

CCK30715AF

1/2.8" High Sensitivity 4K CMOS 30x Zoom/AF Camera Module



■ Overview

- 4K camera module equipped with SONY Startvis color image sensor.
- Equipped with 1/2.8" 30x optical zoom lens for 4K.
- Adoption of compact size housing.

■ Feature

- Near-infrared sensitivity is greatly improved compared to conventional sensors, and when combined with near-infrared light, surveillance images at night become clearer.
- Supports auto ICR operation, automatically switching from daytime color images to nighttime near-infrared images
- Due to Binning mode, the maximum sensitivity is more than doubled compared to Normal.
- 30x optical zoom and 15x digital zoom for a total of 450x zoom.
- Equipped with auto iris, auto electronic shutter, auto gain, auto white balance, and auto focus.
- Equipped with various correction functions according to the image scene (DNR, WDR, fog, heat haze, etc.).
- Supports TMDS output and easily converts to HDMI.
- Supports EX-SDI/3G-SDI/HD-SDI output, enabling long-distance wiring up to 400m without image quality degradation.
- Supports 2160p, 1440p, 1080p, 1080i video formats.
- Flexible support for additional functions.

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■ Specifications

Sensor	Image Sensor	1/2.8" SONY CMOS Image Sensor (IMX715-AAQR1)
	Number of pixels	3864(H) x 2228(V), 8.60M Pixels
	Pixel Size	1.45 μ m(H) x 1.45 μ m(V)
	Scan Format	3840x2160@30/25/15/12.5fps, 2560x1440@30/25fps, 1920x1080@60/50/30/25fps (Option : 3840x2160@29/14fps, 2560x1440@29fps, 1920x1080@59/29fps)
Lens	F No.	Wide: F1.65, Tele: F4.80
	Focal Length	Wide (x1) : 5.2mm, Tele (x30) : 148.24mm
	Zoom	Optical Zoom 1~30times : Stepping Moter Digital Zoom 1~15 times : (Optical + Digital Zoom Max : 450 times)
	Focus	Stepping motor system auto focus Focus range : Wide 1.5m~ ∞ , Tele 1.5m~ ∞
	Optical Arrange of view	Wide (x1) : D/65.60°, H/58.32°, V/34.00° Tele (x30) : D/2.39°, H/2.12°, V/1.20°
	Optical Filter	1: IR Cut Filter (for Day Color) 2: Through Glass
	Video	Video Format
Minimum Illumination		F1.5, Color 0.01 lx, B/W 0.005 lx, IR Cut Filter Off, AGC 42dB, 25IRE
Signal to Noise Ratio		STD 52dB (Minimum 48dB)
Setting		OSD, UART(2ch)
Function	Auto Iris	Yes
	Auto Exposure	Yes
	Auto Focus	Yes
	White Balance	Auto / Manual / Preset (One push)
	Manual Shutter	30fps : 1/30, 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/15000 25fps : 1/25, 1/50, 1/100, 1/200, 1/400, 1/800, 1/1600, 1/3200, 1/6400, 1/12800
	Sense Up	AGC Max 72dB & Slow Shutter Max 256 times.
	Day & Night Mode	Color / B&W / Auto / External
	Digital Noise Reduction	Yes
	Backlight Control	Yes
	Peak / Average Control	Yes
	Gamma Control	0.35 / 0.45 / 0.55 / 0.65 / 0.75 / 0.85 / 0.95 / Defog(L) / Defog(M) / Defog(H)
	Wide Dynamic Range	Yes
	Eclipse (High Light Clip)	Yes
	Fog Reduction	Yes
	Heat Haze Correction	Yes
	Motion Detection	Yes
	H/V Mirror, Flip	Yes
	OSD Language	English, Japanese, Korean, Chinese(Traditional), Chinese(Simplified)
	Title Display	Yes
	Communication Protocol	GCC-CP / Pelco-D / Pelco-P / VISCA
Privacy Mask	Yes (16 Masks)	
Preset Position	Yes (64 Area)	
Synchronous Mode	Internal	
General	Power Source	DC+12V
	Consumption Current	450mA (30fps)
	Operation Temperature	-10°C ~ +50°C
	Storage Temperature	-30°C ~ +70°C
	Humidity	80% Max
	Outside Dimensions	W48.8mm x H57.5mm x D95.2mm
	Net Weight	230g

