

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-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
Pixel Formats	Bayer GB8 / Bayer GB10 / Bayer GB12	Mono8 / Mono10 / Mono12
SNR	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	Fan cooling	
Lens Mount	M58 / F	
Dimensions	M58: 74(W) × 74(H) × 77.8(L) mm, F: 74(W) × 74(H) × 112.9(L) mm	
Weight	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



