

# MARS-24600-12X2M/C-TF

## 246MP CMOS CXP2.0 Area Scan Camera



MARS-24600-12X2M/C-TF camera is equipped with Sony IMX811 245.76MP rolling shutter sensor and uses CoaXPress interface for high-speed transmission of image data, featuring high quality images, low power consumption, high transmission speed, stable operating capability.

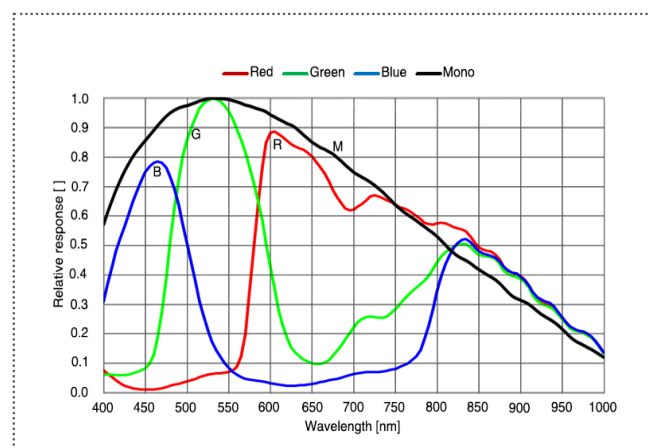
### Applications

Suitable for machine vision applications such as consumer electronics, industrial inspection, medical, scientific research, education and so on.

### Features

- PRNU, DSNU, FFC, Static Defect Correction
- The Sequencer Control supports parameter configuration of exposure, gain, and FFC up to 16 groups
- Color models support Light Source Preset, Color Transformation Control and Saturation
- Gamma, Black Level, Timer, Counter, LUTs and User Set Control
- DAHENG IMAGING or third-party frame grabbers are available

