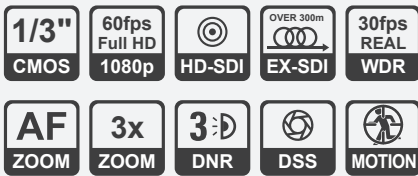


MM-038

1080p 60fps 3x Zoom Module

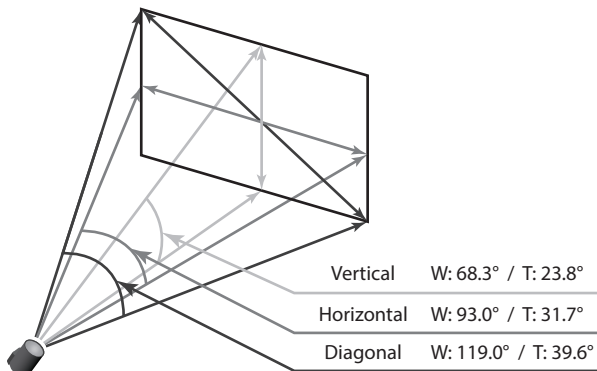
BT.1120 HD-SDI EX-SDI CVBS



Features

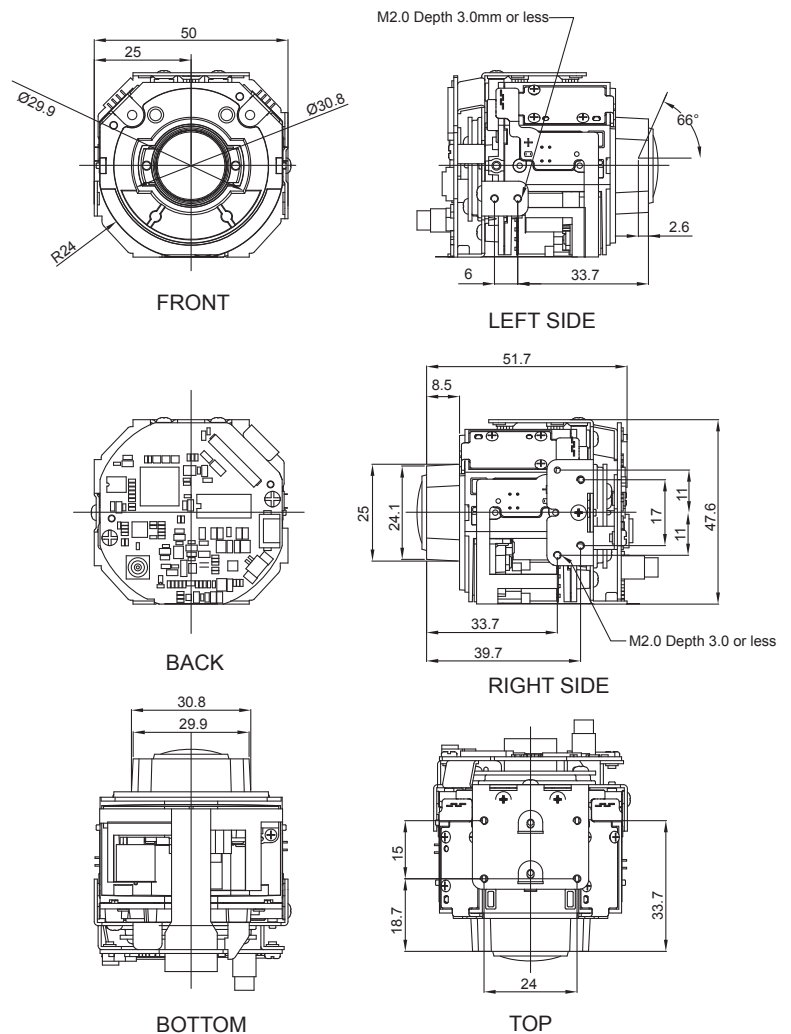
- 1/3" 2MP 60fps Panasonic CMOS sensor
- 1080p 60fps/30fps, 720p 60fps
- 3x Optical Zoom(3mm ~9mm) & 32x Digital Zoom
- Day & Night(ICR)
- Real-time True WDR
- DNR(Digital Noise Reduction: 2D + 3D)
- Privacy Mask Function
- High Light Compensation
- Intelligent Motion Detection
- Defog Function
- Supports VISCA, Pelco-D/P Protocol
- Video Out : BT.1120, HD-SDI, EX-SDI, CVBS

