. Camera Link Connector: SCR (3M) or equivalent

**Caution: This product is not PoCL type. Only apply 12V power through the interface connector.**

2. Interface Connector: HR10A-7R-6PB (Hirose) or equivalent  
This connector is for Power (12V) input and the trigger signal output.  
Trigger input and sync input/output signals can be assigned through the camera setting communication.

### 3. Pin Assignment:

#### A. Camera Link Connector

Pin No.	Signal name	Pin No.	Signal name
1	GND	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	GND

#### B. Interface Connector

Pin No.	Signal name	IN/OUT	Voltage
1	GND	IN	0V
2	I/O-1	IN/OUT	+3.3V
3	I/O-2	IN/OUT	+3.3V
4	I/O-3	IN/OUT	+3.3V
5	TRG Out	OUT	+3.3V
6	+12V	IN	+12V

#### Notes:

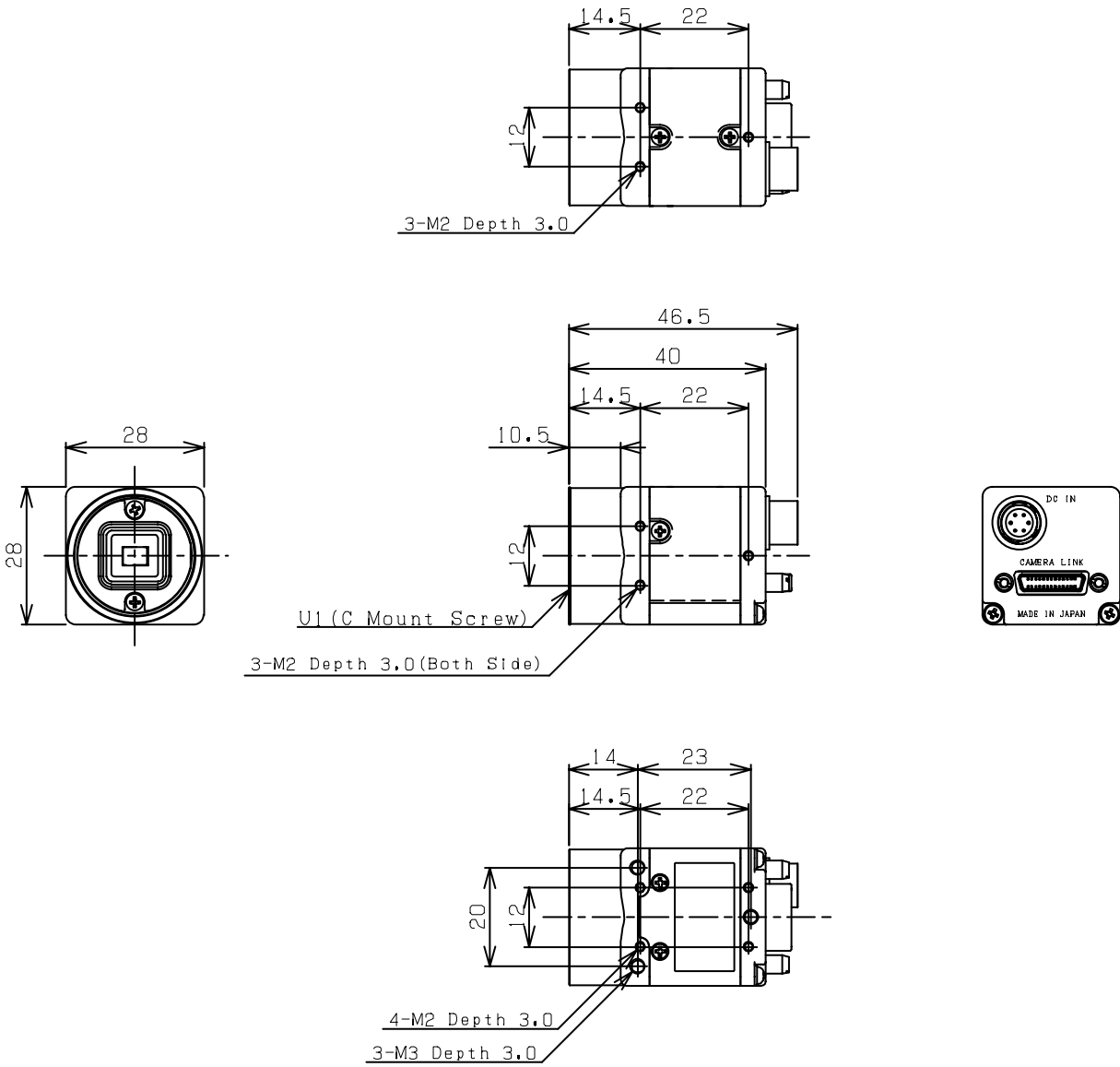
Trigger input signal can be assigned either on Camera Link connector (CC1) or on the No. 2 pin of the interface connector through the camera setting communication.

