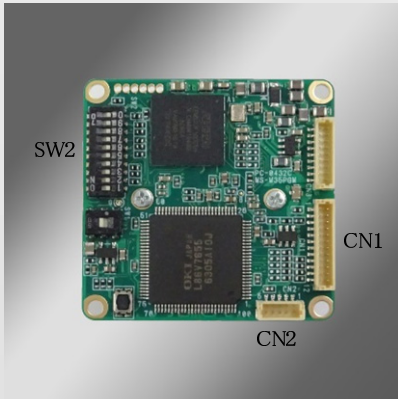


MS-M35PGM 1/3-inch WVGA B&W stereo camera

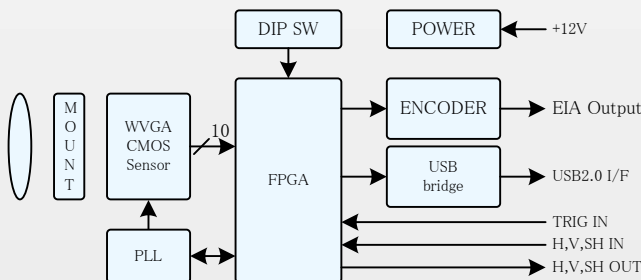


Key feature

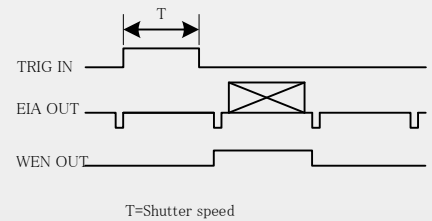
- 1/3-inch, 350,000 pixels, global shutter CMOS sensor
- Simultaneous EIA and USB 2.0 video output is possible
- Internal and external synchronization (stereo camera mode) is possible
- The sensor caning method is progressive
- Selection of H,V inversion mode by DIP SW
- Selection of AE control for AGC and EE by DIP SW
- Selection of fixed shutter or flickerless by DIP SW
- Selection of HDR ON/OFF by DIP SW
- Gamma ON/OFF selection by DIP SW
- Small size of 38(H)×38(W)mm
- DC+12V power supply

1/3-inch CMOS	350,000 pixels	EIA output	USB2.0 I/F
AGC	Electronics iris	Fixed shutter	Flicker less
H,V inversion	Stereo mode	HDR	Gamma control
External trigger	M12,CS mount	38(H)×38(W)mm	DC+12V

Camera block



Trigger timing



External connectors

CN1 : Power, Video output, Synchronous I/O BM12B-SRSS-TB (Manufactured by JST)		
Number	Signal name	Contents
1	DC+12V	DC+12V power input
2	GND	GND Input
3	VIDEO OUT	Video output (EIA)
4	VIDEO GND	Video ground
5	VD OUT	Vertical signal output (For stereo camera)
6	HD OUT	Horizontal signal output (For stereo camera)
7	SHUT OUT	Shutter pulse output (For stereo cameras)
8	WEN OUT	Shutter enable signal output when triggered
9	VD IN	Vertical signal input (For stereo camera)
10	HD IN	Horizontal signal input (For stereo camera)
11	SHUT IN	Shutter pulse input (For stereo cameras)
12	TRIG IN	Trigger input

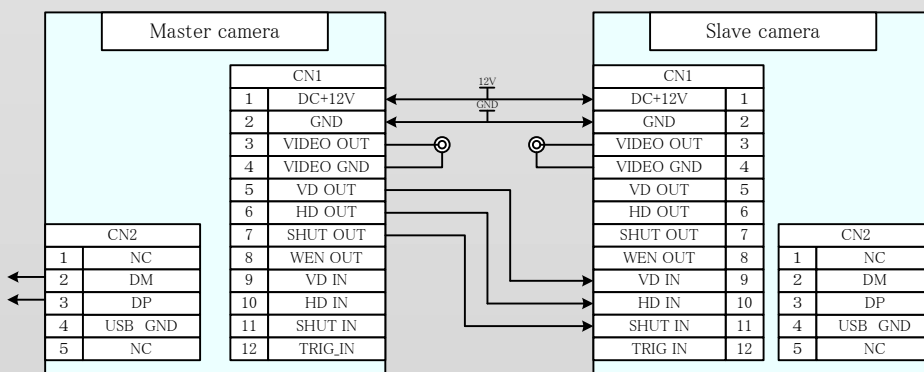
CN2 : USB I/F BM05B-SRSS-TB (Manufactured by JST)		
Number	Signal name	Contents
1	NC	NC
2	DM	-DATA
3	DP	+DATA
4	USB_GND	GND
5	NC	NC

