# MARS-1410-342X2M/C-NF

## 14MP CMOS CXP2.0 Area Scan Camera

MARS-1410-342X2M/C-NF camera is equipped with Gpixel GSPRINT5514 BSI 14MP global 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, Binning, Timer, Counter, LUTs and User Set Control
- DAHENG IMAGING or third-party frame grabbers are available

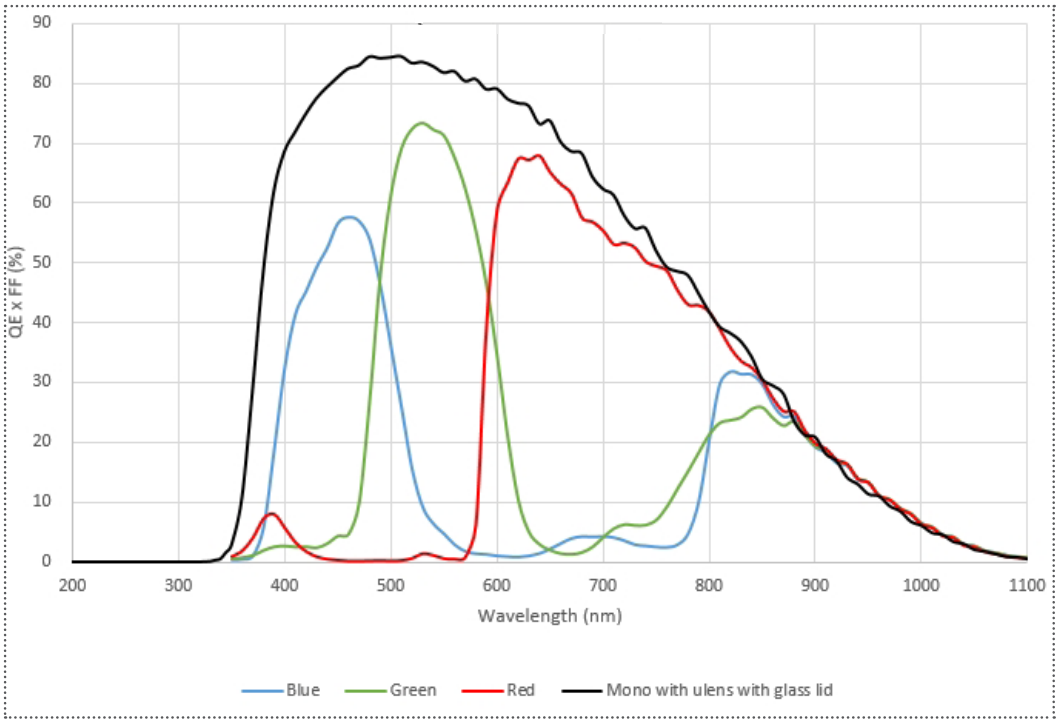
## Specifications

| Model | MARS-1410-342X2C-NF | MARS-1410-342X2M-NF |
|---|---|---|
| Resolution | 4608(H) × 3072(V) | |
| Sensor | Gpixel GSPRINT5514 BSI 14MP Global shutter CMOS | |
| Sensor Format | 25.34 mm (H) × 16.90 mm (V) | |
| Pixel Size | 5.5μm × 5.5μm | |
| Frame Rate | 342.5 fps | |
| ADC | 12 bit | |
| Pixel Bit Depth | 8 bit, 12 bit | |
| Mono/Color | Color | Mono |
| Pixel Formats | Bayer GR8 / Bayer GR12 | Mono8 / Mono12 |
| SNR | 41.6 dB | 41.7 dB |
| Exposure Time | 1μs~1s, Actual Steps: 1μs | |
| Gain | Digital Gain: 0dB~16dB; Default: 0dB, Steps: 0.1dB<br>Analog Gain: 5 levels, with parameter values of 1×(1.0), 2×(1.55), 3×(2.17), 4×(2.77), 5×(5), Default: 1dB | |
| Binning | 1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4 | |
| Decimation | Not Supported | |
| 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 | 16W@24V, ambient temp. 25°C, FAN (ON), 14W@24V, ambient temp. 25°C, FAN (OFF) | |
| Operating Temp. | 0°C ~ +45°C | |
| Storage Temp. | -20°C ~ +70°C | |
| Operating Humidity | 10% ~ 80% | |
| Cooling | Fan cooling | |
| Lens Mount | M58 / F | |
| Dimensions | M58: 74(W) × 74(H) × 76.9(L) mm, F: 74(W) × 74(H) × 112(L) mm | |
| Weight | M58: 540 g, F: 634 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 | |