Field of View



Dimensions

Unit : mm

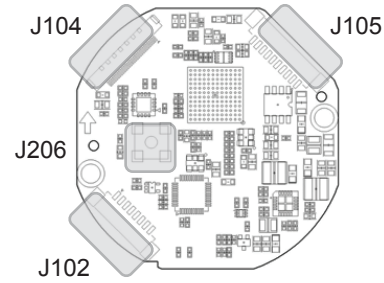


Specifications

MM-038				
Image Sensor	1/3" Panasonic CMOS Sensor			
Total Pixels	1,956(H) x 1,266(V) = 2.48M Pixels			
Active Pixels	1,944(H) x 1,092(V) = 2.12M Pixels			
Scanning System	Progressive Scan			
Sync. System	Internal			
Resolution	Digital : 1080p/60(50)fps, 1080p/30(25)fps, 720p/60(50)fps, 720p/30(25)fps			
	Analog : 700TVL			
Min. Illumination	Color(1/30s) : 0.5 lux , BW(1/30s) : 0.1lux			
	Color DSS(1/8s) : 0.125 lux , BW DSS(1/8s) : 0.025 lux			
Video Output	HD : BT.1120, HD-SDI, EX-SDI			
	Analog SD : VBS(without WDR)			
S/N Ratio	more than 50dB (AGC off)			
Lens Type	3x Day & Night Zoom Lens			
Zoom Ratio	Optical 3x, Digital 32x Zoom			
Focal Length	f= 3mm~ 9mm			
Aperture Ratio	F1.3 (wide) ~ F2.2 (tele)			
Angle Of View(D, H, V)	Wide	119.0°	93.0°	68.3°
	Tele	39.6°	31.7°	23.8°
Focus	Focus / Lens Refresh / E.Zoom / Zoom Preset			
Mode	Auto / One Push / Manual			
Lens Refresh	One Push / 1 ~ 10Day			
Digital Zoom	Off / MAX 2x ~ 32x			
Exposure	AUTO / IRIS.P / SHUT.P / MANUAL			
Gain Control(AGC)	Off / On			
Shutter Speed	1/30(25) ~ 1/30,000 sec			
Iris	0 ~ 20 steps			
Digital Slow Shutter(DSS)	Off / 2x / 4x (/ 8x : 60 or 50 fps mode only)			
Brightness	0 ~ 20 steps			
WDR/BLC	OFF / WDR / BLC			
Day&Night	Auto / Day / Night / Ext-in			
White Balance	Auto / One Push / Manual / Indoor / Outdoor			
HLC	Off / On / Night Only			
DNR	Auto / Off / Low / Middle / High			
Mirror	Off / H / V / H&V			
Sharpness	0 ~ 10 steps			
ACE	Off / Low / Middle / High			
Defog	Off / On(Auto / Manual)			
Privacy Mask	Off / 24 positions			
Motion Detection	Off / 3 positions			
Defect Detection	Off / On			
System	NTSC / PAL			
HD Format	1080p/30(25)fps / 1080p/60(50)fps / 720p/30(25)fps / 720p/60(50)fps			
Communication	Baud Rate : 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200			
	Protocol : VISCA / Pelco-D / Pelco- P / Update			
Language	English / Simplified Chinese / Traditional Chinese / Japanese			
Power Source	9V to 15V DC			
Power Consumption	280mA			
Power Input	Connector			
Video Output	Connector			
Storage Temperature	-10°C ~ +50°C (Humidity : 0%RH ~ 90%RH)			
Operating Temperature	-20°C ~ +60°C (Humidity : 0%RH ~ 90%RH)			
Dimensions	50(W) x 47.6(H) x 60.5(D)			
Weight	112g			

* Design and specifications are subject to change without notice.

Pin Assignment



J105	
1	DC IN
2	GND
3	VBS-OUT
4	GND
5	MD-OUT
6	IR-ON
7	D/N-IN
8	ADKEY
9	485(+)
10	485(-)

Ref 12505WS-10(YEONHO)

J206	
1	SDO
2	GND

Ref RF Connector - MCX(JU YOUNG)

J102	
1	JMODE
2	JTCK
3	JTDI
4	JTDO
5	JTMS
6	GND
7	RXD
8	TXD

Ref 12505WS-08(YEONHO)

J104	
1	TXD
2	RXD
3	RST
4	SDA
5	SCL
6	GND
7	CO7
8	CO6
9	CO5
10	CO4
11	CO3
12	CO2
13	CO1
14	CO0
15	YO7
16	YO6
17	YO5
18	YO4
19	YO3
20	YO2
21	YO1
22	YO0
23	DCKO
24	HSO
25	VSO
26	DENO
27	GND
28	GND
29	DC IN
30	DC IN

Ref USL00-30L-C(KEL Cop)