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**STC-E42A (1/2" CCD)  
STC-E43A (1/3" CCD)  
Product Specification**

**Small Cubic Type  
EIA High-Resolutions  
Monochrome Analog Camera**

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## I. Specifications

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

Product		STC-E42A	STC-E43A	
Electronic Specification	Imager	1/2" Interline Monochrome EIA CCD: ICX418AL	1/3" Interline Monochrome EIA CCD: ICX408AL	
	Total Picture Elements	811 (H) x 508 (V)		
	Active Picture Elements	768 (H) x 494 (V)		
	Chip Size	7.40 (H) x 5.95 (V) mm	5.59 (H) x 4.68 (V) mm	
	Cell Size	8.4 (H) x 9.8 (V) μm	6.35 (H) x 7.40 (V) μm	
	Scanning System	2:1 Interlace		
	Vertical Frequency (Frame Rate)	59.94 Hz		
	Horizontal Frequency	15.734 kHz		
	Pixel Frequency	14.318MHz		
	Resolution	570 TV Lines		
	S/N ratio	56 dB (GAIN 0dB)		
	Minimum Scene Illumination	1 Lux at F1.4		
	Sync. System	Internal / External		
	Video Output	1.0Vp-p / 75Ω, DC coupling		
	Shutter Speed	DIP Switch	OFF; 1/60; 1/100; 1/120; 1/250; 1/500; 1/1000; 1/2000; 1/4000; 1/8000; 1/10,000; 1/20,000; 1/100,000 second	
		Communication	OFF; 1/60 to 1/100,000 second(Variable at every Hand Clock)	
	Integration	Field / Frame		
	Gain	0 to 27dB		
	Gamma	1/0.45		
	Power	Input Voltage	DC12V +/- 10%	
		Consumption	Less than 1.8W	
	Communication	RS232 via 12 Pin 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 Hand V Directions: +/- 0.31 mm		
Material		Case	Front, base, and rear: Aluminum Die Cast (ADC12)	
		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 52g (Camera: 43g, Tripod: 9g)			
Environmental Conditions	Temperature and Humidity	Operational	Temperature: -5 to 50°C; Relative Humidity: 0 to 90% (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 Minutes 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

