

MM-032

2.2Mega pixel HD-SDI Zoom camera



FEATURES

- 1/2.9" Sony "Exmor" CMOS sensor
All-Pixel Scan: 1920(H) X 1200(V) app. 2.3 Mega Pixel
- x3 Optical Zoom (3mm ~9mm)
- Full HD Resolution
1920x1080p / 30fps
1280x720p / 60fps
- Day & Night (ICR)
The ICR will automatically engage depending on the ambient light, allowing the camera to be effective in day & night environment.
- WDR (Wide Dynamic Range)
WDR, more effectively than previous models, by applying an optimum fusion ratio when combining the high speed shutter used in bright areas and the low speed shutter used in dark areas.
- DNR (Digital Noise Reduction, 2D+3D)
The DNR technology eliminates noise thus generating a distinct and clear image. This camera DNR function utilizes both an adaptive 2D filter reducing noise in the brightness of the image and an adaptive 3D filter reducing noise caused by movement.
- Privacy mask Function
The privacy zone function makes it possible to make specific areas of the scene from view.
- Intelligent motion detection
You can transmit an alert signal when it detects motion of an object on the screen. This feature is useful when you have to monitor several screens simultaneously.
- Defog
Defogging foggy video image.
- HLC(High Light Compensation Function)

Compact Size

A highly compact size is suitable for integrating into space-limited housings such as 100 pie fixed dome, mini box type cameras and mini PTZ cameras.

- Dimension: 50(w) x 47.6(h) x 53.4(d) mm (tentative), less than 85g.

Auto Focusing

The MM-032 applies 3x wide angle zoom lens (3mm~9mm) which supplies auto focusing function. Focusing issues are rising up at installation sites of mega pixel cameras. Auto focusing function of the MM-032 is the best solution on that issue.

Supreme video quality

The HDTV 1080p complies with the SMPTE 292M standard regarding a 1920x1080 pixel resolution (twice the resolution of HDTV 720p), full frame rate at 25/30 frames per second, HDTV color fidelity and a 16:9 format.

Lens Optical Specification

IRIS range

F/1.2 ~ Close (Full Close Type)

Focus range

∞ ~0.3mm (from front lens surface)

Minimum object Distance :0.3mm

Embracement Angel

Value is as following at image size 4.8x3.6mm

Focal length	D	H	V
f w = 3mm	118.9°	93°	68.4°
f T = 9mm	39.6°	31.7°	23.8°

Lens Construction

6 groups 8 elements (2GM)
Inner lens with improved UV cut coating

Durability

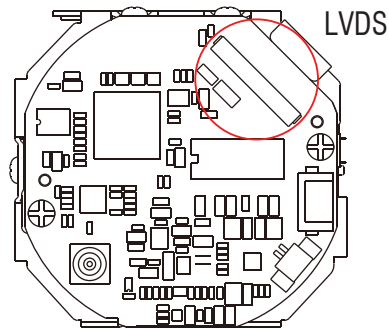
Should work after each of the following times for durability.

Focus	2 million cycle
Zoom	1 million cycle
IRIS	500,000 cycle
IR	20,000 cycle

SPECIFICATIONS

MM-032	
Image Sensor	1/2.9" Sony "Exmor" CMOS
Effective Number of pixels	Approx. 2 Mega Pixels
Aspect Ratio	16 : 9
Lens	3x Optical Zoom f=3.0mm(wide) ~ 9.0mm(tele) F1.2 to F2.1
Digital Zoom	Max 32x
Resolution	1080P/30, 720P/60
Min. illumination	Color : 0.5 lux , BW : 0.1 lux Color DSS : 0.002 lux , BW DSS : 0.001 lux
Video Output	MM-032 : LVDS
S/N Ratio	more than 50dB (AGC off)
Camera Control Comm	Baud Rate : 2400 / 4800 / 9600 / 19200 / 38400 / 57600 / 115200 Protocol : VISCA / Pelco-D / Pelco- P / Update
Focusing Mode	Auto / One Push / Manual
Shutter Speed	1/30(25) ~ 1/60,000 sec
WDR/BLC	OFF / WDR / BLC
White Balance	AUTO / One Push / Manual / Indoor / Outdoor
Power Source	9V to 15V DC
Power Consumption	500mA
Storage Temperature	-20℃ ~ +60℃ (Humidity : 20%RH ~ 95%RH)
Operating Temperature	-5℃ ~ +60℃ (Humidity : 20%RH ~ 80%RH)
External Dimension	50(w) x 47.6(h) x 53.4(d) mm (tentative)
Weight	Less than 85g

REAR PANEL



Pin No.	Name	Pin No.	Name
1	TXOUT3+	21	GND
2	TXOUT3-	22	GND
3	TXCLKOUT+	23	GND
4	TXCLKOUT-	24	GND
5	TXOUT2+	25	NC
6	TXOUT2-	26	NC
7	TXOUT1+	27	VBS-OUT
8	TXOUT1-	28	NC
9	TXOUT0+	29	NC
10	TXOUT0-	30	NC
11	GND		
12	TxD CMOS 5 V		
13	RxD		
14	DC 12V		
15	DC 12V		
16	DC 12V		
17	DC 12V		
18	DC 12V		
19	GND		
20	GND		
Ref	USL00-30L-C (KEL Cop.)		

DIMENSIONS

Unit : mm

