

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	TMDS : 2160p30/29/25/15/14/12.5, 1440p30/29/25, 1080p60/59/50/30/29/25, 1080i60/59/50, 1080PsF30/29/25 EX-SDI : 2160p30/29/25/15/14/12.5, 1440p30/29/25, 1080p60/59/50/30/29/25, 1080i60/59/50, 1080PsF30/29/25 3G-SDI : 1080p60/59/50 HD-SDI : 1080p30/29/25, 1080i60/59/50, 1080PsF30/29/25	
		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

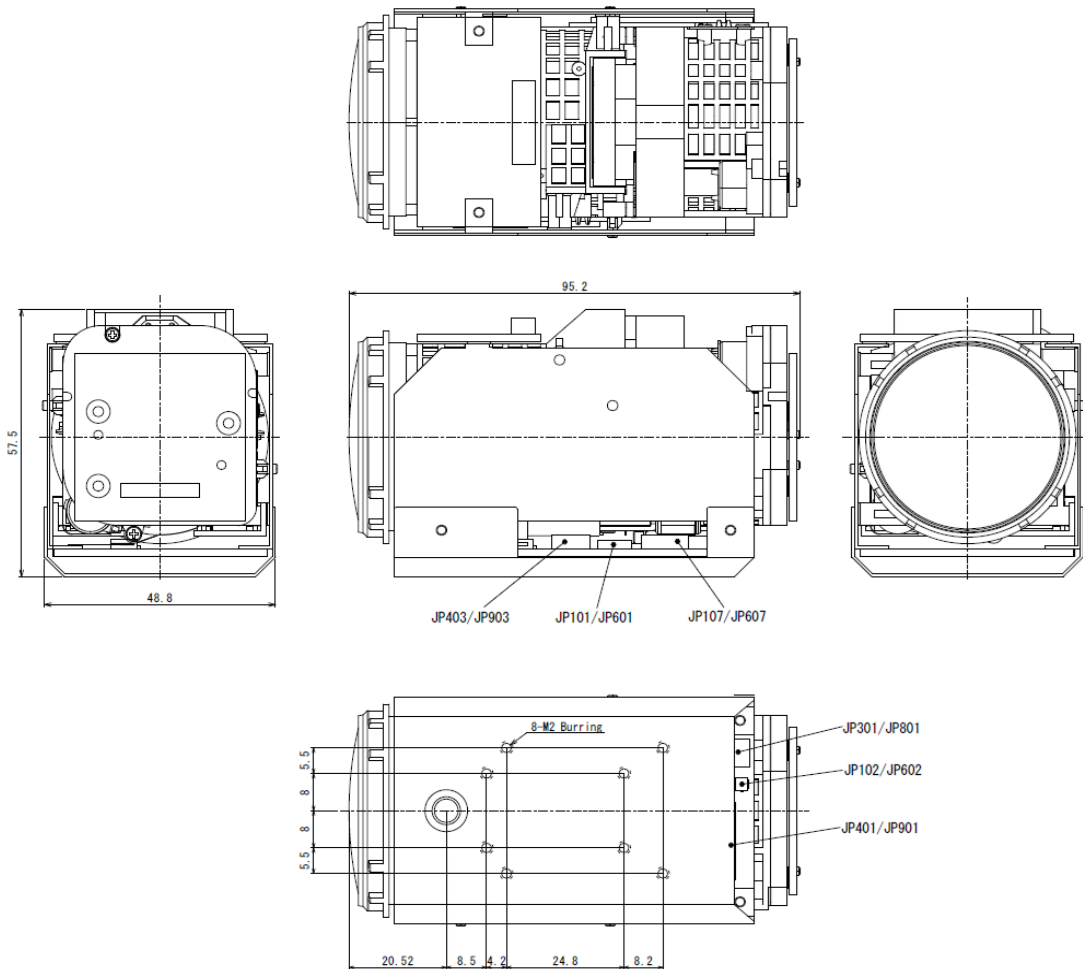
JP107/607 (SM05B-SRSS-TB/JST)		
1	GND	Ground
2	TX2	UART TX (3.3V)
3	RX2	UART RX (3.3V)
4	DC33out	3.3V DC
5	485EN2	RS485 Enable (3.3V)

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	IRIS	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
	ZOOM	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
	FOCUS	MODE	AFTER TELE	MANUAL, AUTO, INTERVAL, AFTER ZOOM, AFTER TELE, DIRECT
		ONE TIME AF	ON	↓
		POSITION	----	----
		SPEED	2	0-4
	DAY&NIGHT	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
	START UP	INITIALIZE	ON	OFF, ON
		MOVE	OFF	OFF, ON
		PRESET No.	0	0-63
	PRESET	No.	0	0-63
		SAVE	ON	↓
		LOAD	ON	↓
	DIS	MODE	OFF	OFF, ON
		RANGE	10%	10%, 20%, 30%
		LEVEL	HIGH	LOW, MIDDLE, HIGH
		AUTO CENTER	50%	OFF, 50%, 100%
	EXPOSURE	BRIGHTNESS	10	0-20
SHUTTER		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	
AGC		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	
BACKLIGHT		MODE	OFF	OFF, ON
		H-POSI	16	0-38
		V-POSI	12	0-35
		H-SIZE	6	0-38
ECLIPSE		V-SIZE	10	0-35
		MODE	OFF	OFF, ON
		LEVEL	10	0-20
WDR		COLOR	BLACK	WHITE, YELLOW, CYAN, GREEN, MAGENTA, RED, BLUE, BLACK
		MODE	OFF	OFF, ON
COLOR		LEVEL	HIGH	LOW, MIDDLE, HIGH
		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	

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	
		PORT	1	1, 2	
	VIDEO	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,	
		SDI EMPHASIS	OFF	OFF, ON	
		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	MODE	OFF	OFF, ON	
		WINDOW	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	↓		

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