

VC-4MX-M144F Series

Compact 4MP CMOS Digital Camera with CoaXPress Interface



The VC-4MX-M144F series, a very compact solution for easy system integration, is based on the CMOS global shutter imager. These VC-4MX cameras feature 4 megapixel resolution with frame rate up to 144 fps. This combination of global shutter, resolution and frame rate sets a new standard for industrial, scientific and surveillance digital imaging applications. Customers in the industrial market can take advantage of common coax cabling to transmit images at rates and distance above and beyond previous standards. With these cameras, image data can be transmitted at up to 6.25 Gbps using a single coaxial cable. Featuring high quality image and high speed, this camera is ideal for wide range of demanding applications including PCB and semiconductor inspections.

For wide range of choice, Vieworks provides this amazing product in three different types, the fan-less type, the fan type, and the FV type with the same specification.

VIEWORKS

vision.vieworks.com

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Main Features

- 4 Megapixel Resolution
- Global Shutter CMOS Technology
- CoaXPress Interface up to 144 fps at 6.25 Gbps
- Reverse X / Reverse Y
- Defective Pixel Correction
- Low Noise with Optimized Heat Treatment
- GenICam Compatible – XML based Control

Applications

- PCB Inspection
- Semiconductor Inspection
- 3D Inspection
- High-end Surveillance

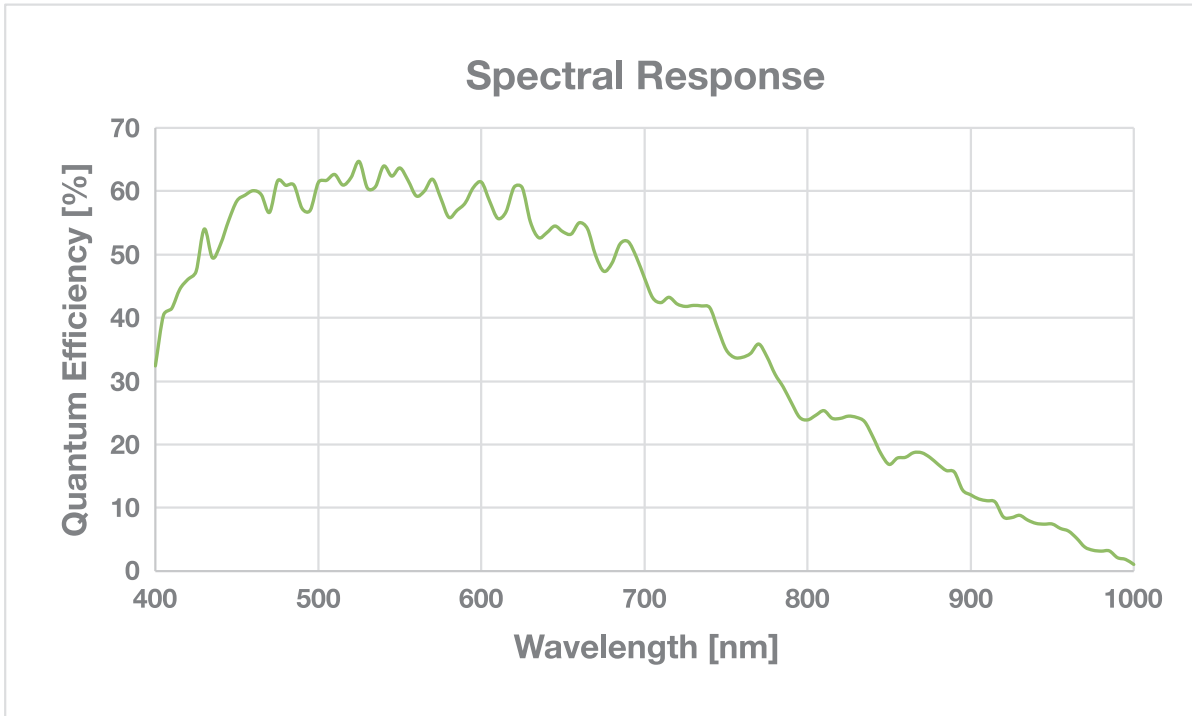
Specifications

Model	VC-4MX-M144F00 / VC-4MX-M144F00-FAN / VC-4MX-M144F00-FV	
Resolution (H × V)	2048 × 2048	
Sensor	AMS CMOSIS CMV4000	
Sensor Size (Optical Format)	11.26 mm × 11.26 mm (1")	
Sensor Type	High Speed CMOS Image Sensor	
Pixel Size	5.5 μm × 5.5 μm	
Interface	CoaXPress (CXP-6 × 1 CH / DIN Connector)	
Max. Frame Rate	144 fps @ 6.25 Gbps	
Exposure Time (1 μs step)	1 μs – 60 s	
Partial Scan (Max. Speed)	19607 fps at 1 Line	
Pixel Data Format	Mono 8	
Electronic Shutter	Global Shutter	
Trigger Synchronization	Free-Run, Hardware Trigger or CXP	
External Trigger	3.3 V ~ 24.0 V, 10 mA, Logical Level Input, Optically Isolated	
Dynamic Range	53 dB	
Gain Control	1 × ~ 4 ×	
Black Level Control	0 ~ 16 LSB	
Dimension / Weight	40 mm × 40 mm × 39 mm, 105 g (No fan) 40 mm × 40 mm × 54 mm, 110 g (Fan) 40 mm × 40 mm × 52 mm, 107 g (FV)	
Temperature	Operating: -5°C ~ 40°C, Storage: -40°C ~ 70°C	
Lens Mount	C-mount, Custom Mount Available upon Request	
Power	External	10 ~ 24 VDC
	Dissipation	Typ. 3.5 W(No fan) / Typ. 4.2 W(Fan)
	PoCXP	24 VDC
Compliance	CE, FCC, KC, UL(except for VC-4MX-M144F00-FV)	
API SDK	Vieworks Imaging Solution 7.X	

