VP-152MX2-M/C 16

152 Megapixel Thermoelectric Peltier Cooled Camera with CoaXPress 2.0 Interface

The VP-152MX2-M/C 16, the latest model of the industrial proven VP series, is a new 152-megapixel CoaX-Press camera and based on the CMOS global shutter image sensor technology. The VP-152MX2-16 camera offers up to 16.3 frames per second at 16,544 × 9,200 resolution. The camera comes with the next generation CoaXPress 2.0 (CXP-12) interface delivering up to 50 Gigabits per second over four coaxial cables. 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 15±2℃ below ambient temperature.

This 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.

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152 Megapixel Thermoelectric Peltier Cooled Camera with CoaXPress 2.0 Interface

CXP-12

Main Features

- Thermoelectric Peltier Cooled – 15±2℃ below
- 152 Megapixel Resolution
- CoaXPress 2.0 Interface up to 16.3 fps at 50 Gbps using 4 CH
- Global Shutter CMOS Technology
- DSNU and PRNU Correction
- Flat Field Correction
- GenICam Compatible – XML based Control

Applications

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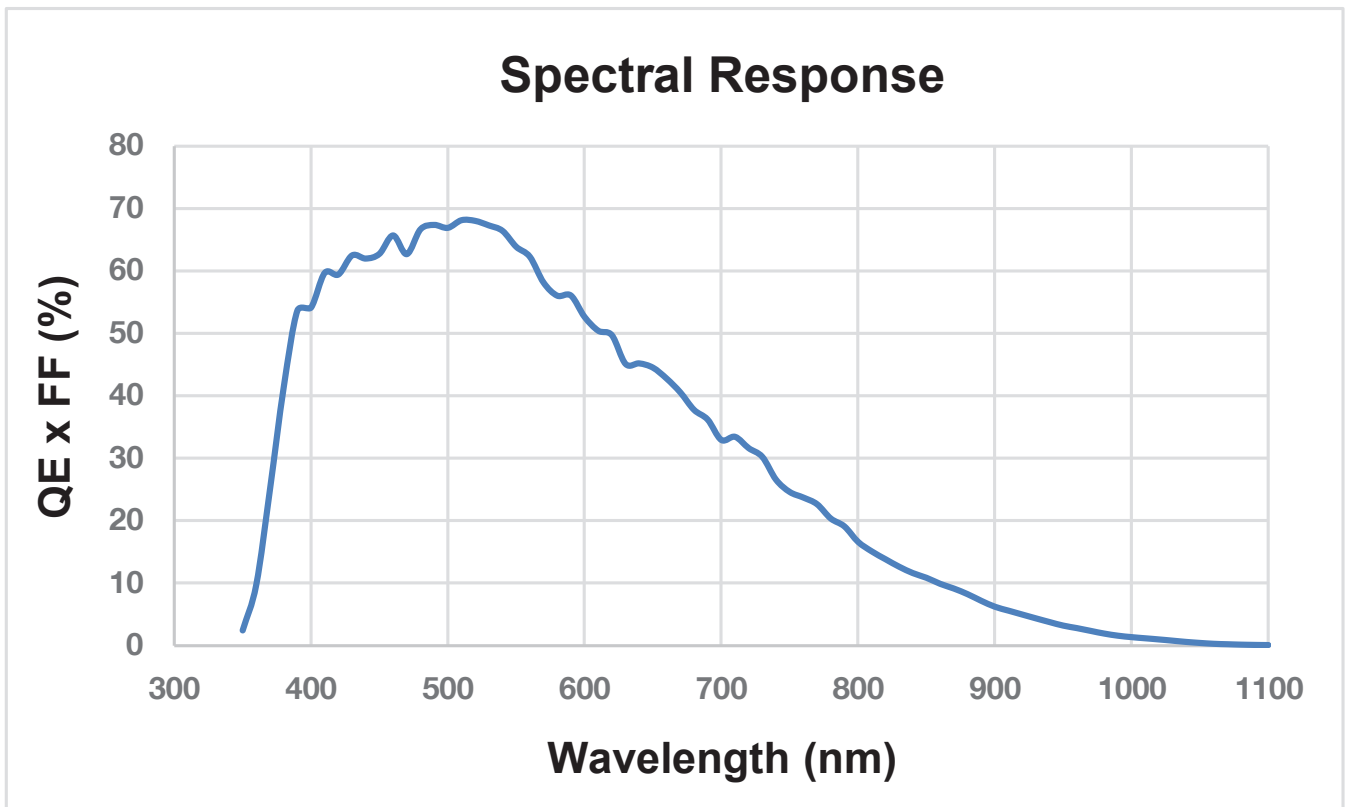- Document / Film Scanning

