

SENTECH

STC-A152A
Product Specification

**Small Cubic Type – SXGA CCD
Monochrome Analog Camera**

Contents

- I. Specifications
 - A. Electronic Specs / Mechanical Specs / Environmental Conditions..... 1
 - B. Rear Panel Specifications..... 2-4
 - 1. Connector Pin Assignment..... 2
 - 2. DIP Switch Settings..... 3
 - 3. External Sync..... 4
 - 4. Gain Mode Setting..... 4

- II. Dimensions
 - A. Dimensions..... 5
 - B. Dimensions (Tripod)..... 6
 - C. Dimensions (Camera with Tripod)..... 7

I. Specifications

A. Electronic Specifications / Mechanical Specifications / Environmental Conditions

Product		STC-A152A		
Electronic specifications	Imager	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 1024 (V)		
	Chip Size	7.6 (H) x 6.2 (V) mm		
	Cell Size	4.65 (H) x 4.65 (V) μ m		
	Scanning System	Progressive		
	Scanning Method	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)	15.28 (15fps) / 19.3 (19fps) Hz		
	Horizontal Frequency	15.998 (15fps) / 20.57 (19fps) kHz		
	Pixel Frequency	28.6363 (15fps) / 36.8181 (19fps) MHz		
	S/N ratio (standard deviation)	56 dB (GAIN 0 dB)		
	Minimum Scene Illumination	1 Lux at F1.4		
	Sync. System	Internal / External		
	Video Output	1.0 Vp-p / 75 Ω , DC coupling (0V)		
	Shutter Speed	DIP Switch	OFF, 1/200, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/8,000, 1/20,000 second	
		Communication	OFF, 1/2 to 1/100,000 sec. (Variable at every H and clock)	
	Gain	0 to 27 dB		
	Gamma	1.0 / 0.45		
	Power Supply	Input Voltage	DC12V \pm 10%	
Consumption		Less than 2.5 W		
Trigger Mode	Edge preset trigger (V-reset, Non-reset) Pulse width trigger (V-reset, Non-reset)			
Communication	RS232 via 12pin connector			
Mechanical specifications	Dimensions	28 (W) x 28 (H) x 46.3 (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		
	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-10R-12PB (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 45 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 Compliance		EMS: EN61000-6-2, EMI: EN55011 (Class B)		
RoHS		RoHS compliance		