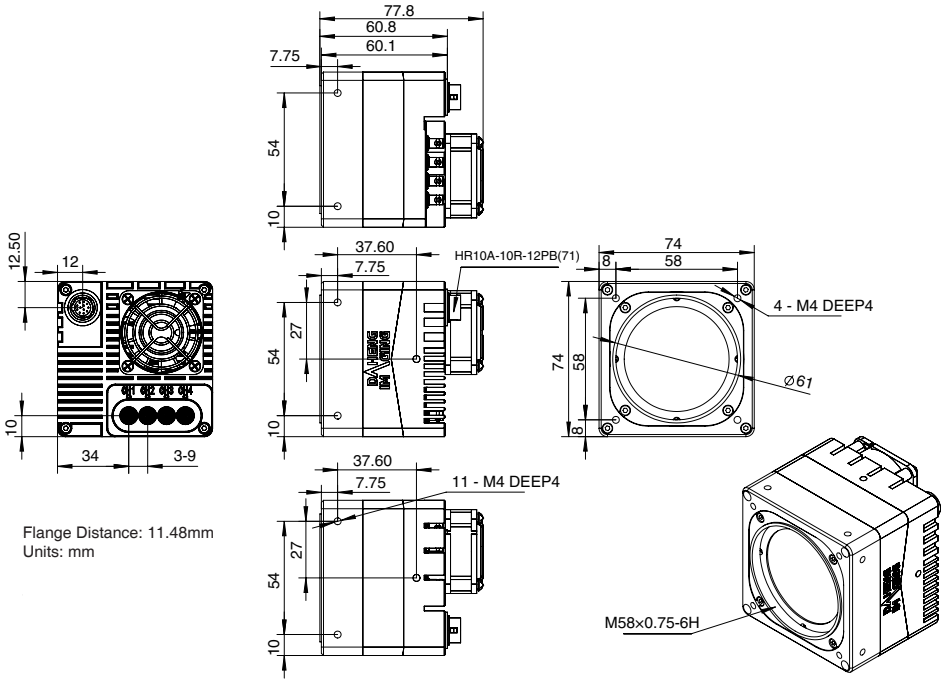
## I/O Interface


| 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 24V ± 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 24V ± 10% |
| 12 | RS232 Tx | RS232 transmit |

## Spectral Response

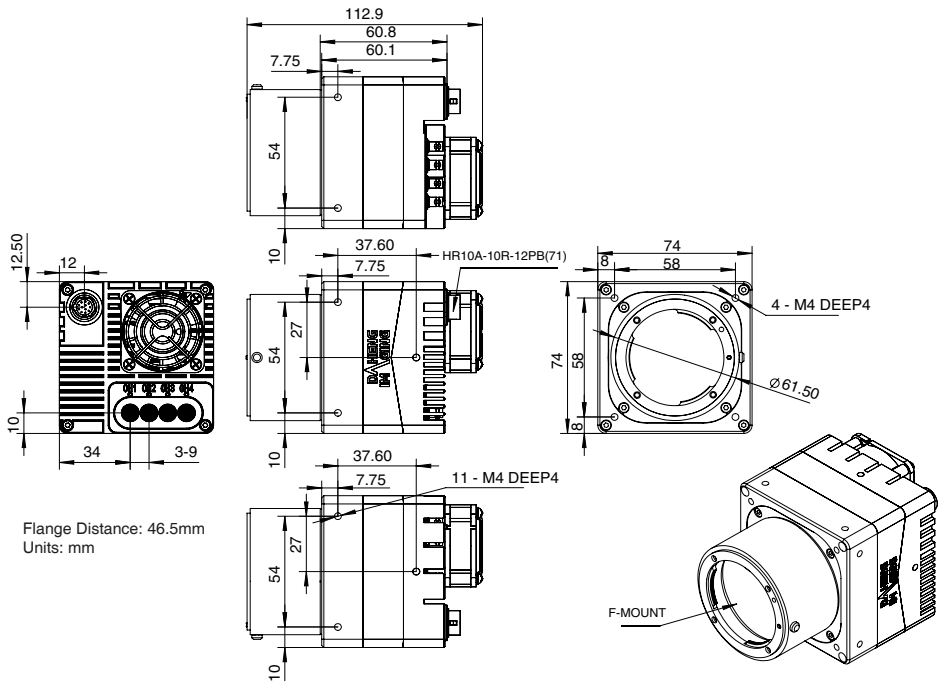


## Technical Drawing




Flange Distance: 11.48mm
Units: mm

MARS-1410-342X2M/C-NF (M58-mount)




Flange Distance: 46.5mm
Units: mm

MARS-1410-342X2M/C-NF (F-mount)

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