The external sync signals (HD and VD) can be assigned on the following connectors through the camera setting communication.

Camera Link connector (CC2: HD signal input, CC3: VD signal input) or  
6pin interface connector (No.4: HD signal input / output, No3: VD signal input / output)

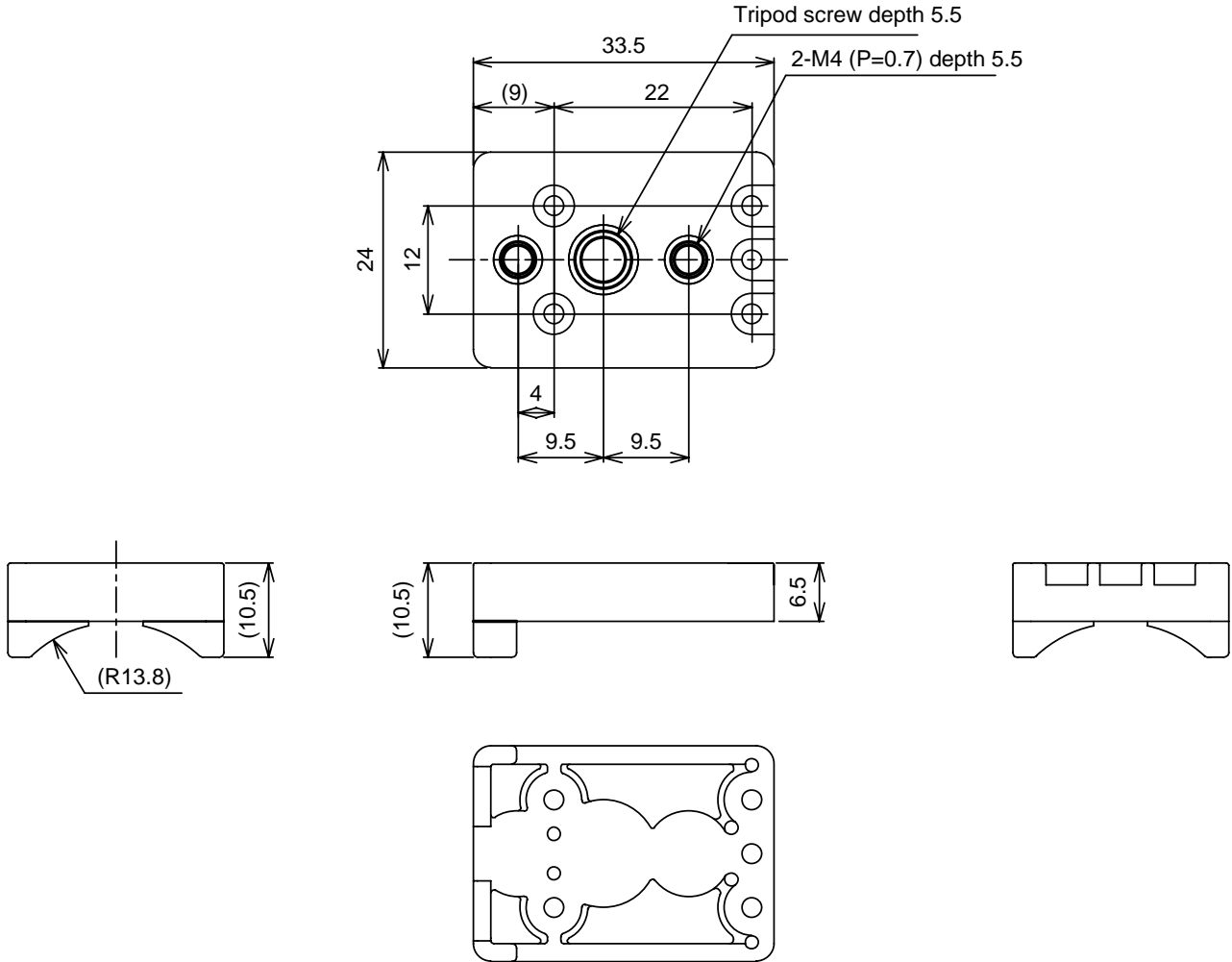
## II. Dimensions

### A. Dimensions



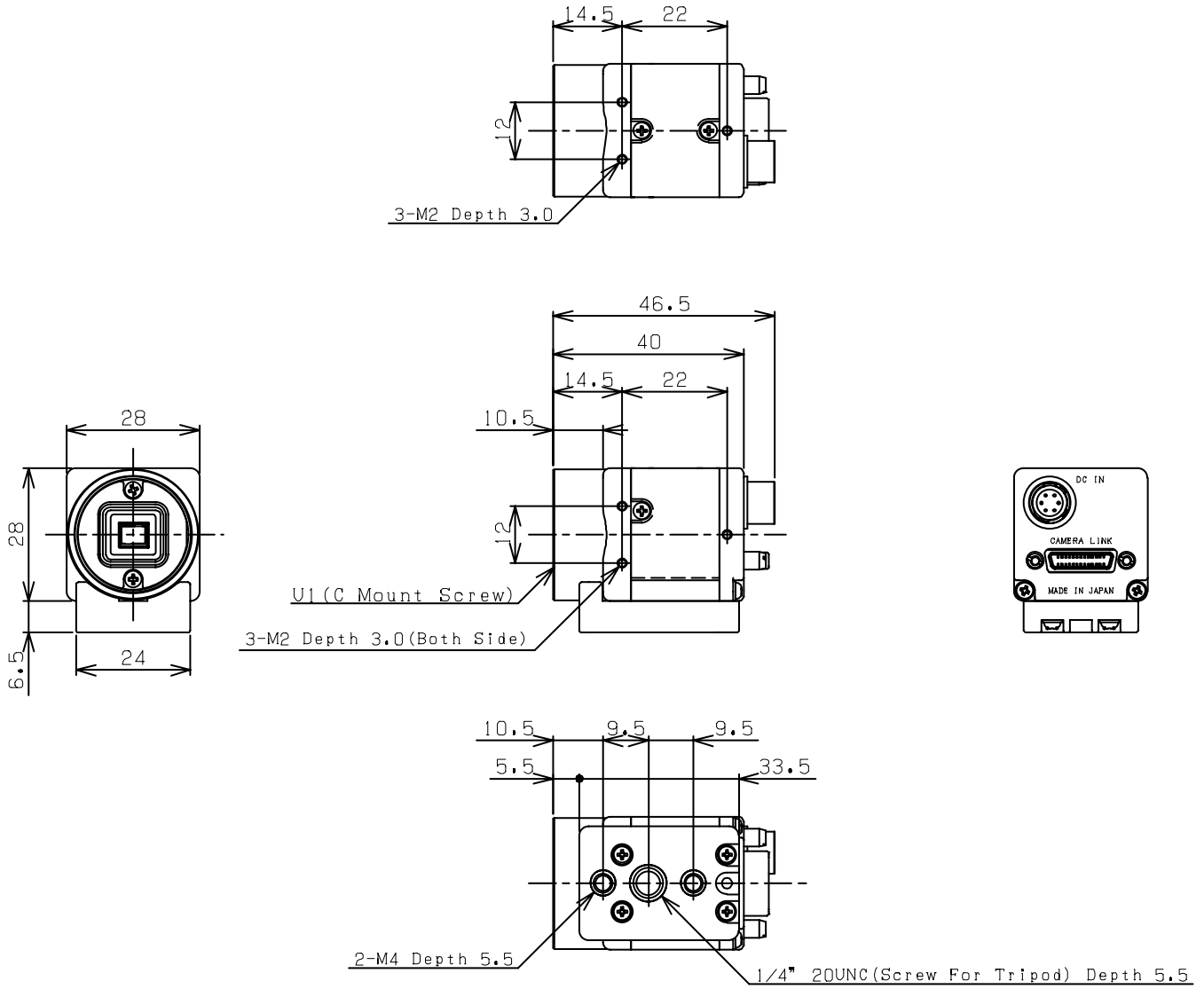
Unit: mm

## B. Tripod Dimensions



Unit: mm

## C. Dimensions (Camera with Tripod)



Unit: mm

## Revisions

Revision	Date (D/M/Y)	Changes	Name	Changes
1.0	19/06/2006	Created Document	Sam Aimono	
1.1	22/08/2006	Update whole documet	Sam Aimono	
1.2	14/09/2006	Update 1) Electronic specification	Sam Aimono	
1.3	21/10/2006	Update 1) Horizontal output timing chart	Sam Aimono	
1.4	25/04/2007	Update 1) Video output timing chart	Sam Aimono	
1.5	1/10/2007	Update 1) Mechanical specifications 2) Communication specifications 3) Tripod drawing 4) Camera modes	Sam Aimono	
2.0	16/4/2008	Separate document from "Specification" to "Specification" and "User's guide"	Sam Aimono	
2.1	13/5/2008	Edited English	Michelle Campbell	

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