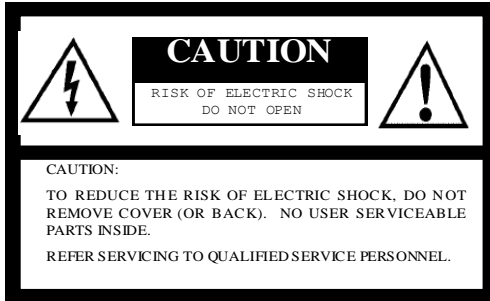


**SENTECH**

**STC-A202A**  
**Product Specification**

**Small Cubic Type – UXGA CCD  
Monochrome Analog 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.

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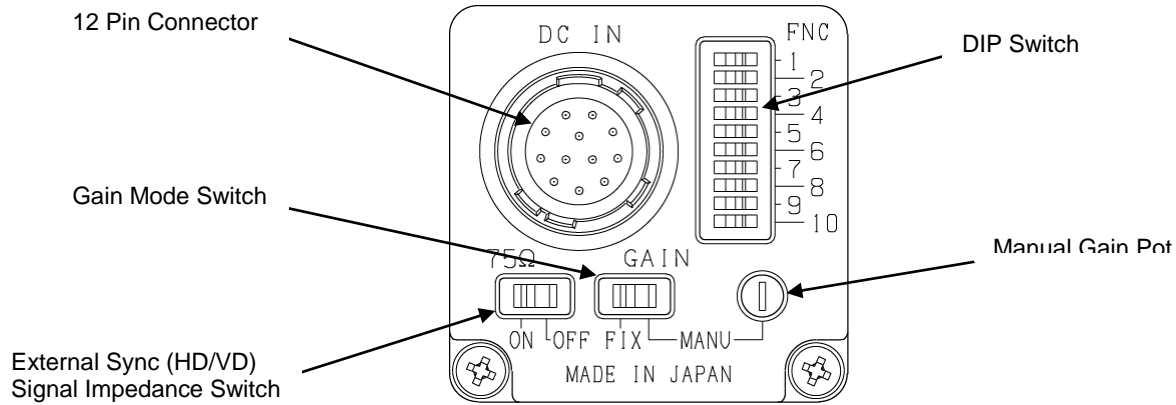
## I. Specifications

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

Product		STC-A202A	
Electronic Specifications	Imager	1/1.8" Interline UXGA monochrome progressive CCD ICX274AL	
	Total Picture Elements	1688 (H) x 1248 (V)	
	Effective Picture Elements	1628 (H) x 1236 (V)	
	Active Picture Elements	UXGA: 1620 (H) x 1220 (V)	
	Chip Size	8.5 (H) x 6.8 (V) mm	
	Cell Size	4.4 (H) x 4.4 (V) $\mu$ 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)	15.3164 Hz	
	Horizontal Frequency	19.176 kHz	
	Pixel Frequency	36.8181 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 $\Omega$ , DC coupling (0V)	
	Shutter Speed	DIP Switch: OFF, 1/200, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/20000 second Communication: OFF, 1/2 to 1/100,000 sec. (Variable at every H and clock)	
	Gain	0 to 27dB	
	Gamma	1.0 / 0.45	
	Power Supply	Input Voltage: DC12V $\pm$ 10% Consumption: Less than 3.0 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(H) x 28(W) x 46.3(D) mm (including the lens mount and connector)	
	Optical Filter	No IR cut filter	
	Optical Center Accuracy	Positional accuracy in H. and V. directions: +/- 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	The tripod can be attached to 4 plates (4 screws on the bottom plate, 3 screws on the remaining plates)	
	Weight	Approximately 52g (Camera 43g, Tripod 9g)	
Environmental Conditions	Temperature & 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 direction 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	