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Pin Assignment

JP401/901 (USL00-30L-A/KEL)		
1	GND in	Ground
2	TXCLKout-	TMDS Clock-
3	TXCLKout+	TMDS Clock+
4	GND in	Ground
5	TXout0-	TMDS TX0-
6	TXout0+	TMDS TX0+
7	GND in	Ground
8	TXout1-	TMDS TX1-
9	TXout1+	TMDS TX1+
10	GND in	Ground
11	TXout2-	TMDS TX2-
12	TXout2+	TMDS TX2+
13	GND in	Ground
14	485EN1	UART1 RS485 Enable output
15		Reserved
16		Reserved
17	Hot Plug Detect	5V/out. Open:stop
18	+5V Power	5V DC output
19		Reserved
20	GND in	Ground
21	I2CSCL	I2C Serial Clock
22	I2CSDA	I2C Serial Data
23	GND in	Ground
24	RX1	UART1 RX input
25	TX1	UART1 TX output
26	RESET	12V DC input
27	T12V in	12V DC input
28	T12V in	12V DC input
29	T12V in	12V DC input
30	T12V in	12V DC input

JP104/604 (53261-0671/MOLEX)		
1	DC12in	12V DC
2	GND	Power Ground
3	DC12in	12V DC
4	GND	Power Ground
5	IRext	ICR Control
6		Reserved

JP105/605 (SM06B-SRSS-TB/JST)		
1	ENTER	OSD Enter
2	RIGHT	OSD Right/Tele
3	LEFT	OSD Left/Wide
4	UP	OSD Up/Near
5	DOWN	OSD Down/Far
6	GND	Ground

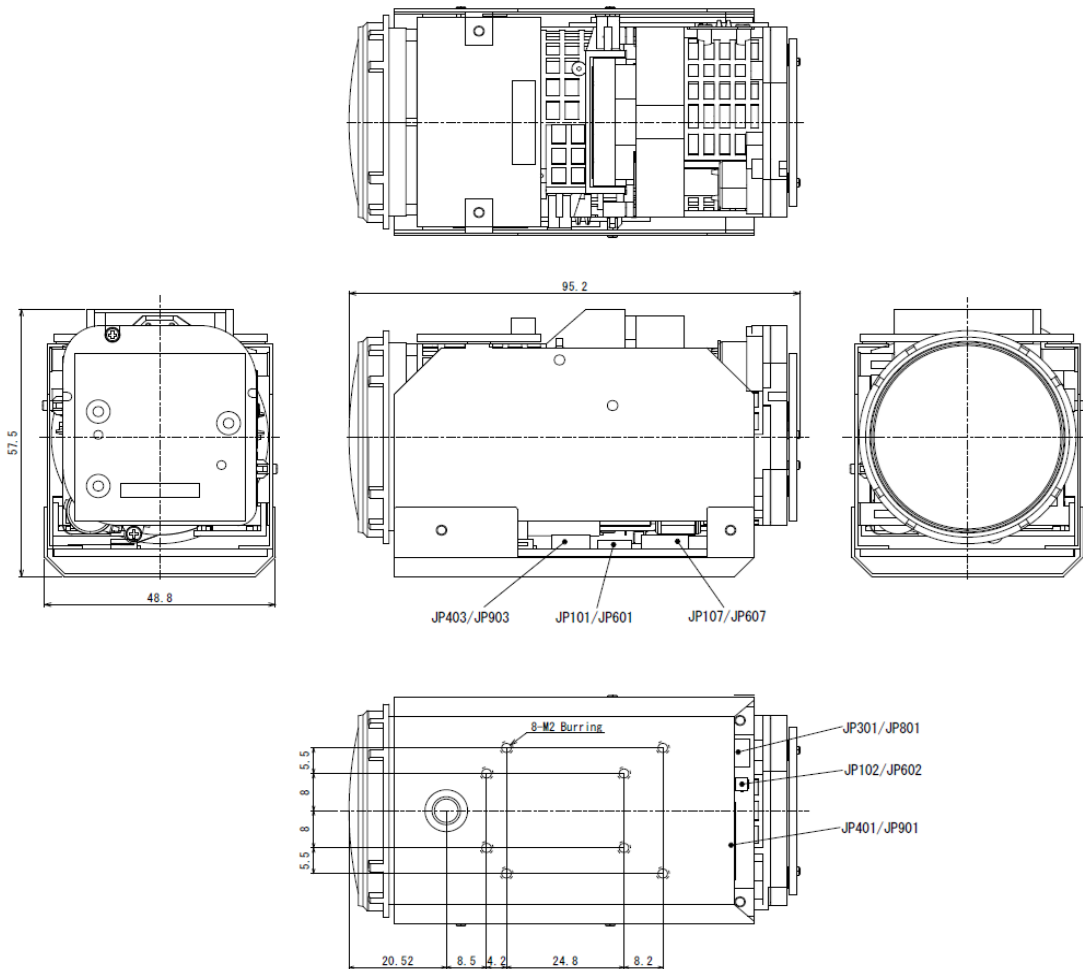
JP107/607 (SM05B-SRSS-TB/JST)		
1	GND	Ground
2	TX2	UART TX (3.3V)
3	RX2	UART RX (3.3V)
4	DC33out	3.3V DC
5	485EN2	RS485 Enable (3.3V)

