

CCK30662AF

1/2.8" High Sensitivity 2M CMOS x30 Zoom/AF Camera Module



■ Overview

- 2M camera module equipped with SONY Startvis2 color image sensor.
- Equipped with 1/2.8" 30x optical zoom lens for 2M.
- 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 1080p, 1080i, 720p video formats.
- Flexible support for additional functions.

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■ Specifications

| | | |
|------------------------|------------------------------------|--|
| Sensor | Image Sensor | 1/2.8" SONY CMOS Image Sensor (IMX662-AAQR1) Starvis2 for NIR |
| | Number of pixels | 1936(H) x 1120(V), 2.13M Pixels |
| | Pixel Size | 2.9 μ m(H) x 2.9 μ m(V) |
| | Scan Format | 1920x1080@60/50/30/25fps (Option 1920x1080@59.94/29.97fps) |
| Lens | F No. | Wide: F1.6, Tele: F4.4 |
| | Focal Length | Wide (x1) :4.5mm, Tele (x30) : 135mm |
| | 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/61.7° , H/56.8° , V/32.8° Tele (x30) : D/2.5° , H/2.2° , V/1.2° |
| | Optical Filter | 1: IR Cut Filter (for Day Color) 2: Through Glass |
| Video | Video Format | TMD5 : 1080p60/59/50/30/29/25, 1080i60/59/50, 1080PsF30/29/25, 720p60/59/50/30/29/25 EX-SDI : 1080p60/59/50/30/29/25, 1080i60/59/50, 1080PsF30/29/25, 720p60/59/50/30/29/25 3G-SDI : 1080p60/59/50 (Option) HD-SDI : 1080p30/29/25, 1080i60/59/50, 1080PsF30/29/25, 720p60/59/50/30/29/25 |
| | 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) |
| Function | Setting | OSD, UART(2ch) |
| | 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, 1/30000 25fps : 1/25, 1/50, 1/100, 1/200, 1/400, 1/800, 1/1600, 1/3200, 1/6400, 1/12800, 1/25600 |
| | 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 | 250mA (30fps) |
| | Operation Temperature | -10°C ~ +50°C |
| | Storage Temperature | -30°C ~ +70°C |
| | Humidity | 80% Max |
| | Outside Dimensions | W48.8mm x H55.0mm x D93.1mm |
| 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 |

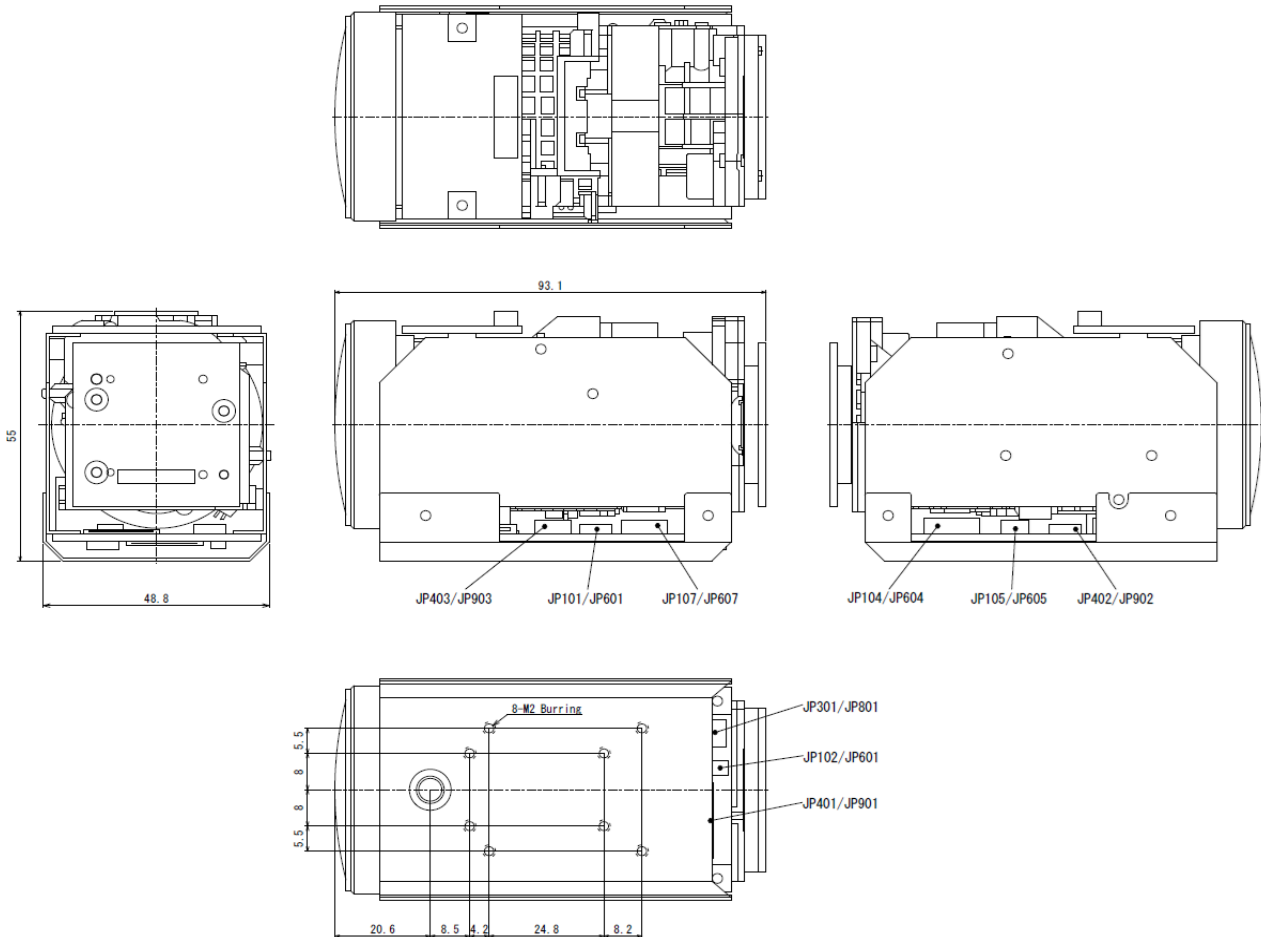
| JP107/607 (SM05B-SRSS-TB/JST) | | |
|-------------------------------|---------|---------------------|
| 1 | GND | Ground |
| 2 | TX2 | UART TX (3.3V) |
| 3 | RX2 | UART RX (3.3V) |
| 4 | DC33out | 3.3V DC |
| 5 | 485EN2 | RS485 Enable (3.3V) |

| 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, 1/30000 |
| | | 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, 1/25600 | |
| 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 | |

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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 | |
| | | PORT | 1 | 1, 2 | |
| | VIDEO | FRAMERATE | 30/60Hz | 30/60Hz, 25/50Hz, (Option 29.97/59.94Hz) | |
| | | FORMAT | 1080p 30 | 30/60Hz : 720p30, 720p60, 1080p30, 1080p60, 1080i60, 1080PsF30 25/50Hz : 720p25, 720p50, 1080p25, 1080p50, 1080i50, 1080PsF25 29/59Hz : 720p29, 720p59, 1080p29, 1080p59, 1080i59, 1080PsF24 | |
| | | SDI MODE | HD-SDI | 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 | MODE | | OFF | OFF, ON |
| | | | No. | 0 | 0-3 |
| | | WINDOW | 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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