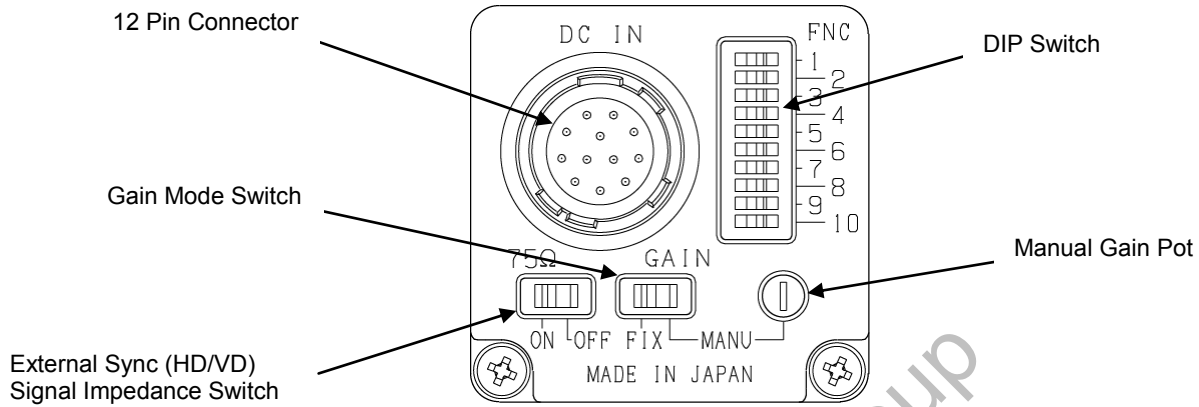


Figure 1

### 12 Pin Connector Assignment

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

### Pin Assignment

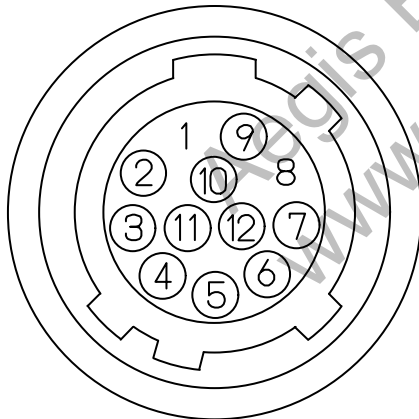


Figure 2

No.	Signal types	
	Internal sync	External sysnc
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	-	-
11	-	-
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)

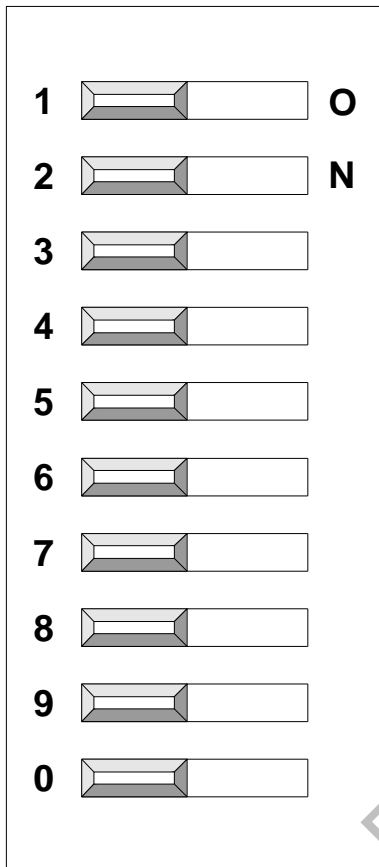


Figure 3

### DIP Switch No. 1 to 4: Shutter Speed

Shutter Speed	No. 1	No. 2	No. 3	No. 4
OFF	OFF	OFF	OFF	OFF
1/50 sec.	<b>ON</b>	OFF	OFF	OFF
1/100 sec.	OFF	<b>ON</b>	OFF	OFF
1/120 sec.	<b>ON</b>	<b>ON</b>	OFF	OFF
1/250 sec.	OFF	OFF	<b>ON</b>	OFF
1/500 sec.	<b>ON</b>	OFF	<b>ON</b>	OFF
1/1,000 sec.	OFF	<b>ON</b>	<b>ON</b>	OFF
1/2,000 sec.	<b>ON</b>	<b>ON</b>	<b>ON</b>	OFF
1/4,000 sec.	OFF	OFF	OFF	<b>ON</b>
1/5,000 sec.	<b>ON</b>	OFF	OFF	<b>ON</b>
1/8,000 sec.	OFF	<b>ON</b>	OFF	<b>ON</b>
1/10,000 sec.	<b>ON</b>	<b>ON</b>	OFF	<b>ON</b>
1/20,000 sec.	OFF	OFF	<b>ON</b>	<b>ON</b>
1/100,000 sec.	<b>ON</b>	OFF	<b>ON</b>	<b>ON</b>
OFF	OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>
OFF	<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