JP102/602 (AYU1-1P-02676-120/JST)		
1	EX-SDI	EX-SDI TX
2	GND	Video Ground

JP301/801 (SM04B-SRSS-TB/JST)		
1	DC33out	3.3V DC
2	ARin	Audio R
3	ALin	Audio L
4	AGND	Ground

(Option)

Dimensions



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■ OSD Menu

Menu	Parameter	Default	Range	
LENS	MODE	AUTO	AUTO, MANUAL	
	AUTO H-LIMIT	0	0-16	
	AUTO M-LIMIT	4	0-16	
	AUTO L-LIMIT	16	0-16	
	MANUAL LEVEL	16	0-16	
	INTERLOCK	ON	OFF, ON	
	POSITION	----	----	
	DZ-MODE	OFF	OFF, LINK, MANUAL	
	DZ-LIMIT	X1	X1, X2, X4, X6, X8, X10, X12, X15	
	DZ-MANUAL	200	0-400	
	POSITION	----	---- x---, -	
	SPEED	2	0-4	
	MODE	AFTER TELE	MANUAL, AUTO, INTERVAL, AFTER ZOOM, AFTER TELE, DIRECT	
	ONE TIME AF	ON	↓	
	POSITION	----	----	
	SPEED	2	0-4	
	INTERVAL	10sec	10sec, 30sec, 1min, 5min, 10min, 30min, 60min	
	MODE	AUTO	AUTO, DAY, NIGHT, EXTERN	
	D->N LEVEL	13	0-24	
	N->D LEVEL	7	0-24	
	DELAY	SLOW	SLOW, MIDDLE, FAST	
	POSITION	----	DAY, NIGHT	
	INITIALIZE	ON	OFF, ON	
	MOVE	OFF	OFF, ON	
	PRESET No.	0	0-63	
	No.	0	0-63	
	SAVE	ON	↓	
	LOAD	ON	↓	
	MODE	OFF	OFF, ON	
	RANGE	10%	10%, 20%, 30%	
	LEVEL	HIGH	LOW, MIDDLE, HIGH	
	AUTO CENTER	50%	OFF, 50%, 100%	
	BRIGHTNESS		10	0-20
EXPOSURE	MODE	AUTO	AUTO, MANUAL, FLICKERLESS	
	AUTO H-LIMIT	1/15000	30fps : 1/30, 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000,	
	AUTO M-LIMIT	1/1000	1/15000	
	AUTO L-LIMIT	1/30	25fps : 1/25, 1/50, 1/100, 1/200, 1/400, 1/800, 1/1600, 1/3200, 1/6400,	
	MANUAL LEVEL	1/30	1/12800	
	SENS-UP	OFF	OFF, X1, X2, X4, X8, X16, X32, X64, X128, X256	
	MODE	AUTO	AUTO, MANUAL	
	PRIORITY1	IRIS>AGC	IRIS>AGC, AGC>IRIS	
	PRIORITY2	AGC>SENS	AGC>SENS, SENS>AGC	
	AUTO LIMIT	72dB	0-72dB	
	MANUAL LEVEL	0dB	0-72dB	
	AUTO GAMMA	OFF	OFF, LOW, MIDDLE, HIGH	
	AUTO SETUP	10	0-20	
	POSITION	----	----	
	PEAK-AVE		10	0-20
	MODE	OFF	OFF, ON	
	H-POSI	16	0-38	
	V-POSI	12	0-35	
	H-SIZE	6	0-38	
	V-SIZE	10	0-35	
	MODE	OFF	OFF, ON	
	LEVEL	10	0-20	
	COLOR	BLACK	WHITE, YELLOW, CYAN, GREEN, MAGENTA, RED, BLUE, BLACK	
	MODE	OFF	OFF, ON	
	LEVEL	HIGH	LOW, MIDDLE, HIGH	
	COLOR	WB	AUTO	MANUAL, AUTO, AUTO-EXT, PRESET
		MANUAL TEMP	5000K	3000K, 5000K, 8000K,
		R-GAIN	10	0-20
		B-GAIN	10	0-20
		COLOR GAIN	10	0-20
		SUPPRESS	0	0-10
		BLACK ADJUST	NIGHT	OFF, ON, COLOR, NIGHT
		NIGHT COLOR	OFF	OFF, ON