B. Rear Panel Specifications

1. Connector Pin Assignment

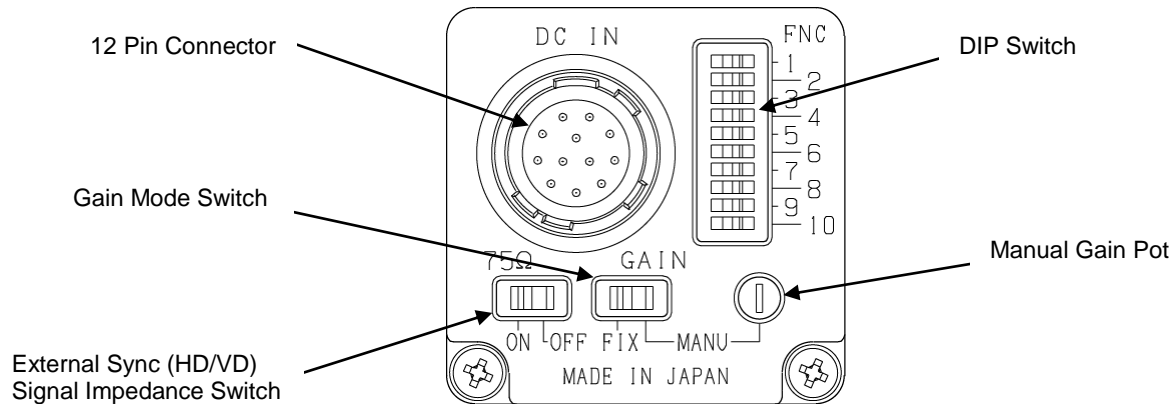


Figure 1

12 Pin Connector Assignment

The connector type: HR10A-10R-12PB (Hirose) or equivalent

Pin Assignment

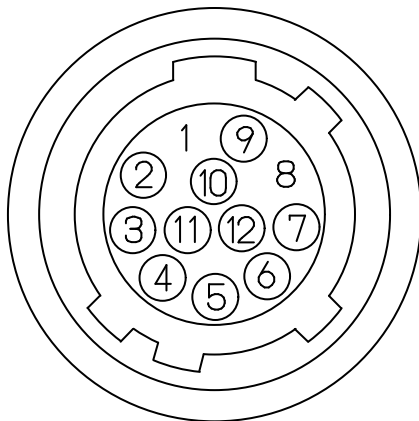


Figure 2

No.	Signal types	
	Internal sync	External sync
1	GND	GND
2	+12V DC	+12V DC
3	VIDEO GND	VIDEO GND
4	VIDEO OUT	VIDEO OUT
5	HD GND	HD GND
6	HD OUT	HD IN
7	VD OUT	VD IN
8	GND	GND
9	TXD	TXD
10	WEN OUT	WEN OUT
11	TRG IN	TRG IN
12	RXD (Note)	RXD (Note)

*Note: Pin No.12 can be connected to GND

The camera settings can change by RS232C communication with No. 9 and 12.
Please refer the detail for the user's guide.

2. DIP Switch Settings (Refer to Dip Switch in Figure 1)

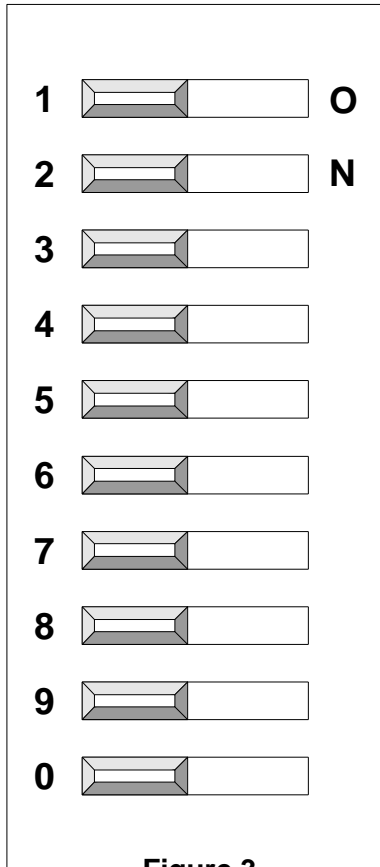


Figure 3

DIP Switch No. 1 to 3: Shutter Speed

Shutter Speed	No. 1	No. 2	No. 3
OFF/Plus width	OFF	OFF	OFF
1/200 sec.	ON	OFF	OFF
1/500 sec.	OFF	ON	OFF
1/1,000 sec.	ON	ON	OFF
1/2,000 sec.	OFF	OFF	ON
1/4,000 sec.	ON	OFF	ON
1/8,000 sec.	OFF	ON	ON
1/20,000 sec.	ON	ON	ON

DIP Switch No. 4 to 5: Reset Mode

Reset mode	No. 4	No. 5
Non-reset	OFF	OFF
V-reset	ON	OFF

DIP Switch No. 6: Trigger Polarity

Trigger polarity	No. 6
Positive	OFF
Negative	ON

DIP Switch No.7 to 8: Scanning Method

Scanning method	No. 7	No. 8
Full	OFF	OFF
Full	ON	OFF
1/2 partial	OFF	ON
1/4 partial	ON	ON

