

VP-144/216/288MX2 Series

144/216/288-Megapixel Thermoelectric Peltier Cooled Camera
with CoaXPress 2.0 Interface



- VP-144MX2-M15 Image

CoaXPress®

The VP-144/216/288MX2, the latest models of the industrial proven VP series, are new 144/216/288 Megapixel CoaXPress 2.0 cameras and adopt the cutting-edge High Speed CMOS Image Sensor. The VP-288MX2 camera offers up to 15 frames per second at 24,000 × 12,000 resolution. The cameras in this series use thermoelectric Peltier(TEC) cooling technology. The TEC maintains operating temperature of the image sensor at up to 10 degrees below ambient temperature. The camera provides a stable operating condition and 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.

VP-144/216/288MX2 Series

Ultra High Resolution CMOS Digital Camera

Main Features

- Thermoelectric Peltier Cooled – 10°C below
- 144/216/288-Megapixel Resolution
- CoaXPress 2.0 Interface up to 15 fps at 50Gbps using 4 Channels
- Global Shutter CMOS Technology
- DSNU and PRNU Correction
- Pixel by Pixel PRNU Correction
- Flat Field Correction with Sequencer Control
- Defective Pixel Correction

Applications

- Flat Panel Display Inspection
- Electronics Inspection
- Semiconductor Inspection
- Document / Film Scanning

Specifications

Model		VP-144MX2-M15	VP-216MX2-M/C15K	VP-288MX2-M15
Resolution (H × V)		12000 × 12000	17984 × 12000	24000 × 12000
Sensor		Vieworks Sensor (SCG 144M)	Vieworks Sensor (SCG 216M-M/C)	Vieworks Sensor (SCG 288M)
Sensor Size (Diagonal)		42.0mm × 42.0mm(59.39mm)	63.0mm × 42.0mm(75.71mm)	84.0mm × 42.0mm(93.91mm)
Pixel Size		3.5 μm × 3.5 μm		
Interface		CoaXPress 2.0 (CXP-6/10/12)		
Max. Frame Rate		15 fps at 8 bit		
Exposure Time (1 μs step)		100 μs – 7 s (1 μs step)		
Binning	Sensor	Horizontal and Vertical Dependent: ×1		
	Logic	Horizontal and Vertical Independent: ×1, ×2		
Pixel Data Format		Mono: 8 bit, 10 bit, 12 bit Color (VP-216MX2-C15K only): RG Bayer 8bit, 10bit, 12bit		
Electronic Shutter		Global Shutter		
Exposure Mode		Free-Run, Timed, Trigger Width		
Dynamic Range		62 dB at 12 bit		
Gain Control	Analog	1× ~ 4×		
	Digital	1× ~ 32×		
Black Level Control		0 ~ 255 LSB at 12 bit		
Dimension / Weight		125 mm × 125 mm × 106 mm, 2.1 kg		
Cooling Performance		10±2°C below ambient temperature (Standard cooling with a fan)		
Temperature		Operating: 0°C ~ 40°C, Storage: -40°C ~ 70°C		
Trigger Synchronization		Free-Run, Hardware Trigger, Software Trigger, UserOutput0, CXP, Timer		
External Trigger		3.3 V ~ 24.0 V, 10 mA, Logical Level Input, Optically Isolated CoaXPress Control Port		
Software Trigger		Asynchronous, Programmable via Camera API		
Lens Mount (Custom mount available upon request)		M72-mount	M95-mount	M102-mount
Power	External	12 ~ 24 VDC		
	Dissipation	Typ. 38 W	Typ. 40 W	Typ. 41.5 W
API SDK		Vieworks Imaging Solution 7.3x		

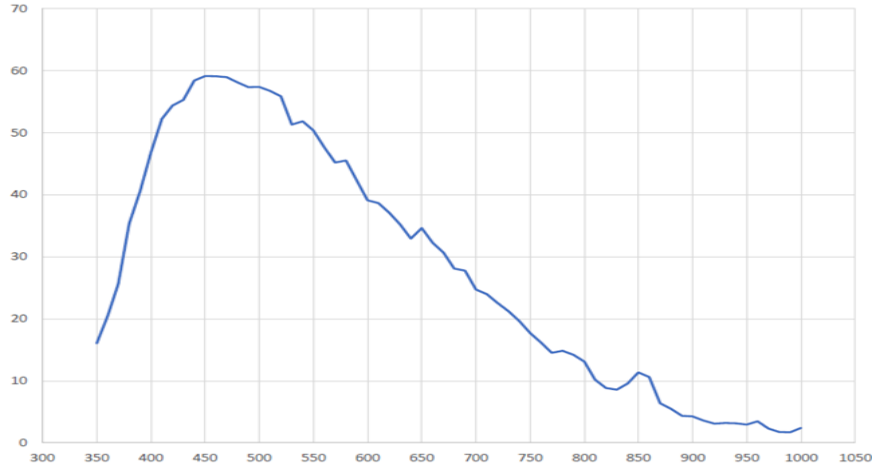
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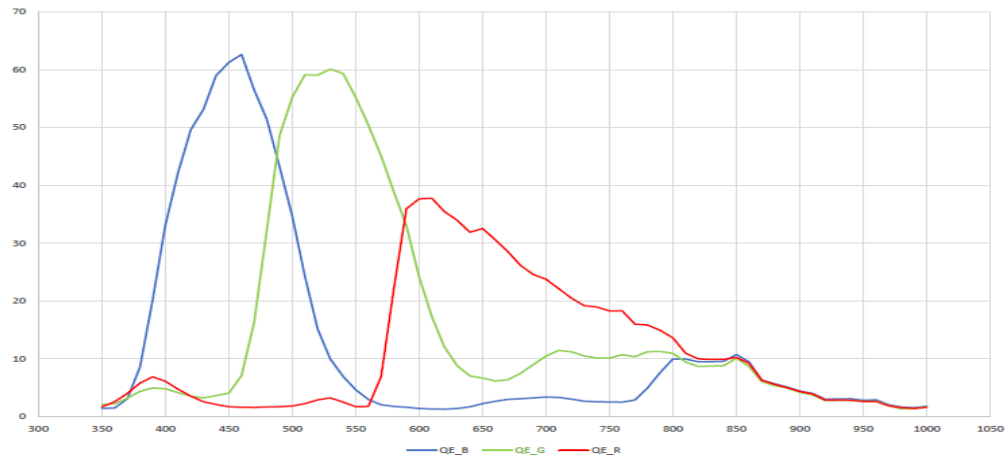
Relative Sensitivity Curves