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Menu	Parameter	Default	Range		
IMAGE	SHARPNESS	5	0-10		
	DNR	HIGH+	OFF, LOW, LOW+, MIDDLE, MIDDLE+, HIGH, HIGH+		
	HEAT HAZE	OFF	OFF, LOW, MIDDLE, HIGH		
	DWDR	OFF	OFF, LOW, MIDDLE, HIGH		
	DEFOG	MODE	OFF	OFF, MANUAL, AUTO	
		LEVEL	MIDDLE	LOW, MIDDLE, HIGH	
	GAMMA	0.45	0.35, 0.45, 0.55, 0.65, 0.75, 0.85, 0.95, DEFOG-L, DEFOG-M, DEFOG-H		
	PRIVACY	NO.	0	0-15	
		DISPLAY	OFF	OFF, ON	
		H-POSI	12	0-60	
		V-POSI	2	0-34	
		H-SIZE	3	0-60	
		V-SIZE	3	0-34	
		Y-LEVEL	10	0-20	
		CB-LEVEL	10	0-20	
		CR-LEVEL	10	0-20	
	TR-LEVEL	0	0-3		
	MIRROR	OFF	OFF, ON		
	FLIP	OFF	OFF, ON		
	FREEZE	OFF	OFF, ON		
COLORBAR	OFF	OFF, ON			
SYSTEM	COMM	CAMERA ID	0	0-63	
		BAUDRATE	115200	2400, 4800, 9600, 19200, 38400, 57600, 115200	
		PROTOCOL	GCC-CP	GCC-CP, PELCO-D, PELCO-P, VISCA	
	VIDEO	PORT	1	1, 2	
		FRAMERATE	30/60Hz	30/60Hz, 25/50Hz, (Option 29.97/59.94Hz)	
		FORMAT	2160p 30	30/60Hz : 1080p30, 1080p60, 1440p30, 2160p15, 2160p30, 1080i60, 1080PsF30 25/50Hz : 1080p25, 1080p50, 1440p25, 2160p12.5, 2160p25, 1080i50, 1080PsF25 29/59Hz : 1080p29, 1080p59, 1440p29, 2160p14, 2160p29, 1080i59, 1080PsF29	
		SDI MODE	EX-2.1 1.5G	OFF, HD-SDI, 3G-SDI, EX-2.0 135M, EX-2.1 135M, EX-3.0 135M,	
		TMDS MODE	RGB	OFF, RGB, YCbCr	
		IMAGE RANGE	FULL	FULL, COMP	
		COLOR SPACE	HD-PbPr	YUV, SD-CbCr, HD-PbPr	
	CONFIRM	ON	↓		
	AUDIO	OFF	OFF, ON		
	LANGUAGE	ENGLISH	ENGLISH, JAPANESE, KOREAN, CHINESE(T), CHINESE(S)		
	TITLE	CAM TITLE	OFF	OFF, ON	
		TIME CODE	OFF	OFF, ON	
		POSITION	TOP-R	TOP-R, TOP-L, BOTTOM-R, BOTTOM-L	
	MOTION	WINDOW	MODE	OFF	OFF, ON
			No.	0	0-3
			USE	ON	OFF, ON
			H-POSI	0	0-30
			V-POSI	0	0-17
			H-SIZE	30	0-30
		V-SIZE	16	0-17	
	SENSITIVITY	5	0-5		
	DISPLAY	OFF	OFF, ON		
	TEXT ALARM	OFF	OFF, ON		
	VERSION	S/N	----	----	
FIRMWARE		----	----		
VERSION		----	----		
RESET	ON	↓			