DIP Switch No.9: Sync. System

Sync. System	No. 9
External	OFF
Internal	ON

DIP Switch No.10: Binning

Binning	No. 10
OFF	OFF
ON	ON

3. External Sync. (HD/VD) signal impedance setting (See **External Sync** in **Figure 1**)

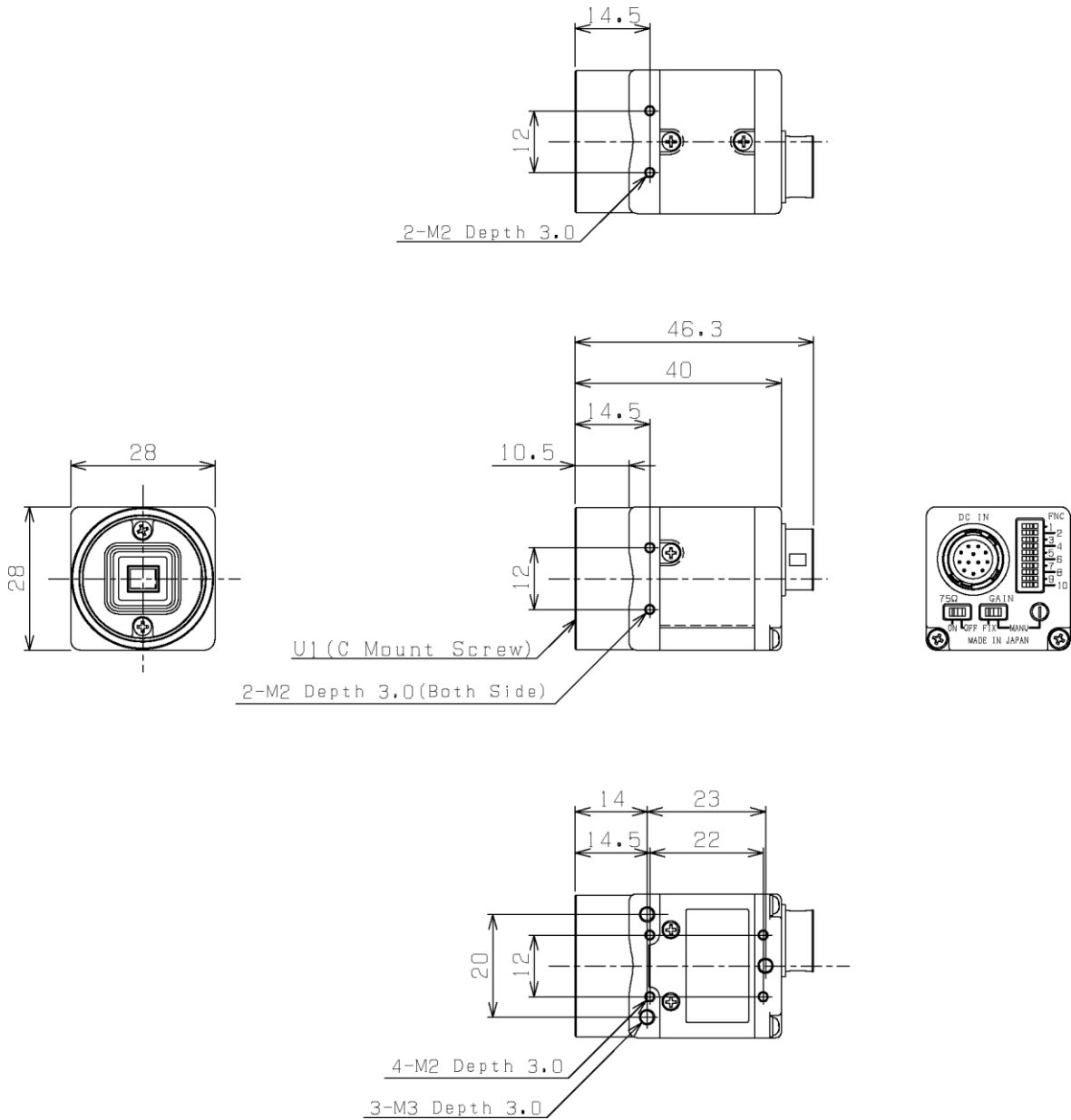
ON: 75Ohm termination
OFF: High impedance

4. Gain Mode Setting (See **Gain Mode Switch** in **Fig. 1**)

FIX: Fixed gain
MAN: Manual gain
The gain can be adjustable by the manual gain pot (See **Manual Gain Pot** in **Fig. 1**).

