MARS-2100-230X2M/C(-NF)

21MP CMOS CXP2.0 Area Scan Camera



MARS-2100-230X2M/C(-NF) camera is equipped with CMOS 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

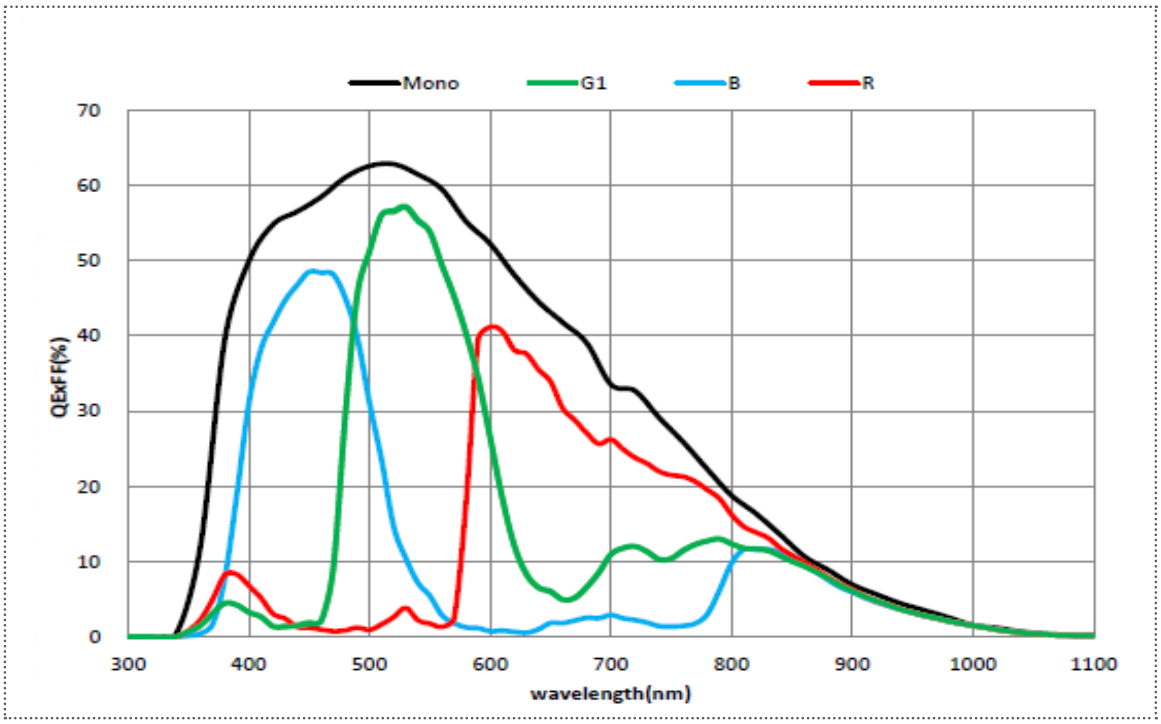
Model	MARS-2100-230X2C	MARS-2100-230X2M	MARS-2100-230X2C-NF	MARS-2100-230X2M-NF
Resolution	5120(H) × 4096(V)			
Sensor	Gpixel GSPRINT4521 21MP Global shutter CMOS			
Sensor Format	29.5 mm			
Pixel Size	4.5μm × 4.5μm			
Frame Rate	227.7 fps			
ADC	10 bit, 12 bit			
Pixel Bit Depth	8 bit, 10 bit, 12 bit			
Mono/Color	Color	Mono	Color	Mono
Pixel Formats	Bayer GB8 / Bayer GB10 / Bayer GB12	Mono8 / Mono10 / Mono12	Bayer GB8 / Bayer GB10 / Bayer GB12	Mono8 / Mono10 / Mono12
SNR	44.9 dB	45.0 dB	44.9 dB	45.0 dB
Exposure Time	1μs~1s, Actual Steps: 1μs			
Gain	Digital Gain: 0dB~16dB; Default: 0dB, Steps: 0.1dB Analog Gain: 4 levels, with parameter values of 1×(1.0), 2×(1.3), 3×(2.0), 4×(4.2); Default: 1dB			
Binning	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	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	Passive Cooling, optional: Heat Dissipation Fins		Fan cooling	
Lens Mount	M58 / F		M58 / F	
Dimensions	M58：74(W) × 74(H) × 67.1(L) mm F：74(W) × 74(H) × 102.2(L) mm		M58: 74(W) × 74(H) × 77.8(L) mm F: 74(W) × 74(H) × 112.9(L) mm	
Weight	M58：537 g，F：631 g		M58: 589 g, F: 683 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