* The sensitivity data may not match the measurement on the finished product necessarily because it is measured based on the wafer.

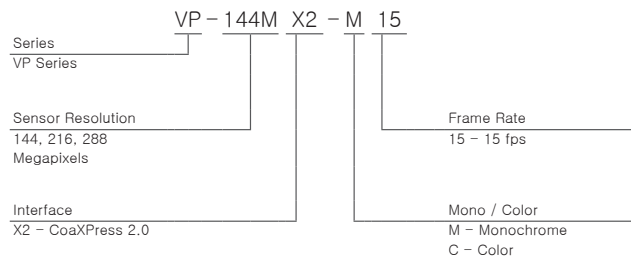
Mono



Color (VP-216MX2-C15K only)

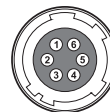


Ordering Scheme



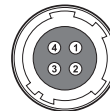
Connector Specification

Power



1, 2, 3: +24 VDC
4, 5, 6: GND
(HR10A-7R-6PB)

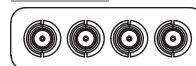
Control



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

Data Transfer / Communications

Micro-BNC



CH1 CH2 CH3 CH4

CH1: Master Connection
75 Ω, Micro-BNC (HD-BNC)

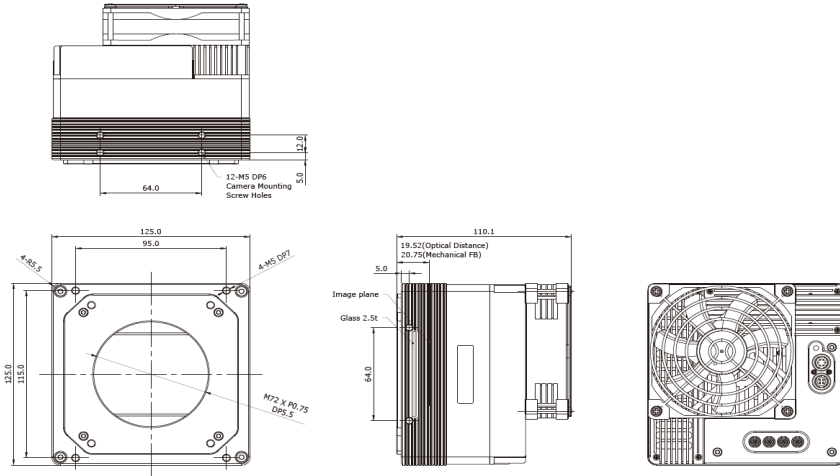
Connectors on camera body

VP-144/216/288MX2 Series

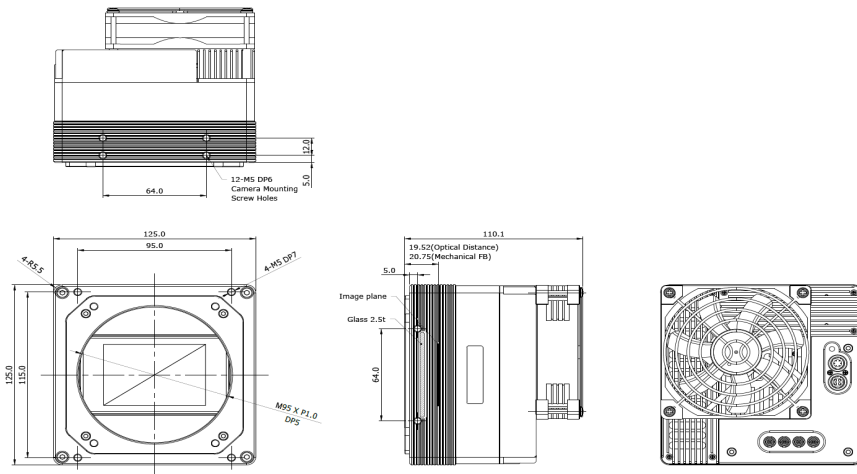
Ultra High Resolution CMOS Digital Camera

Mechanical Dimensions

- VP-144MX2 (unit:mm)



- VP-216MX2 (unit:mm)



- VP-288MX2 (unit:mm)

