

MM-208B

1080p 60fps 20x Zoom Module

HD-SDI EX-SDI HDMI TVI 2.0 CVBS

1/3" CMOS 60fps Full HD 1080p HD-SDI OVER 300m EX-SDI 30fps REAL WDR

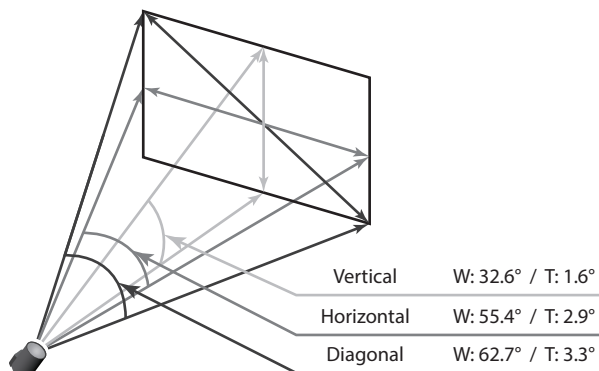
AF ZOOM 20x ZOOM 3:1 DNR DSS MOTION



Features

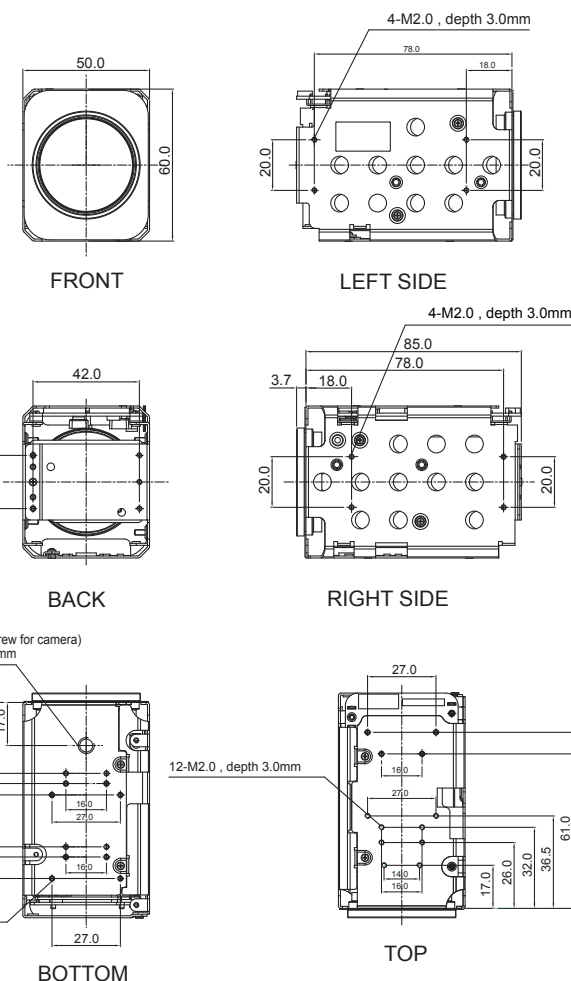
- 1/3" 2MP 60fps Panasonic CMOS sensor
- 1080p 60fps/30fps, 720p 60fps
- 20x Optical Zoom(4.7mm~94mm) & 32x Digital Zoom
- Day & Night(ICR)
- Real-time True WDR
- Digital Noise Reduction(2D+3D)
- DIS(Digital Image Stabilizer)
- Privacy Mask Function
- High Light Compensation
- Intelligent Motion Detection
- Defog Function
- Supports VISCA, Pelco-D/P Protocol
- Video Out : HD-SDI, EX-SDI, HDMI, TVI 2.0, CVBS

Field of View



Dimensions

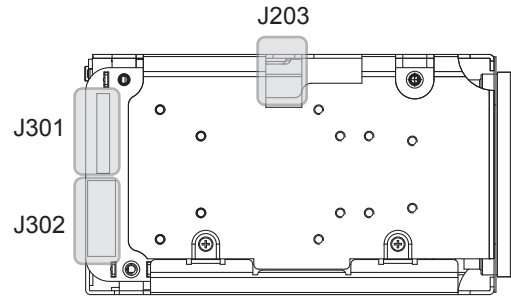
Unit : mm



Specifications

MM-208B				
Image Sensor	1/3" Panasonic CMOS Sensor			
Total Pixels	1956 (H) x 1266 (V) = 2.48M Pixels			
Active Pixels	1944 (H) x 1092 (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(1/7.5s) : 0.125 lux , BW DSS(1/7.5s) : 0.025 lux			
Video Output	HD : HD-SDI, EX-SDI, HDMI, TVI 2.0			
	Analog : VBS(without WDR)			
S/N Ratio	more than 50dB (AGC off)			
Lens Type	20x Day & Night Zoom Lens			
Zoom Ratio	Optical 20x, Digital 32x Zoom			
Focal Length	f = 4.7 mm ~ 94.0 mm			
Aperture Ratio	F1.6 (wide) ~ F3.5 (tele)			
Angle Of View(D, H, V)	Wide	62.7°	55.4°	32.6°
	Tele	3.3°	2.9°	1.6°
Focus	Mode / Distance / Zoom Speed / Lens Refresh / E.Zoom			
Mode	Auto / One Push / Manual			
Distance	0.1 / 1.0 / 3.0 / 6.0 / 10.0 m			
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			
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	500mA			
Power Input	Connector			
Video Output	Connector			
Storage Temperature	-20℃ ~ +60℃ (Humidity : 0%RH ~ 90%RH)			
Operating Temperature	-10℃ ~ +50℃ (Humidity : 0%RH ~ 90%RH)			
Dimensions	50(W) x 60(H) x 88(D)			
Weight	250g			

Pin Assignment



J301		J302	
1	TVI-OUT	1	RxD
2	GND	2	TxD
3	VBS-OUT	3	GND
4	GND	4	DC+12V
5	TX_HPD	5	GND
6	TX_SDA	6	VBS-OUT
7	TX_SCL	7	GND
8	TXC-	8	TVI-OUT
9	TXC+	9	GND
10	TX0-	Ref 10019HR-09(YEONHO)	
11	TX0+		
12	TX1-	J203	
13	TX1+		
14	TX2-	-	
15	TX2+		
16	+5V-OUT	Ref MMCX-R/A	
17	GND		
18	GND		
19	DC+12V		
20	DC+12V		
21	DC+12V		
22	GND		
23	GPIO2		
24	GPIO1		
25	ADKEY(OSD Control)		
26	D/N-IN		
27	IR-ON		
28	MD-OUT		
29	RS-485(-)		
30	RS-485(+)		

Ref USL00-30L-C(KEL Cop.)

* Design and specifications are subject to change without notice.