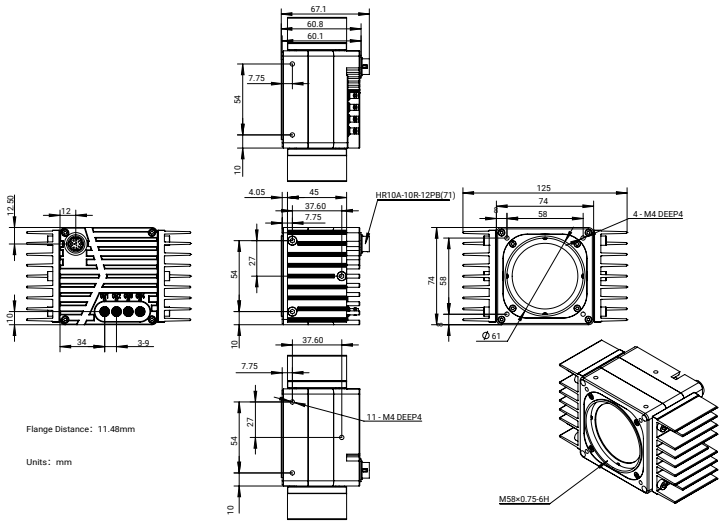


PIN	Definition	Description
1	Line 0+	Opto-isolated input +
2	GND	PWR GND & GPIO GND
3	Line 0-	Opto-isolated input -
4	POWER_IN	Camera external power 24V±10%
5	Line 2	GPIO input/output
6	RS232 Rx	RS232 receive
7	Line 1-	Opto-isolated output -
8	Line 1+	Opto-isolated output +
9	GND	PWR GND & GPIO GND
10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

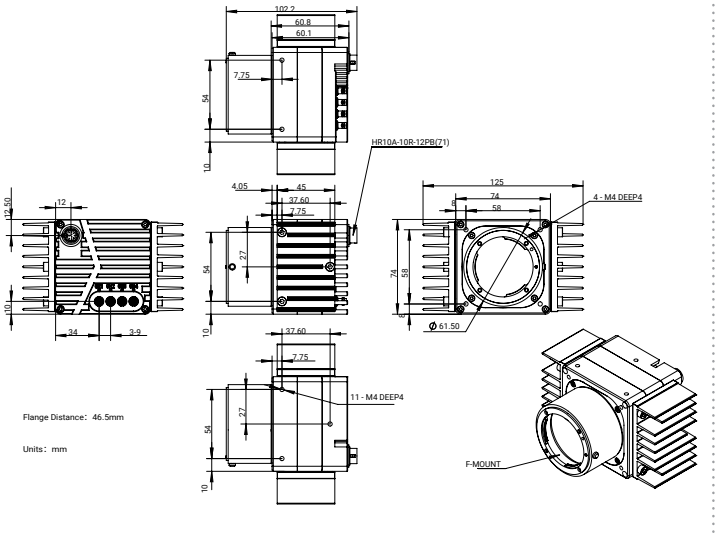
Spectral Response



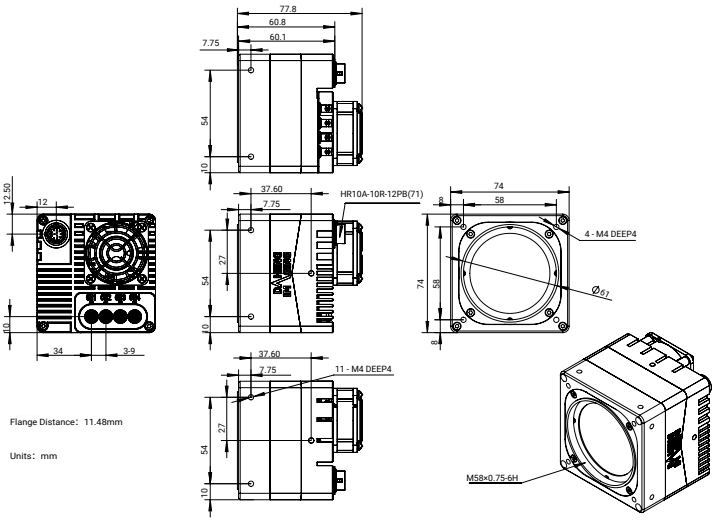
Technical Drawing



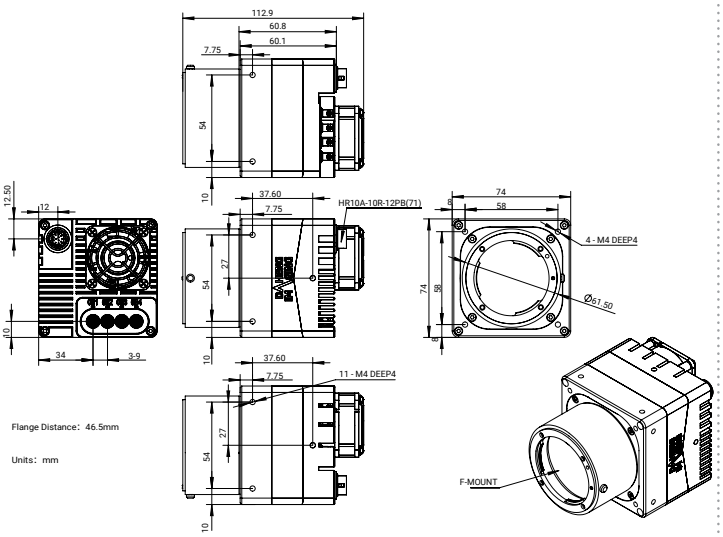
MARS-2100-230X2M/C (M58-mount)



MARS-2100-230X2M/C (F-mount)



MARS-2100-230X2M/C-NF (M58-mount)



MARS-2100-230X2M/C-NF (F-mount)

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