

VP-50MX-M/C 30

50 Megapixel Thermoelectric Peltier Cooled Camera



The VP-50MX, the latest member of the industrial proven VP series, is a 50 megapixel resolution CMOS camera with the CoaXPress interface. The VP-50MX uses the latest 50 megapixel CMOS image sensor (CMV50000) technology from AMS CMOSIS, and offers up to 30.9 frames per second at 7920 × 6004 resolution. This camera uses thermo-electric Peltier (TEC) cooling technology developed for, and used by, many demanding medical market customers. The TEC maintains the operating temperature of the CMOS image sensor at up to about 12 degrees below ambient temperature. This camera provides a stable operating condition or the ability to expose for a long period of time to increase camera sensitivity. Featuring the stable operating capability and high resolution, this camera is ideal for demanding applications such as FPD, PCB and semiconductor inspections.

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Main Features

- 50 Megapixel Resolution (AMS CMOSIS)
- Thermoelectric Peltier Cooled
 - about 12°C below ambient temperature
- Minimizing the number of hot pixels with TEC
- CoaXPress Interface up to 30 fps at 25 Gbps using 4 CH
- Defective Pixel Correction
- Flat Field Correction
- DSNU and PRNU Correction

Applications

- Flat Panel Display Inspection
- PCB Inspection
- Machine Vision Inspection
- Microscopy and Metrology

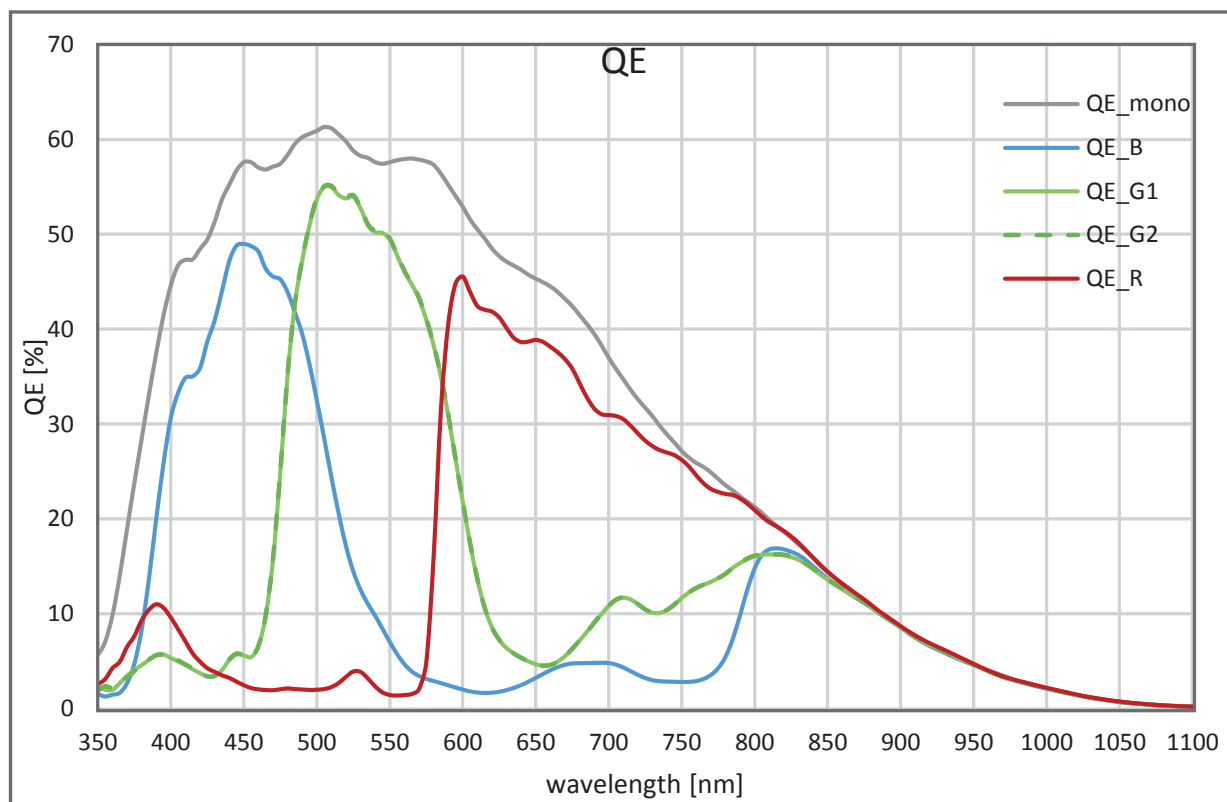
Specifications

Model		VP-50MX-M/C 30
Resolution (H × V)		7920 × 6004
Sensor		AMS CMOSIS CMV 50000
Sensor Size (Diagonal)		35 mm (45.72 mm)
Sensor Type		High Speed CMOS Image Sensor
Pixel Size		4.6 μm × 4.6 μm
Interface		CoaXPress
Max. Frame Rate	1 CH	7.7 fps @ 6.25 Gbps
	2 CH	15.5 fps @ 6.25 Gbps
	4 CH	30.9 fps @ 6.25 Gbps
Exposure Time (1 μs step)		1 μs – 60 s
Partial Scan (Max. Speed)		3968 fps at 4 Lines
Pixel Data Format	Mono	Mono 8 / Mono 10 / Mono 12
	Color	BG Bayer 8 / BG Bayer 10 / BG Bayer 12
Electronic Shutter		Global Shutter
Trigger Synchronization		Free-Run, Hardware Trigger, Software Trigger or CXP
External Trigger		3.3 V ~ 24.0 V, 10 mA, Logical Level Input, Optically Isolated
Software Trigger		Asynchronous, Programmable via Camera API
Dynamic Range		64 dB
Gain Control		1 × ~ 30 × (1/1024 step)
Black Level Control		0 ~ 256 LSB at 12 bit (1 LSB step)
Cooling Method		Thermoelectric Peltier Cooling
Cooling Performance		12°C below ambient temperature – Standard cooling with a fan
Dimension / Weight		90 mm × 90 mm × 146 mm, 1,400 g (with F-mount)
Temperature		Operating: -5°C ~ 40°C, Storage: -40°C ~ 70°C
Lens Mount		F-mount, Custom mount available upon request
Vibration / Shock		3G (20 ~ 200 Hz) XYZ / 10G 6 ms
Power	External	10 ~ 24 V DC
	Dissipation	Typ. 24.0 W
Compliance		CE, FCC, KC
API SDK		Viewworks Imaging Solution 7.X

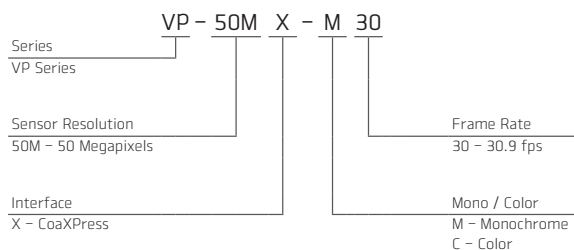
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Spectral Response

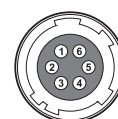


Ordering Scheme



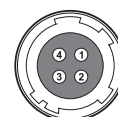
Connector Specification

Power



1, 2, 3: +12V DC
4, 5, 6: GND
(HR10A-7R-6PB)

Control



1: Trigger IN+
2: Trigger IN-
3: Strobe Out-(GND)
4: Strobe Out+
(HR10A-7R-4S)

Data Transfer / Communications



CH1 CH2 CH3 CH4

CH1: Master Connection
75 Ω , DIN 1.0/2.3

Connectors on camera body

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Mechanical Dimensions

Unit: mm