SW setting

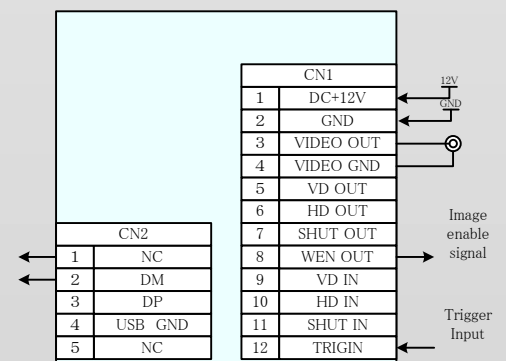
SW2		
Number	Signal name	Contents
1	V FLIP	OFF : V-normal , ON : V-reverse
2	H FLIP	OFF : H-normal , ON : H-reverse
3	AGC	OFF : AGC ON, OFF : AGC ON
4	SH MODE 1	00 : Shutter OFF , 01 : Electronic Iris , 10 : Electronic shutter , 11 : Trigger *1)
6	FIX SHUT 1	000 : 1/60 , 001 : 1/100 , 010 : 1/120 , 011 : 1/250 , 100 : 1/500 , 101 : 1/1000 , 110 : 1/2000 , 111 : 1/4000 *2)
8	FIX SHUT 3	
9	GAMMA	OFF : $\gamma=1$, ON : $\gamma=0.6$
10	HDR	OFF : HDR OFF , ON : HDR ON

- *1) In stereo camera mode (when VD, HD, or SHUT is connected), set to a mode other than trigger mode. The stereo camera mode of the slave camera can be set only when the master camera is in stereo mode. The transition occurs automatically when a VD, HD, or SHUT is connected from the camera. In addition, when the slave camera is connected to VD, HD, or SHUT, it will automatically shift to the SW4 and SW5 should be turned off on the camera.
- *2) Fixed shutter setting in stereo camera mode (when VD, HD or SHUT is connected). Please set the SW6, 7, and 8 on the master side since they are linked to the SW6, 7, and 8 on the master side.
- *Change the DIP SW setting or change to stereo camera mode or internal sync mode. When using the power switch, turn the power off and then on again.

Stereo camera connection



Trigger mode connection



*) Make the above connections and reconnect the power. The camera will automatically switch to stereo camera mode. However, set SW4 and SW5 to trigger mode. Set the setting to something other than the default. The electronic shutter and iris of the slave camera are controlled by the master camera.

*) Set SW4 and SW5 to ON and input the trigger signal.

Specifications

Item	Specifications
Model	MS-M35PGM
Image sensor	1/3-inch HDR B&W CMOS sensor
Number of effective pixels	752(H) × 480(V)
Unit cell size	6 μm(H) × 6 μm(V)
Sensor scanning method	Progressive scan method
Video signal output method	EIA system
Vertical frequency	60Hz
Image output	VBS: 1.0V (p-p) / 75 Ω
Synchronization method	Internal/External synchronization
S/N	48dB
Digital I/F	USB2.0, MJPEG, 60fps
Horizontal video inversion	DIP SW setting
Vertical video inversion	↓
AGC control	↓
Electro-iris	↓
Trigger shutter	↓
Electronic shutter	1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000
Gamma	1, 0.6 DIP SW setting
HDR	DIP SW setting
Lens mount	M12/CS
Power consumption	0.9W
Power supply	DC+12V ± 10%
External dimensions	38(H) × 38 (W)mm
Weight	Approx. 15 g
Operating temperature	-10°C ~ +50°C
Operating humidity	20% ~ 80%
Components	Camera body, Dedicated harness