## B. Rear Panel Specifications

### 1. Connector Pin Assignment

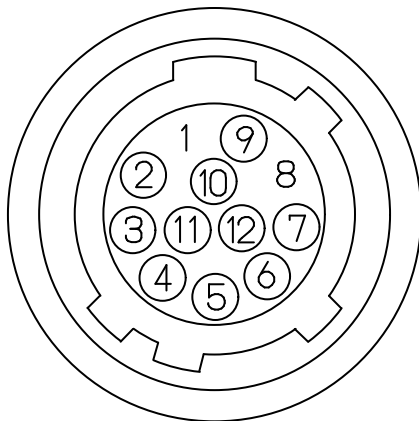


**Figure 1**

### 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)

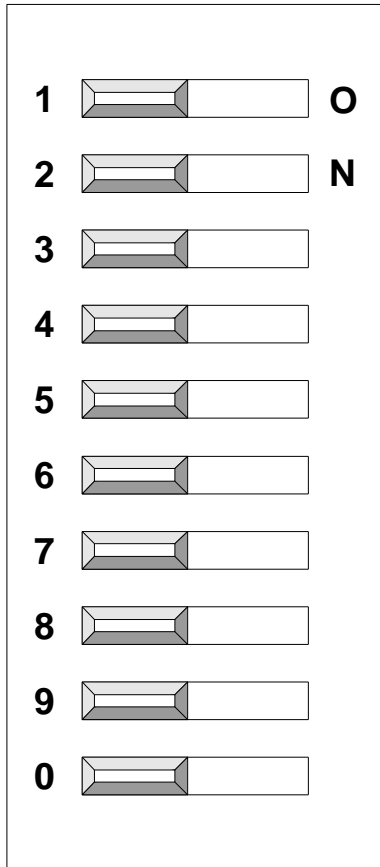


Figure 3

### 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

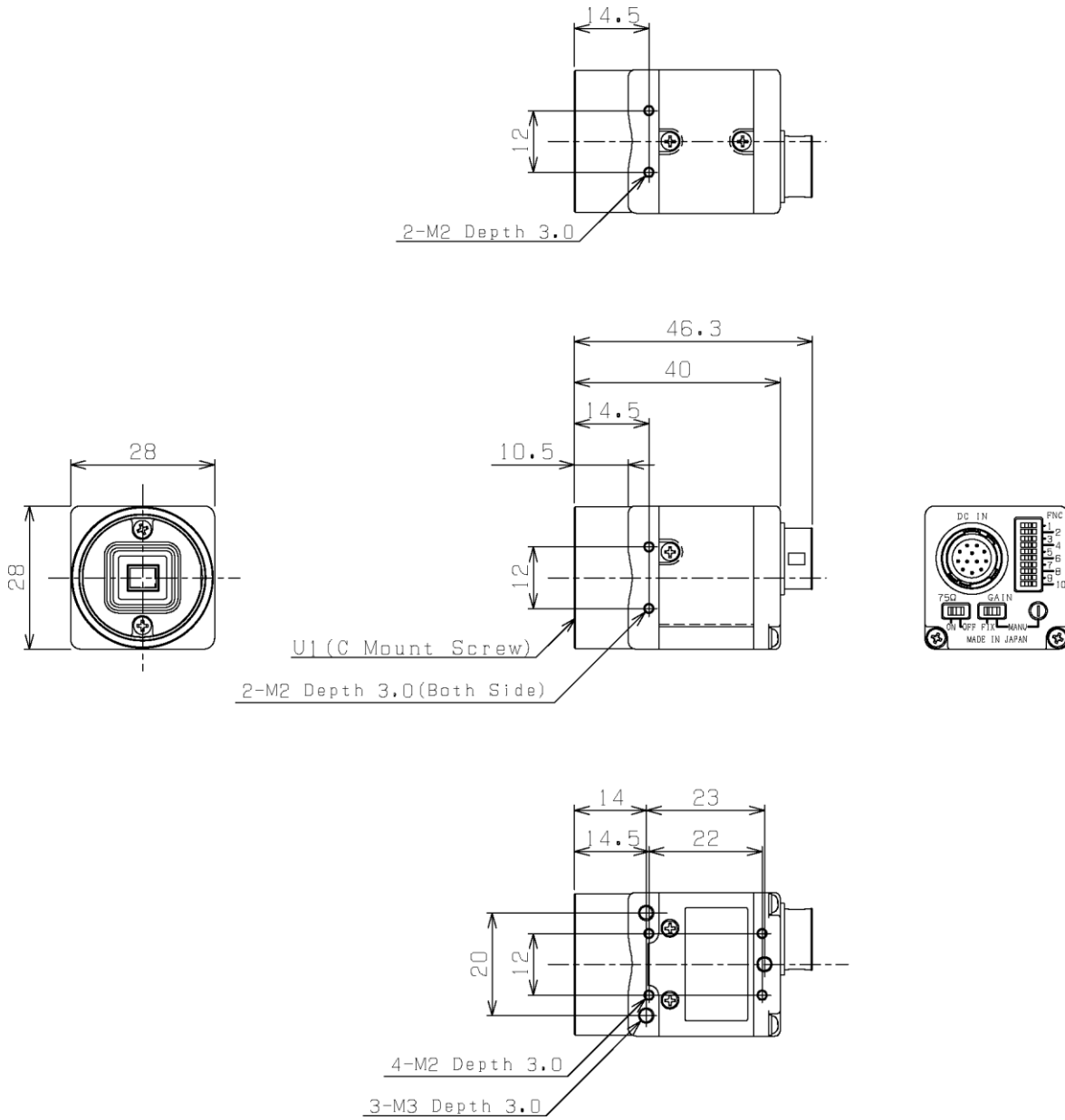
4. Gain Mode Setting (See **Gain Mode Switch** in **Fig. 1**)