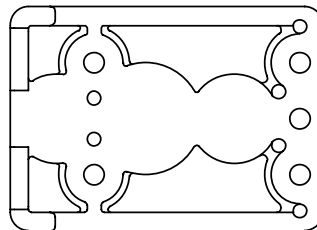
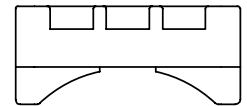
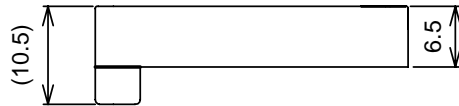
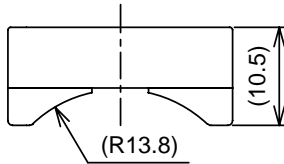
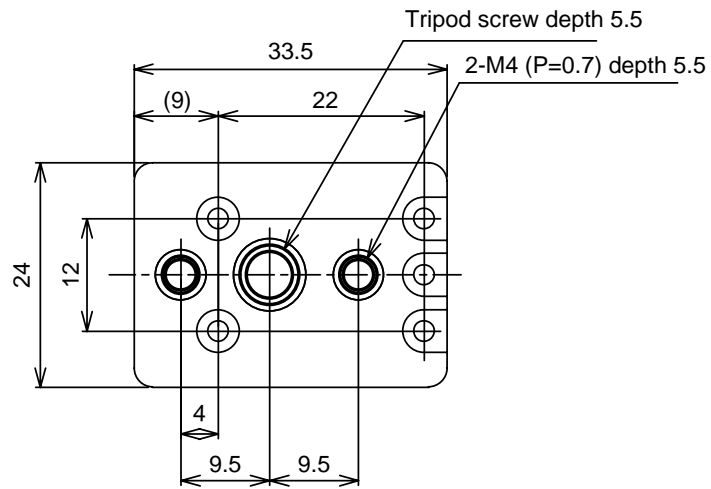
II. Dimensions