### DIP Switch No. 5 to 7 : No Function

### DIP Switch No. 8: Gamma

Gamma	No. 8
1.0	OFF
0.45	<b>ON</b>

### DIP Switch No.9: Sync. System

Sync. System	No. 9
External	OFF
Internal	<b>ON</b>

### DIP Switch No.10: Integration

Integration	No. 10
Frame	OFF
Field	<b>ON</b>

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

ON: 75Ohm termination  
OFF: High impedance

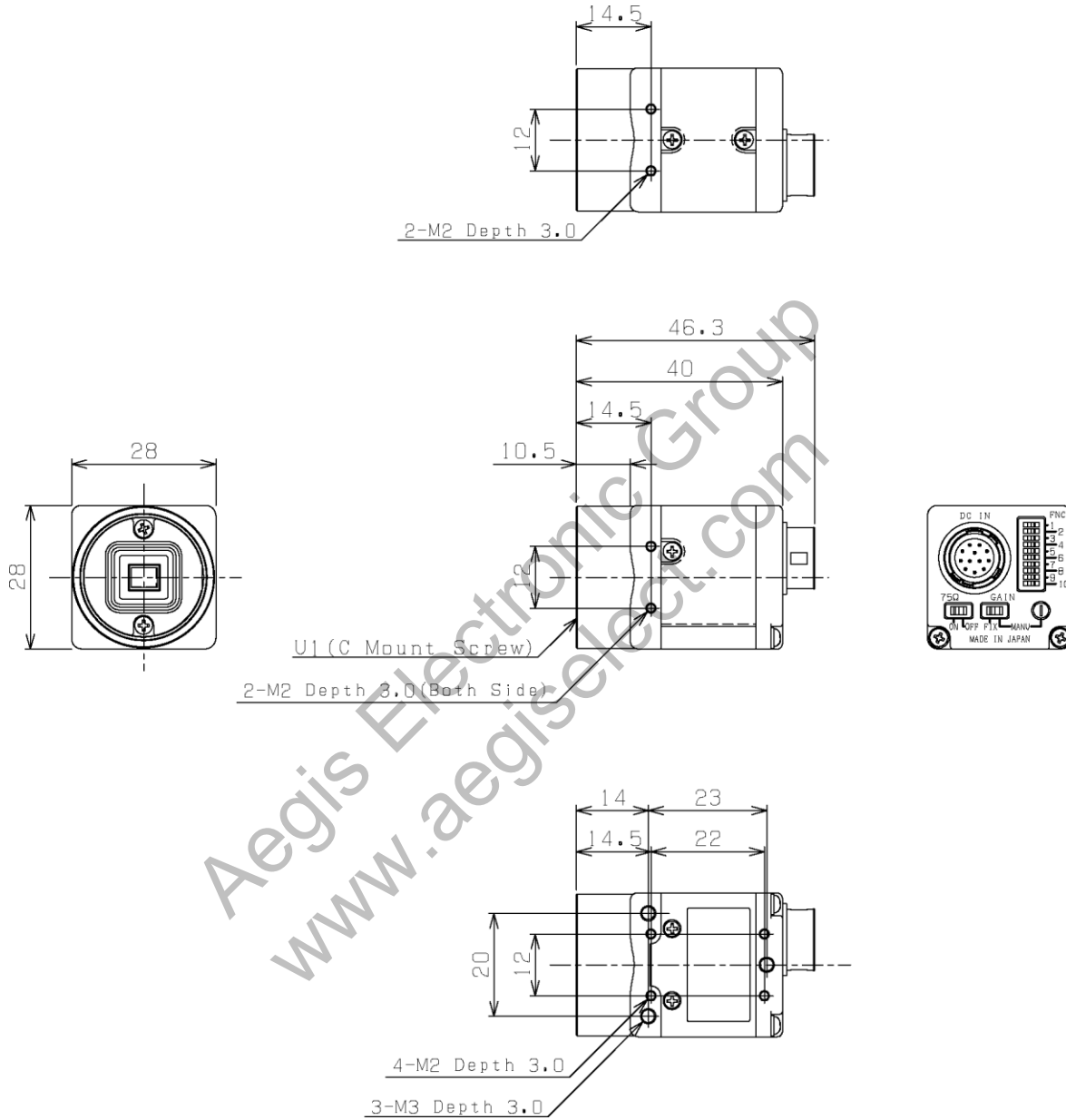
4. Gain Mode Setting (See **Gain Mode Switch** in **Fig. 1**)

