MARS-10500-113COFM/C-NF/NNL

105MP CMOS CoaXPress-over-Fiber Area Scan Camera



The MARS-10500-113COFM/C-NF/NNL monochrome/color camera uses Sony IMX927 global shutter CMOS sensor and supports 100G optical transmission, featuring high bandwidth, long transmission range and strong anti-interference. With optional fan/liquid cooling for diverse industrial inspection applications, it is ideal for advanced packaging inspection including CoWoS (Chip-on-Wafer-on-Substrate).

Preliminary

Applications

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

Features

- FFC, 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
- Magewell or Euresys frame grabbers are available

Specifications

Model	MARS-10500-113COFC-NF MARS-10500-113COFC-NNL	MARS-10500-113COFM-NF MARS-10500-113COFM-NNL
Resolution	10240(H) × 10240(V)	
Sensor	Sony IMX927 105MP Global shutter CMOS	
Max. Image Circle	28.072mm × 28.072mm	
Pixel Size	2.74μm × 2.74μm	
Frame Rate	112.4fps	
ADC	8 bit, 10 bit, 12 bit	
Pixel Bit Depth	8 bit, 10 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	BayerRG8 / BayerRG10 / BayerRG12	Mono8 / Mono10 / Mono12
SNR	12bit: 39.5 dB, 10bit: 40.1 dB	12bit: 39.7 dB, 10bit: 40.2 dB
Exposure Time	5μs~1s, Actual Steps: 1μs, Remove Parameter Limits: max.60s	
Gain	Digital Gain: 0dB~16dB; Default: 0dB, Steps: 0.1dB, Remove Parameter Limits: max.24dB Analog Gain (BPP10): 0dB~18dB; Default: 0dB, Steps: 0.3dB, Remove Parameter Limits: max.42dB Analog Gain (BPP12): 0dB~24dB; Default: 0dB, Steps: 0.3dB, Remove Parameter Limits: max.48dB	
Binning	-	2×2
Decimation	1×1, 2×2	
Synchronization	Hardware trigger, software trigger	
Acquisition Control	Single frame, Continuous, Software trigger, Hardware 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	CoaXPress over Fiber	
Power Supply	24 VDC	
Power Consumption	TBD	
Operating Temp.	0°C ~ +45°C	
Storage Temp.	-20°C ~ +70°C	
Operating Humidity	10% ~ 80%	
Cooling Method	NF: Fan, NNL: Liquid Cooling	
Cooling Temp.	Liquid Cooling Typ.: ambient temp. 25°C, sensor temp. below 45°C	
Lens Mount	M58	
Dimensions	58(W) × 58(H) × 110(L) mm	
Weight	NF: 543.3 g, NNL: 676 g	
Software	Magewell or Euresys frame grabbers supporting software	
OS	Win7 / Win8 / Win10 / Win11	
Conformity	CE, RoHS, FCC, ICES, UKCA, CoaXPress2.0, CoaXPress over Fiber, Bridge Protocol 1.1, GenICam	

Preliminary

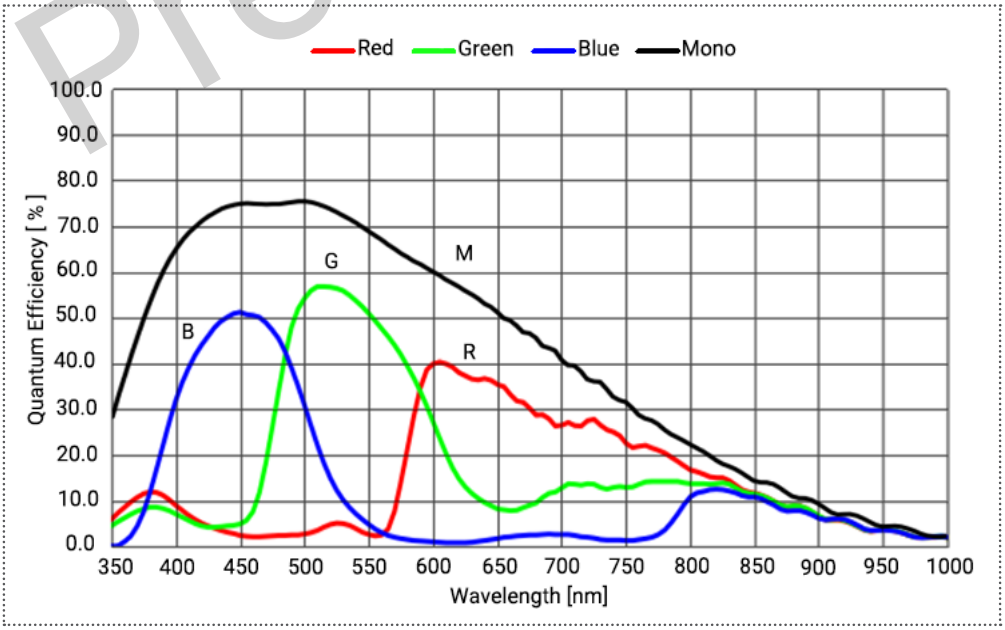
I/O Interface



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

Preliminary

Spectral Response



China Daheng Group, Inc. Beijing Image Vision Technology Branch

12F Daheng Science & Technology Tower, No.3 Suzhou Street, Haidian District, Beijing China, 100080

Tel: +86 10 82828878

E-mail: isales@daheng-imaging.com

DAHENG IMAGING shall not be liable to damages resulting from errors, inconsistencies or omissions. Specifications are subject to change without prior notice.
Please refer to the manual for more details. Copyright © 2026 China Daheng Group, Inc. Beijing Image Vision Technology Branch. All rights reserved.