Model

MS - M35PGM

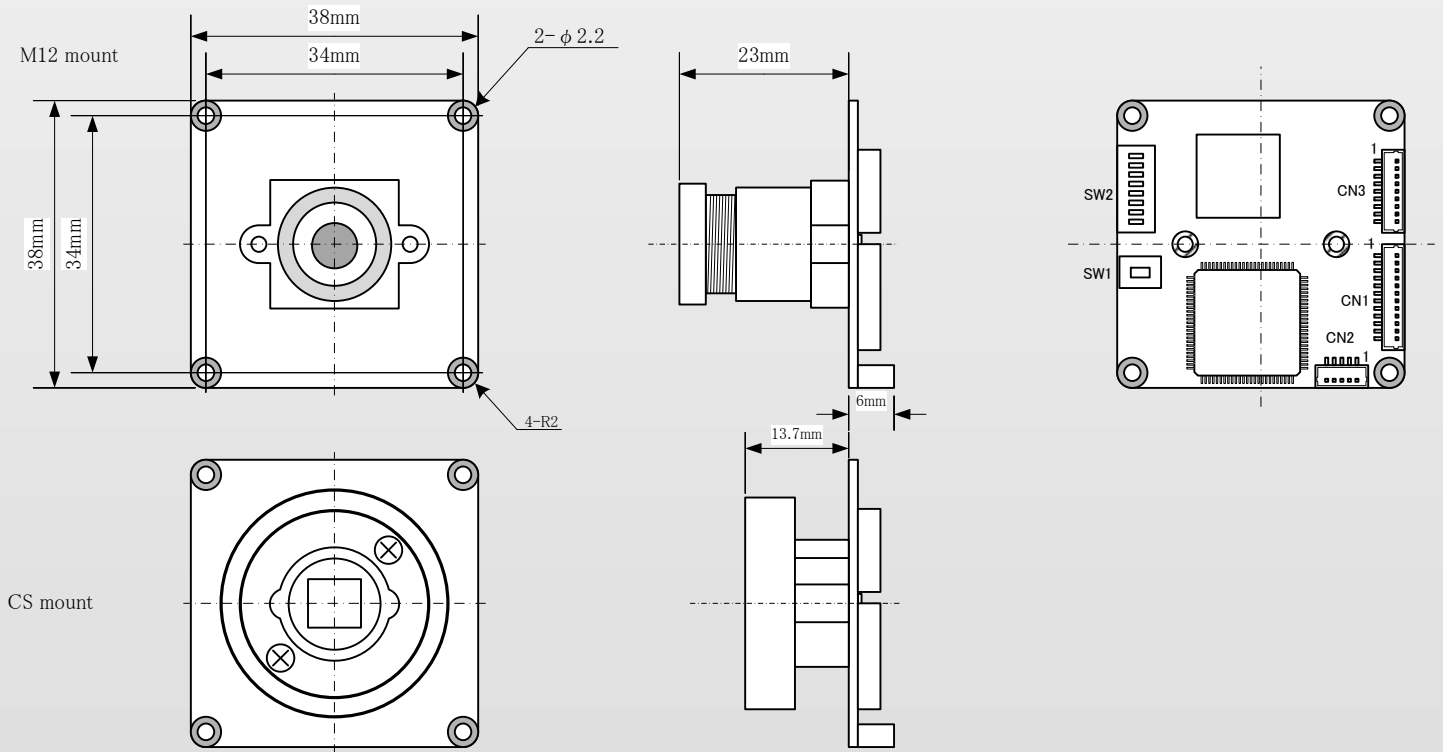
M

SH30

Lens mount selection Lens type selection

M : M12 Lens mount	· M12	
C : CS mount	2.1mm : SH21	6.0mm : SH60
	2.5mm : SH25	8.0mm : SH80
	3.0mm : SH30	12.0mm : SH120
	3.6mm : SH36	16.0mm : SH160
	4.3mm : SH43	
	· CS	
	3.0~8.0mm :	MT308M-200
	5.0~50.0mm :	MT550M-200
	12.0mm :	MT25HB-200
	16.0mm :	MT17HF-200
	25.0mm :	MT20HC-200
		MT35HB-200

Externals



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