### Spectral Response



## Specifications

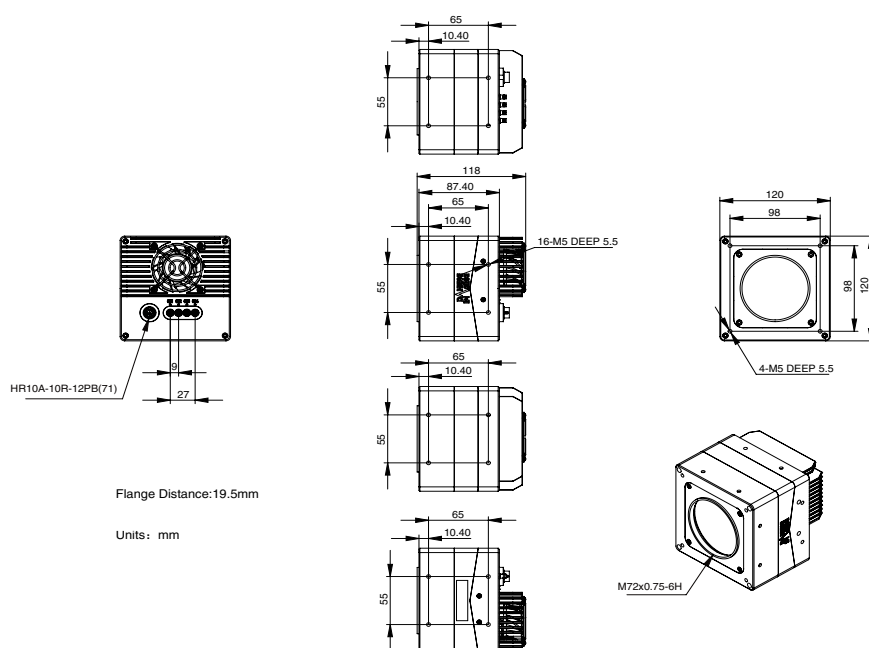
| Model               | MARS-24600-12X2C-TF                                                                                                                              | MARS-24600-12X2M-TF              |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Resolution          | 19200(H) × 12800(V)                                                                                                                              |                                  |
| Sensor              | Sony IMX811 245.76MP Rolling shutter CMOS                                                                                                        |                                  |
| Max. Image Circle   | 64.84 mm                                                                                                                                         |                                  |
| Pixel Size          | 2.81μm × 2.81μm                                                                                                                                  |                                  |
| Frame Rate          | 10.54fps @ 19200 × 12800                                                                                                                         |                                  |
| ADC                 | 12 bit, 14 bit, 16 bit                                                                                                                           |                                  |
| Pixel Bit Depth     | 8 bit, 12 bit, 14 bit, 16 bit                                                                                                                    |                                  |
| Mono/Color          | Color                                                                                                                                            | Mono                             |
| Pixel Formats       | Bayer RG8 / Bayer RG12 /<br>Bayer RG14 / Bayer RG16                                                                                              | Mono8 / Mono12 / Mono14 / Mono16 |
| SNR                 | 43.9 dB                                                                                                                                          | 44.2 dB                          |
| Exposure Time       | CXP12.5 × 4, Actual Steps: 4 row periods<br>Bayer RG8: 144μs ~ 60s. Bayer RG12: 123μs ~ 60s.<br>Bayer RG14: 144μs ~ 60s. Bayer RG16: 287μs ~ 60s |                                  |
| Gain                | Digital Gain: 0dB~24dB; Default: 0dB, Steps: 0.1dB<br>Analog Gain: 0dB~16dB; Default: 0dB, Steps: 0.1dB                                          |                                  |
| Binning             | Not Supported                                                                                                                                    |                                  |
| Decimation          | 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4                                                                                                      |                                  |
| Synchronization     | Hardware trigger, software trigger                                                                                                               |                                  |
| Acquisition Control | Single frame, Continuous, Software trigger, Hardware trigger, CXP trigger                                                                        |                                  |
| Reverse X/Y         | Reverse X/Y                                                                                                                                      |                                  |
| I/O Interface       | 1 input and 1 output with opto-isolated, 1 bidirectional GPIO, 1 RS232                                                                           |                                  |
| Data Interface      | CXP-12 × 4 (HDBNC)                                                                                                                               |                                  |
| Power Supply        | 24 VDC or PoCXP                                                                                                                                  |                                  |
| Power Consumption   | Typical: 40.6W@24V, ambient temp. 25°C, Sensor temp. 10°C, TEC (ON), FAN (ON)<br>44W@Rapid cooling stage, TEC (ON), FAN (ON)                     |                                  |
| Operating Temp.     | 0°C ~ +45°C                                                                                                                                      |                                  |
| Storage Temp.       | -20°C ~ +70°C                                                                                                                                    |                                  |
| Operating Humidity  | 10% ~ 80%                                                                                                                                        |                                  |
| Cooling             | Thermoelectric Cooling (TEC) with a fan                                                                                                          |                                  |
| Lens Mount          | M72                                                                                                                                              |                                  |
| Dimensions          | 120(W) × 120(H) × 118(L) mm                                                                                                                      |                                  |
| Weight              | 2340 g                                                                                                                                           |                                  |
| Software            | DAHENG IMAGING or third-party frame grabbers supporting software                                                                                 |                                  |
| OS                  | Win7 / Win8 / Win10 / Win11                                                                                                                      |                                  |
| Conformity          | CE, RoHS, FCC, ICES, UKCA, CoaXPress2.0, GenICam                                                                                                 |                                  |

## I/O Interface



| PIN | Definition | Description                            |
|-----|------------|----------------------------------------|
| 1   | Line 0+    | Opto-isolated input +                  |
| 2   | GND        | PWR GND & GPIO GND                     |
| 3   | Line 0-    | Opto-isolated input -                  |
| 4   | POWER_IN   | Camera external power<br>24V $\pm$ 10% |
| 5   | Line 2     | GPIO input/output                      |
| 6   | RS232 Rx   | RS232 receive                          |
| 7   | Line 1-    | Opto-isolated output -                 |
| 8   | Line 1+    | Opto-isolated output +                 |
| 9   | GND        | PWR GND & GPIO GND                     |
| 10  | GND        | PWR GND & GPIO GND                     |
| 11  | POWER_IN   | Camera external power<br>24V $\pm$ 10% |
| 12  | RS232 Tx   | RS232 transmit                         |

## Technical Drawing



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