A. Camera Dimensions



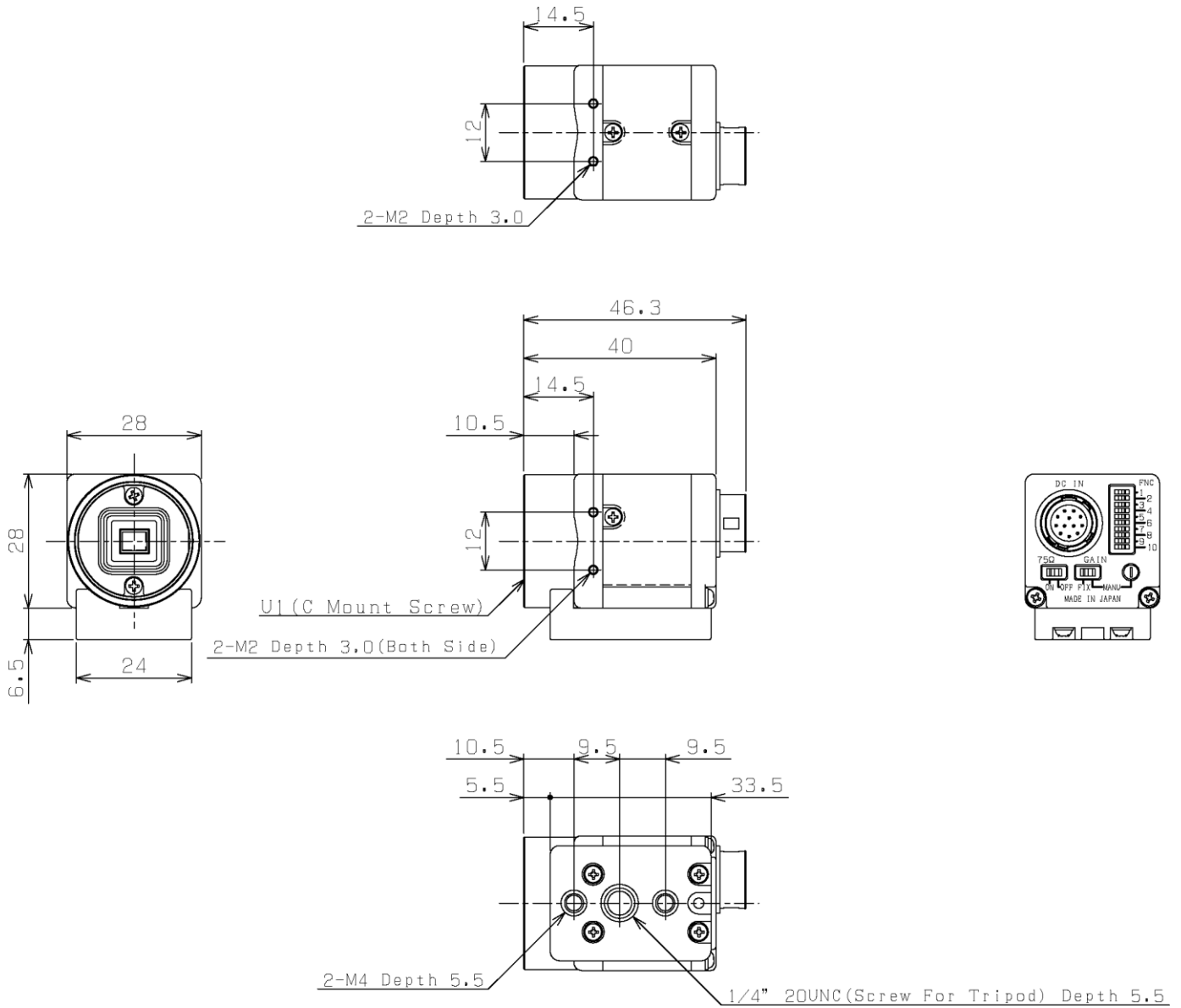
Unit: mm

B. Tripod Dimensions



Unit: mm

C. Camera with Tripod Dimensions



Unit: mm

Revisions

Revision	Date (D/M/Y)	Changes	Name	Changes
1.0	23/08/2006	Created Document	Sam Aimono	
1.1	22/08/2006	Update 1) Mechanical Specifications (optical center accuracy) 2) Communication Specifications (add the initial data and the data range) 3) Tripod drawing (Change Japanese to English)	Sam Aimono	
2.0	16/04/2007	Separate document from "Specification" to "Specification" and "User's Guide"	Sam Aimono	
2.1	12/05/2008	Edited English	Michelle Campbell	

Sensor Technologies America, Inc.

1345 Valwood Pkwy, Suite 320
Carrollton, Texas 75006-6891
TEL (972) 481-9223 FAX (972) 481-9209
URL <http://www.sentechamerica.com/>

Sensor Technology Co., Ltd.

7F, Harada Center Building
9-17, Naka cho 4chrome
Atsugi-city, Kanagawa
243-0018 Japan
TEL +81-46-295-7061 FAX +81-46-295-7066
URL <http://www.sentech.co.jp/>

Taiwan Sensor Technology, Inc.

3F-6, No. 9, Aiguo W, Rd., Jhong Jheng District
Taipei City 100, Taiwan, R.O.C.
TEL 886-2-2383-2331 FAX 886-2-2370-8775
EMAIL: sentech0501@yahoo.com.tw