Specifications

Model		VP–152MX2–M/C 16
Resolution (H × V)		16,544 × 9,200
Sensor Size (Diagonal)		53.0 ㎜ ×29.4 ㎜ (60.6 ㎜)
Sensor Type		High Speed CMOS Image Sensor
Pixel Size		3.2 ㎛ × 3.2 ㎛
Interface		CXP–12 × 4
Max. Frame Rate	CXP–6 × 4	10.4 fps
	CXP–10 × 4	16.3 fps
	CXP–12 × 4	16.3 fps
Exposure Time (1 ㎲ step)		1 ㎲ – 60 s
Partial Scan (Max. Speed)		704 fps at 4 Lines
Pixel Data Format	Mono	Mono 8 / Mono 10 / Mono 12
	Color	GB Bayer 8 / GB Bayer 10 / GB Bayer 12
Electronic Shutter		Global Shutter
Binning		×1, ×2, ×4 (Horizontal and Vertical Independent)
Gain Control		1× ~ 32×
Black Level Control		0 – 255 LSB at 12 bit
Trigger Synchronization		Free–Run, Hardware Trigger, Software Trigger or CXP
External Trigger		3.3 V ~ 24.0 V, 10 ㎃, Logical Level Input, Optically Isolated
Software Trigger		Asynchronous, Programmable via Camera API
Dynamic Range		66 dB
Cooling Method		Thermoelectric Peltier Cooling
Cooling Performance		15±2℃ below ambient temperature – Standard cooling with a fan
Dimension / Weight		100.0 ㎜ × 100.0 ㎜ × 116.0 ㎜, 1,650 g (with M72–mount)
Temperature		Operating: 0℃ ~ 40℃, Storage: –40℃ ~ 70℃
Lens Mount		M72–mount, Custom mount available upon request
Power	External	11 ~ 24 V DC
	Dissipation	Typ. 32.0 W
Compliance		CE, FCC, KC (in preparation)

Spectral Response

Spectral Response

QE x FF (%) vs Wavelength (nm)

Ordering Scheme

VP – 152M X2 – M 16

Series
VP Series

Sensor Resolution
152M – 152 Megapixels

Interface
X2 – CoaXPress 2.0

Frame Rate
16 – 16.3 fps

Mono / Color
M – Monochrome
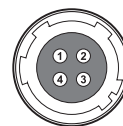C – Color
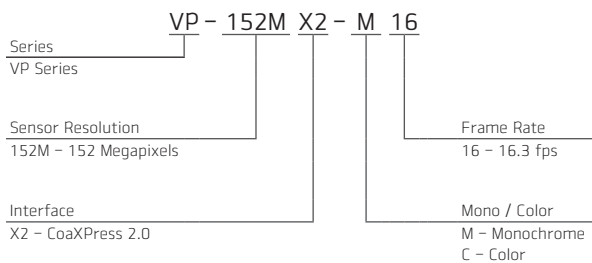
Connector Specification

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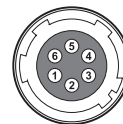
1, 2, 3: +12V DC   4, 5, 6: GND
(HR10A–7R–6PB)

Control

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

Data Transfer / Communications

Micro-BNC

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

CH1 CH2 CH3 CH4

Connectors on camera body

Mechanical Dimensions

Unit: mm

100.0±0.05

4-R6.0

100.0±0.05

M72 x P0.75 DP8

116

79

20.8±0.2 (Mechanical FB)
19.52±0.2 (Optical Distance)

12.0

8.0

Glass 2.5t

(⌀77.5)

64.0

Image Plane

8-M5 DP5
Camera Mounting Screw Holes

PWR   CTRL

CH4
CH3
CH2
CH1

vieworks

D-21-428