

MARS-10301-24X2M/C-TF

103MP CMOS CXP2.0 Area Scan Camera



MARS-10301-24X2M/C-TF camera uses CoaXPress interface for high-speed transmission of image data. The camera is equipped with TEC and cooling fan, which can effectively reduce thermal noise and generate high-quality images.

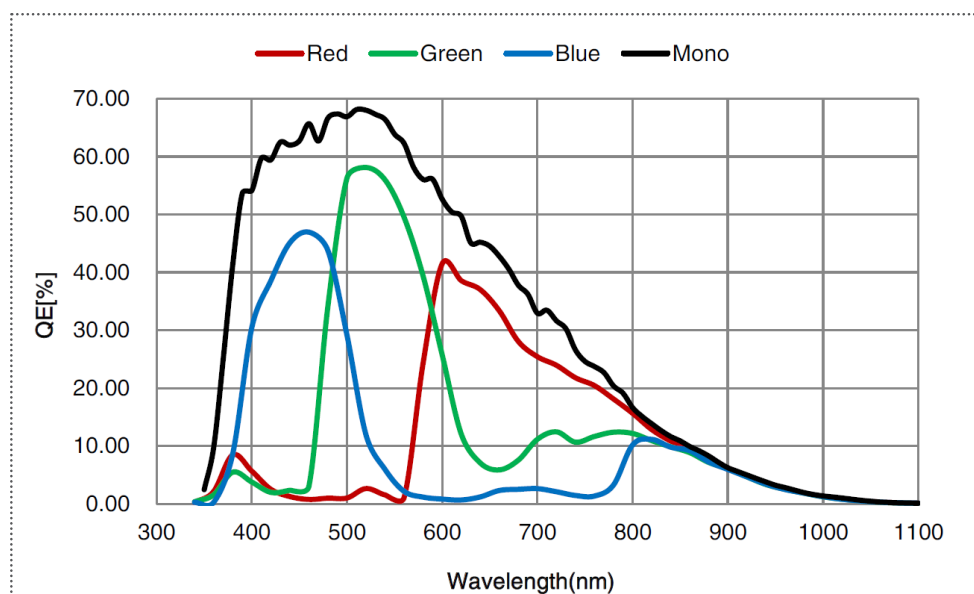
Applications

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

Features

- PRNU, DSNU, FFC, FFC ROI, Hot Pixel Correction, 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, Timer, Counter, LUTs and User Set Control
- DAHENG IMAGING or third-party frame grabbers are available

Spectral Response



Specifications

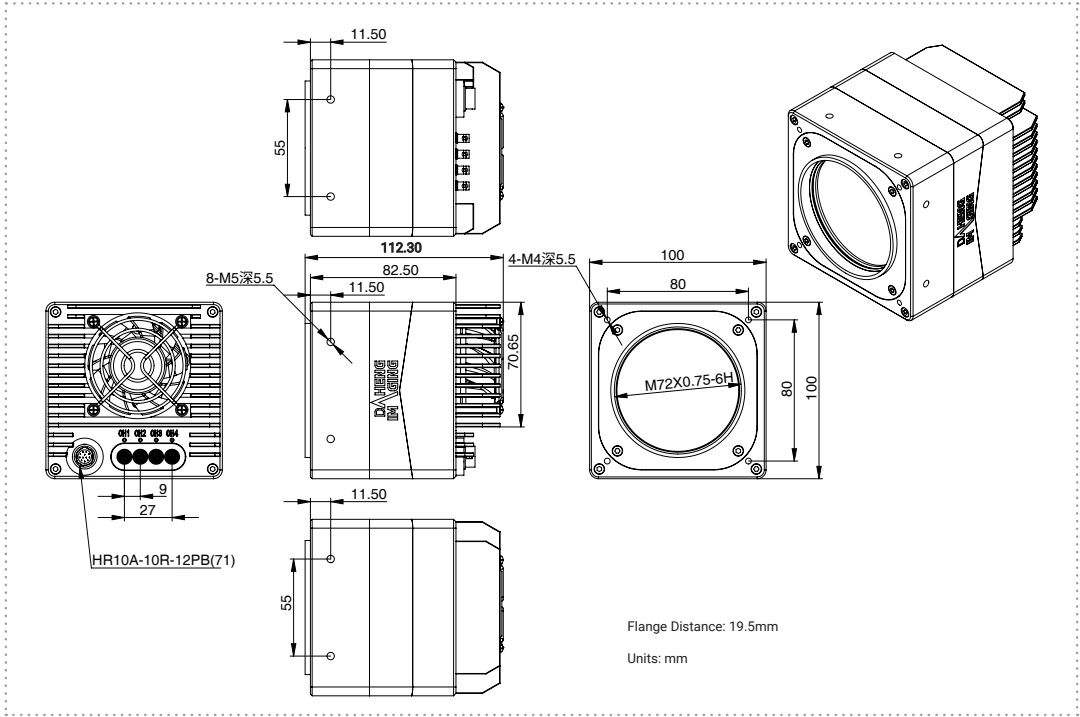
Model	MARS-10301-24X2C-TF	MARS-10301-24X2M-TF
Resolution	11264(H) × 9200(V)	
Sensor	Gpixel GMAX32103 103MP Global shutter CMOS	
Sensor Format	36.1mm × 29.4mm	
Pixel Size	3.2μm × 3.2μm	
Frame Rate	24 fps	
ADC	12 bit	
Pixel Bit Depth	8 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer GB8 / Bayer GB12	Mono8 / Mono12
SNR	40.3 dB	40.3 dB
Exposure Time	20μs~1s, Actual Steps: 1 row period	
Gain	Digital Gain: 0dB~16dB; Default: 0dB, Steps: 0.1dB Analog Gain: 0.5dB~2.8dB; Default: 1.4dB, Steps: 0.1dB	
Binning	1×1, 1×2, 1×4, 2×1, 2×2, 2×4, 4×1, 4×2, 4×4	
Decimation	Horizontal FPGA, Vertical Sensor: 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	Typ.: 22W@24V, ambient temp. 25°C, sensor constant temp. 10°C, TEC&FAN (ON) Max.: 30W@fast cooling (TEC&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	100(W) × 100(H) × 112.3(L) mm	
Weight	1610 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

Technical Drawing



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