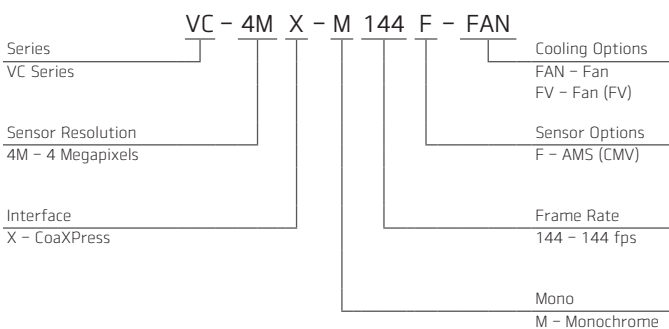
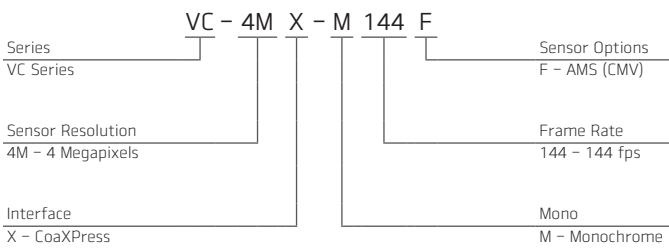
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Quantum Efficiency Curve

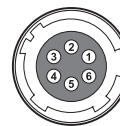


Ordering Scheme



Connector Specification

Power



- 1: +12 VDC
- 2: Trigger IN+
- 3: Trigger IN-
- 4: Output+
- 5: Output- (HR10A-7R-6PB)
- 6: DC Ground

Data Transfer / Communications



CXP Single Channel
75 Ω, DIN 1.0/2.3

Connectors on Camera Body

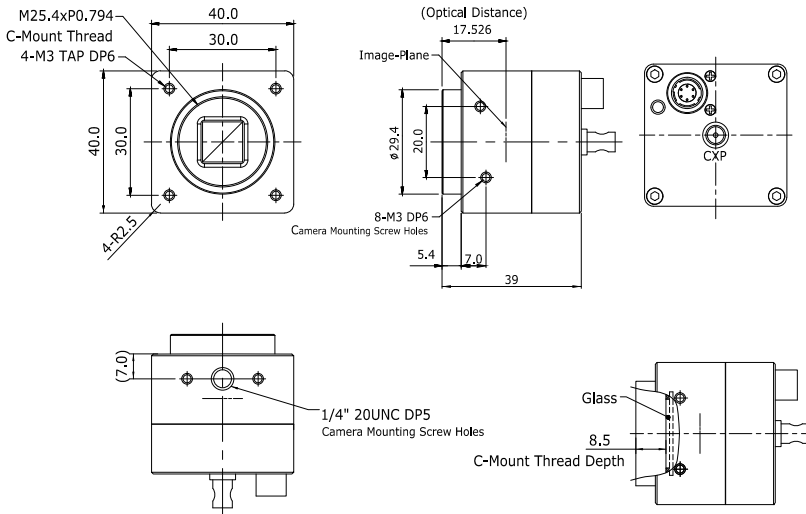
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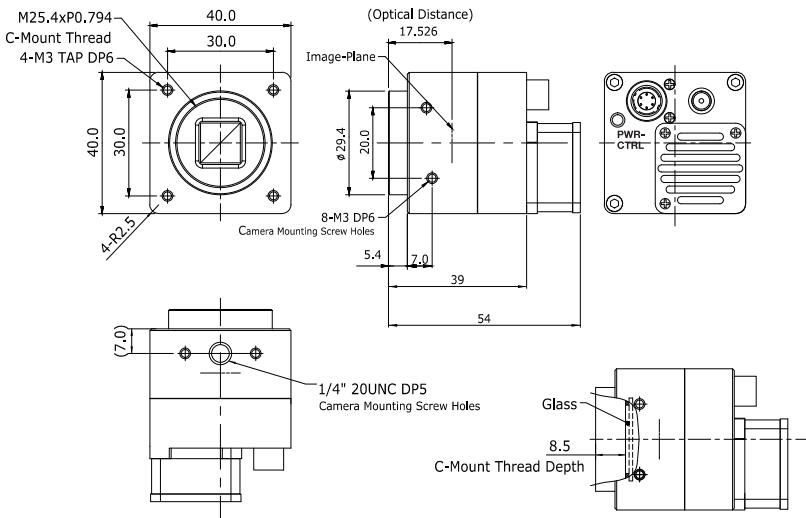
Mechanical Dimensions

Unit: mm

VC-4MX-M144F00



VC-4MX-M144F00-FAN



VC-4MX-M144F00-FV