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



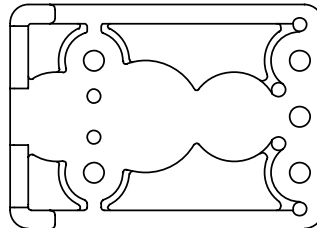
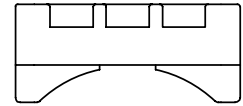
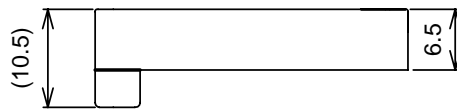
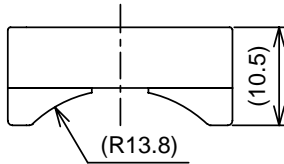
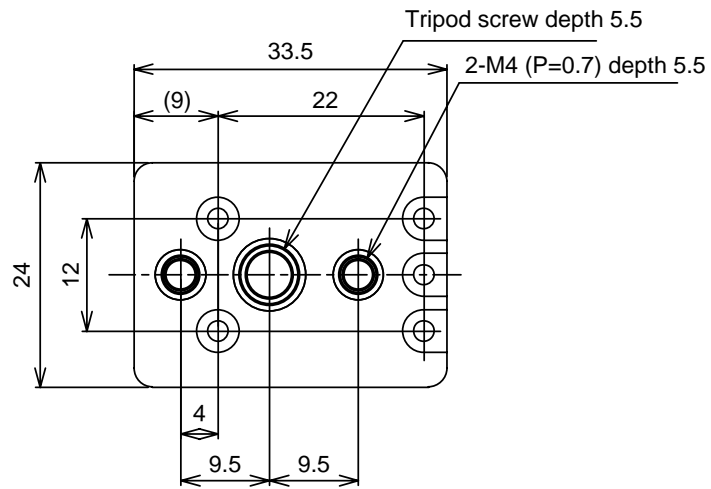
## II. Dimensions

