MARS-5000-24GTM/C-TF

50MP CMOS 10GigE Area Scan Camera

The MARS-5000-24GTM/C-TF is a monochrome/color GigE Vision camera with the Gpixel GMAX3249 CMOS sensor. The MARS-5000-24GTM/C-TF is capable of 10Gbit/s maximum transfer data rate, and has opto-isolated I/Os. The camera is equipped with TEC and cooling fan, which can effectively reduce thermal noise and generate high-quality images.

Applications

Suitable for screen display, measurement, semiconductor and other fields.

Features

- Time Stamp, Binning, Decimation, Reverse X/Y
- The Sequencer Control supports multiple sets of parameters configuration of FFC
- Trigger mode: Frame Start /Frame Burst Start
- Gain, GainAuto, Gamma, Black Level, Digital Shift, Flat Field Correction
- Color models support Light Source Preset, Color Transformation Control and Saturation
- Static Defect Correction, Hot Pixel Correction, Sharpness, Noise Reduction(Mono)
- Timer, Counter, LUTs and User Set Control
- Remove Parameter Limit to expand the range of Parameter
- Data storage area for saving algorithm coefficients and parameter configuration
- TEC+Fan Cooling

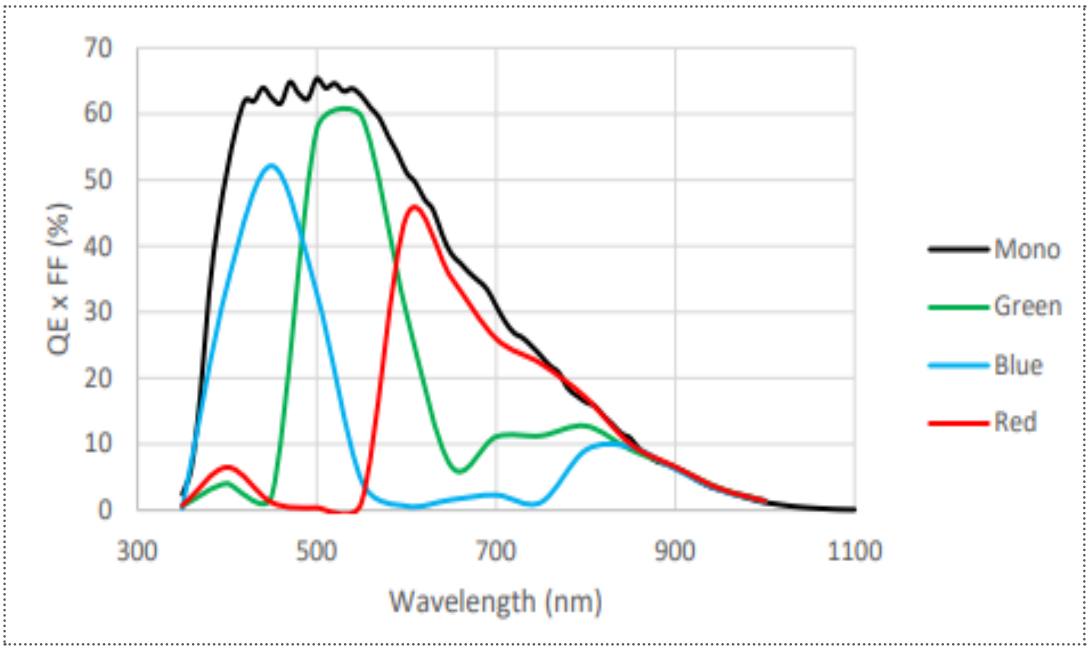
Specifications

Model	MARS-5000-24GTC-TF	MARS-5000-24GTM-TF
Resolution	7008(H) × 7000(V)	
Sensor	Gpixel GMAX3249 Global shutter CMOS	
Sensor Format	2"	
Pixel Size	3.2μm × 3.2μm	
Frame Rate	24.7 fps	
ADC	12 bit	
Pixel Bit Depth	8 bit, 12 bit	
Mono/Color	Color	Mono
Pixel Formats	Bayer GB8 / Bayer GB12 / Mono8 / Mono12 / RGB8 / BGR8 / Bayer GB12Packed / Mono12Packed	Mono8 / Mono12 / Mono12Packed
SNR	40.42 dB	40.05 dB
Exposure Time	14μs~1s, Actual Steps: 1 row period	
Gain	0dB~16dB, Default: 0dB, Steps: 0.1dB	
Binning	1×1, 1×2, 2×1, 2×2	
Decimation	Horizontal FPGA, Vertical Sensor: 1×1, 1×2, 2×1, 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 programmable GPIO	
Data Interface	10GigE	
Power Supply	24VDC ± 10%	
Power Consumption	< 38.4W @ 24VDC	
Operating Temp.	0°C ~ +45°C	
Storage Temp.	-20°C ~ +70°C	
Operating Humidity	10% ~ 80%	
Lens Mount	M58(19.5mm), F	
Dimensions	85(W) × 85(H) × 114.11(L) mm (M58-mount), 85(W) × 85(H) × 141.2(L) mm (F-mount)	
Weight	1220 g (M58), 1314 g (F)	
OS	Win10/Win11 32bit, 64bit OS, 64bit OS is recommended	
Conformity	CE, RoHS, FCC, ICES, UKCA, GigE Vision®, GenICam®	