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

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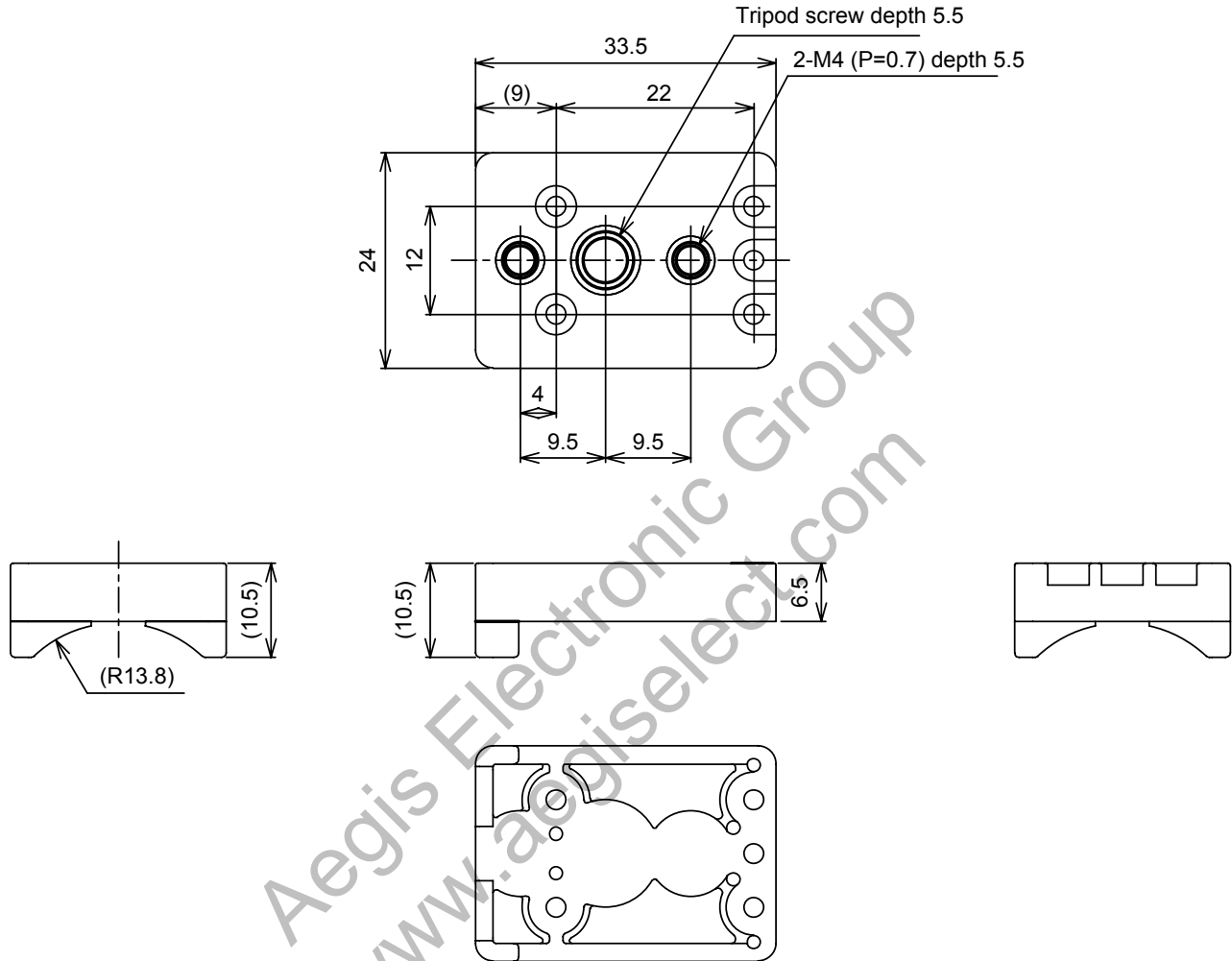
## II. Dimensions