### A. Camera Dimensions



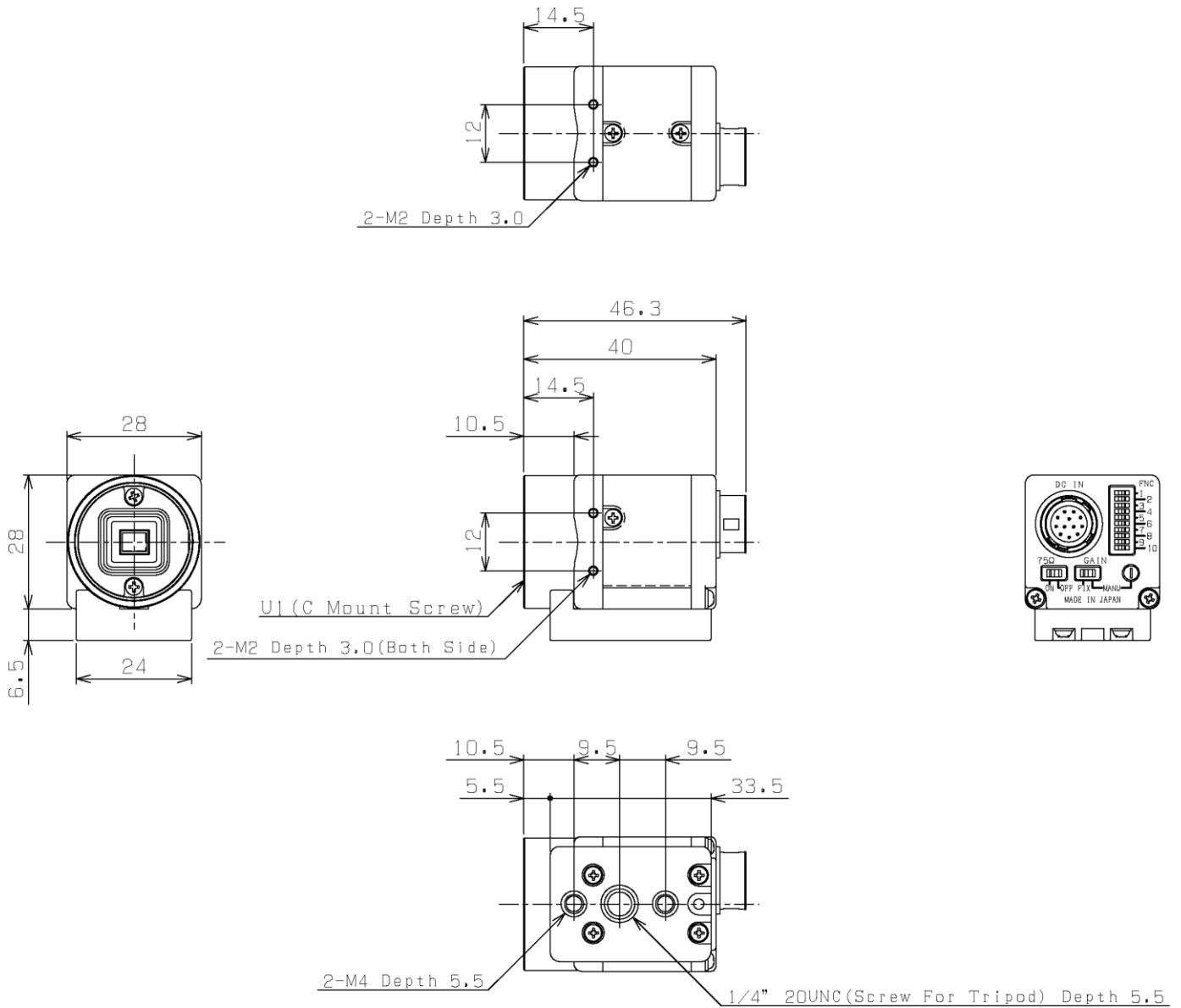
Unit: mm

## B. Tripod Dimensions



Unit: mm

## C. Camera with Tripod Dimensions



Unit: mm

## Revisions

Revision	Date (D/M/Y)	Changes	Name	Changes
1.0	26/04/2006	Created Document	Sam Aimonio	
1.1	1/10/2006	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) 4) Camera Modes	Sam Aimonio	
2.0	16/04/2007	Separate document from "Specification" to "Specification" and "User's Guide"	Sam Aimonio	
2.1	12/05/2008	Edited English	Michelle Campbell	

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