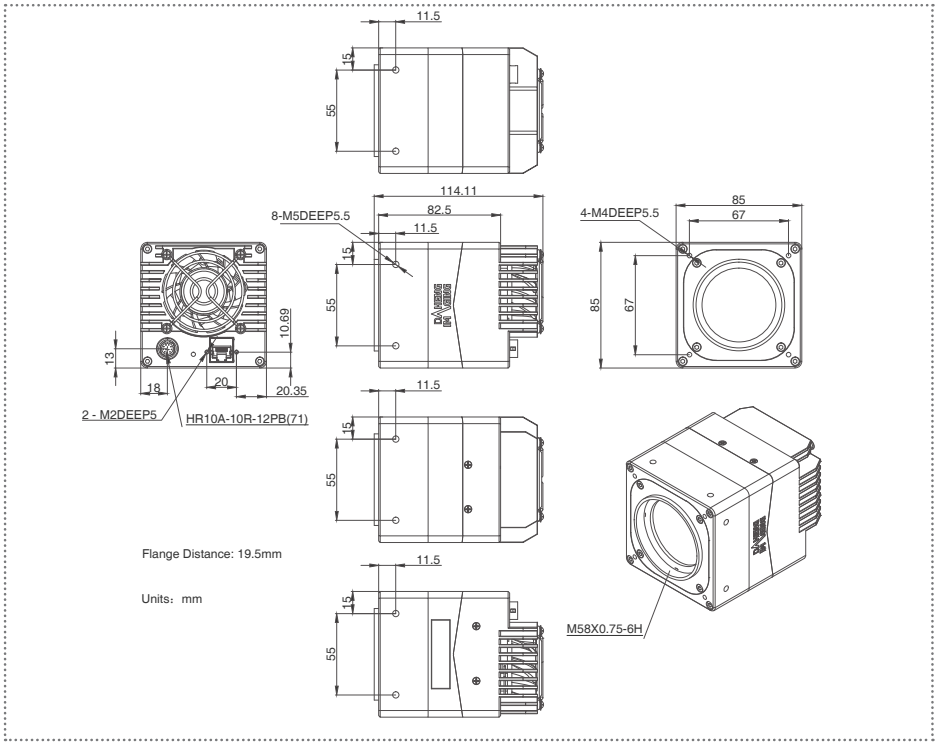
I/O Interface

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 24VDC (±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 +24VDC (±10%)
12	RS232 Tx	RS232 transmit

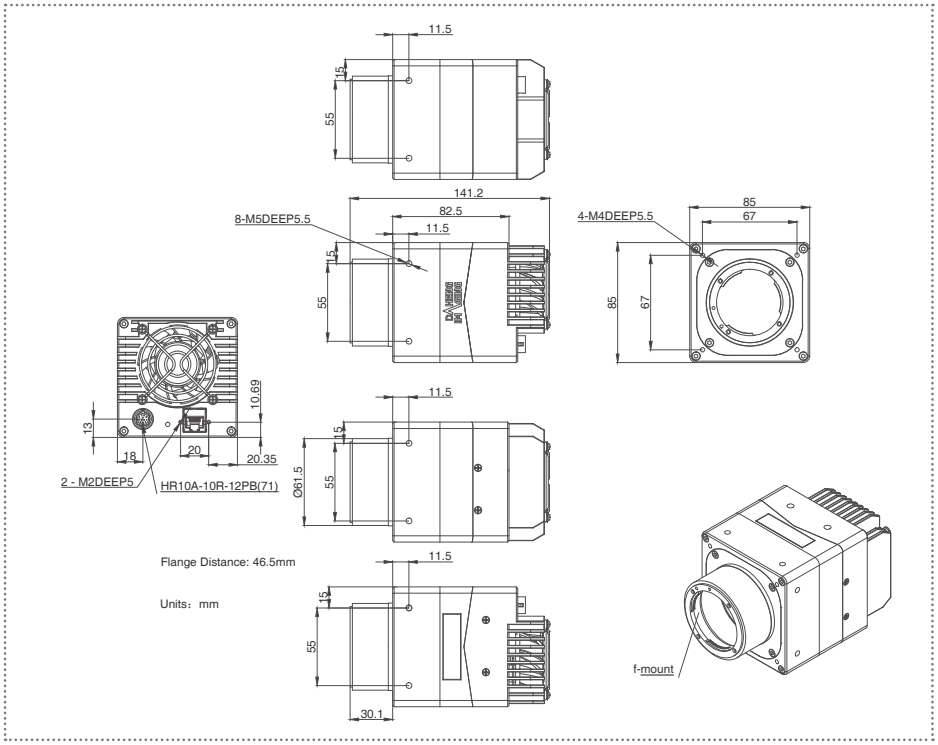
Spectral Response



Technical Drawing



MARS-5000-24GTM/C-TF M58, M58-mount, flange distance:19.5mm



MARS-5000-24GTM/C-TF F, F-mount

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