### A. Camera Dimensions



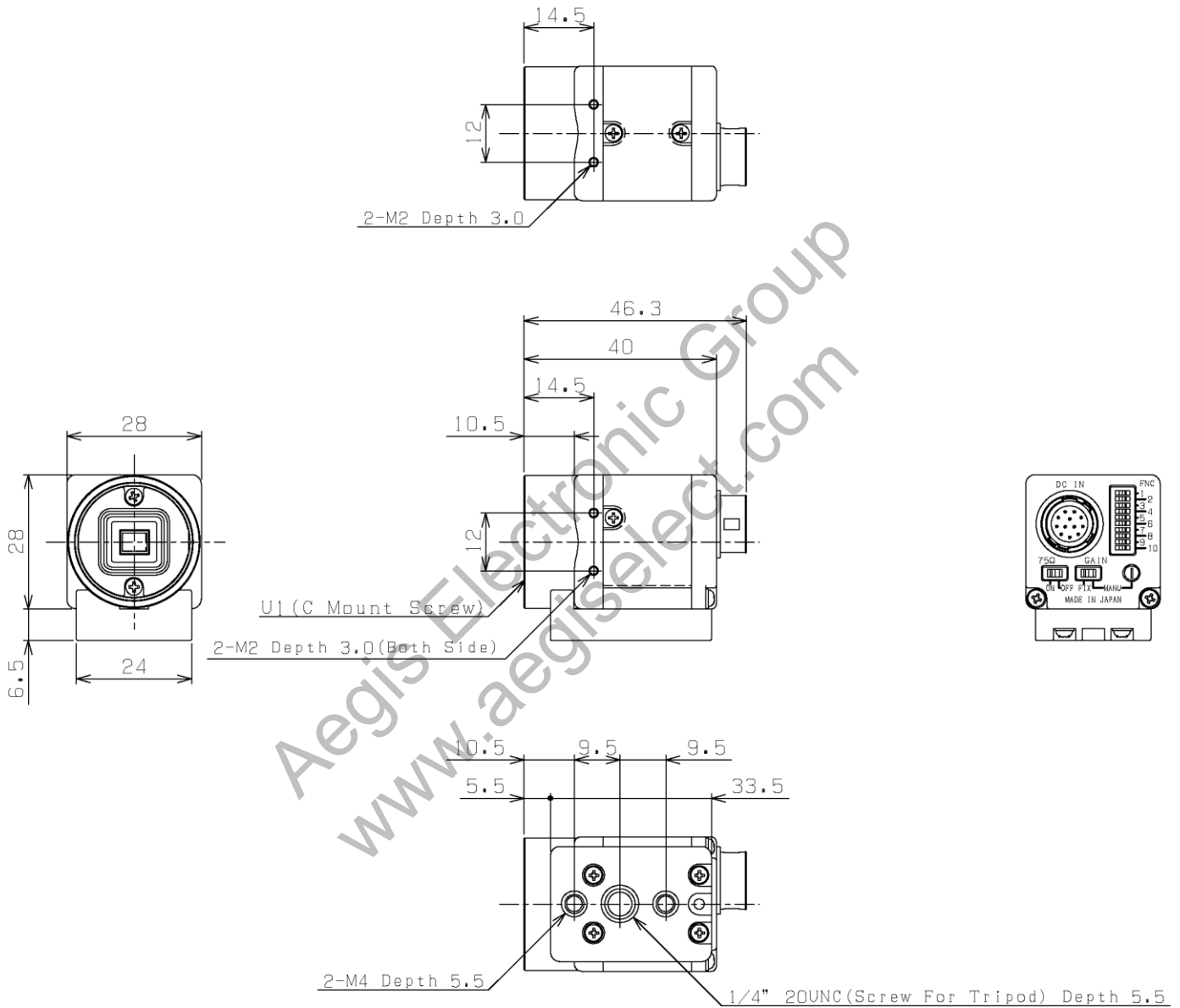
Unit: mm

## B. Tripod Dimensions



Unit: mm

## C. Camera with Tripod Dimensions



Unit: mm

## Revisions

Revision	Date (D/M/Y)	Changes	Name	Changes
1.0	23/09/2006	New Document	Sam Aimono	
1.1	01/10/2007	Update 1) Mechanical Specification (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	16/04/2008	Separate document from "Specification" to "Specification" and "User's guide"	Sam Aimono	
2.1	12/05/2008	Edit English	Michelle Campbell	

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