VN-200MX

200 MEGAPIXEL PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

The VN-200MX, the latest member of the industrial proven VN series, is the highest CMOS pixel shifting camera equipped with the CoaXPress interface. It features 50 megapixel resolution with frame rate up to 30 fps. This is the highest pixel shifting camera whose resolution is extended from 50 MP up to 427 MP through vieworks' iconic pixel shifting technology. With the VN-200MX, customers in the industrial market can take advantage of 427 million pixel resolution at 3 fps. Its CoaXPress interface supports transmitting image data at up to 6.25 Gbps using a single coaxial cable and up to 25 Gbps using four cables. Featured with high speed and high resolution, this new technology is ideal for inspection systems such as FPD, PCB and semiconductor as well as 3D imaging and digitizing of different objects.

vieworks

VN-200MX

200 MEGAPIXEL PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

Main Features

* 50 Megapixel Resolution (AMS CMOSIS)
* Nano Stage Pixel Shifting Mechanism
* Extended Resolution up to 427 MP at 3 fps (9 Shot Mode)
* CoaXPress Interface up to 30 fps at 25 Gbps using 4 CH
* Pixel Defect Correction
* Flat Field Correction
* DSNU and PRNU Correction

Applications

* FPD and PCB Inspection
* Semiconductor Inspection
* High Speed 3D Imaging
* Digitizing and Scanning
* Research and Scientific Imaging

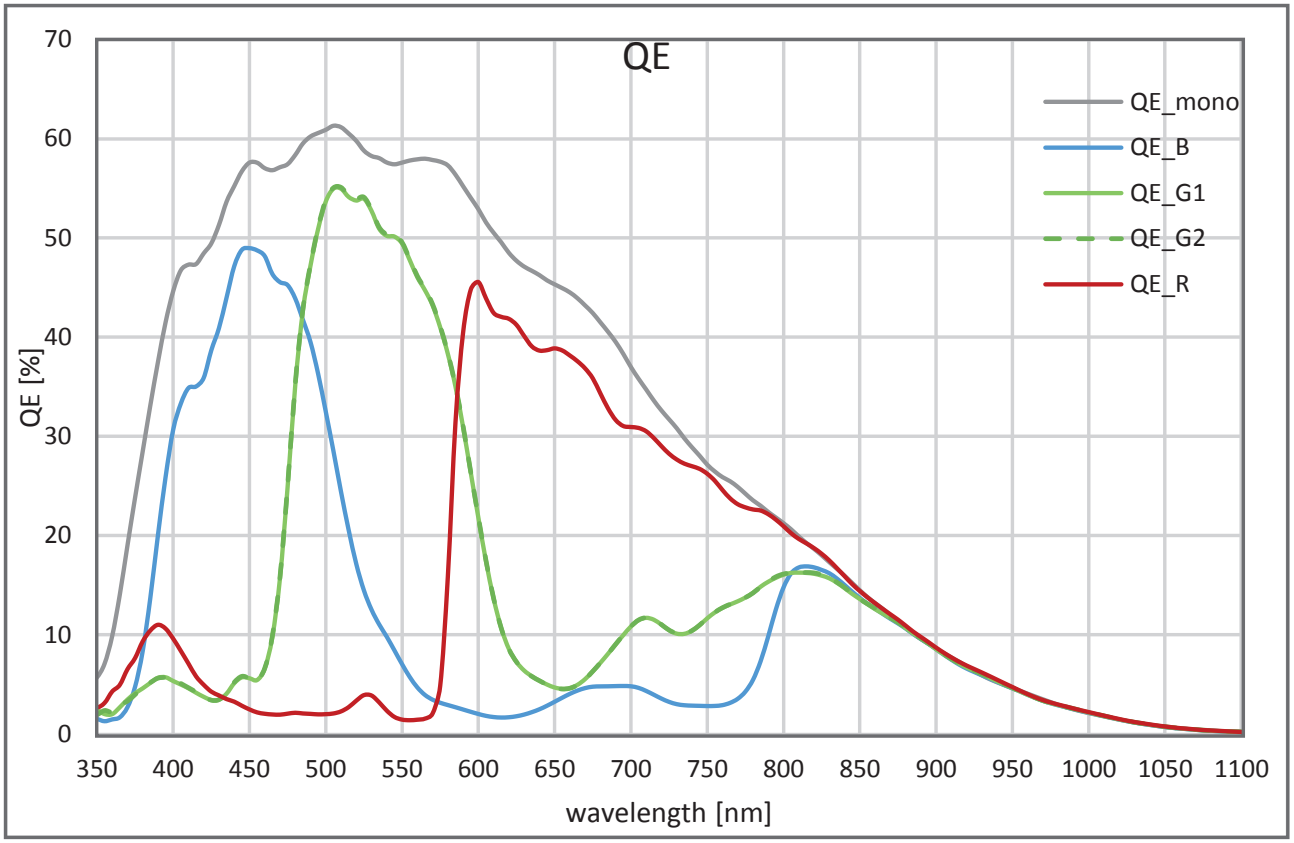
Specifications

Model		VN-200MX-M/C 30		
Resolution (H × V)		7920 × 6004		
Sensor		AMS CMOSIS CMV 50000		
Sensor Size (Optical Diagonal)		35 ㎜ (45.72 ㎜)		
Sensor Type		High Speed CMOS Image Sensor		
Pixel Size		4.6 ㎛ × 4.6 ㎛		
Interface		CoaXPress		
Max. Frame Rate	47.5 MP	1CH: 7.7 fps @ 6.25 Gbps	2CH: 15.5 fps @ 6.25 Gbps	4CH: 30.9 fps @ 6.25 Gbps
	190 MP	1CH: 2 fps @ 6.25 Gbps	2CH: 3.9 fps @ 6.25 Gbps	4CH: 7.7 fps @ 6.25 Gbps
	427 MP	1CH: 1 fps @ 6.25 Gbps	2CH: 1.7 fps @ 6.25 Gbps	4CH: 3.4 fps @ 6.25 Gbps
Exposure Time (1 ㎲ step)		1 ㎲ – 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		
Exposure Mode		Free-Run, Timed and Trigger Width		
Dynamic Range		64 dB		
Gain Control		1× ~ 30× (1/1024 step)		
Black Level Control		0 ~ 256 LSB at 12 bit (1 LSB step)		
Shift Range		0 ~ 7.5 ㎛, 1 ㎚ step		
Shift Resolution		0.001 ㎛		
Shift Control		Sequence Mode (mono4, mono9, mono2H, mono2V, bayer4, bayer16)		
Dimension / Weight		80 ㎜ × 80 ㎜ × 150 ㎜, 1,100 g		
Temperature		Operating: -5℃ ~ 40℃, Storage: -40℃ ~ 70℃		
Lens Mount		F-mount, Custom mount available upon request		
Power	External	10 ~ 24 V DC, Typ. 14.0 W		
	PoCXP	24 V DC, Minimum of two PoCXP cables required		
Compliance		CE, FCC, KC		
API SDK		Vieworks Imaging Solution 7.X		

VN-200MX

200 MEGAPIXEL PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

Quantum Efficiency Curves



Ordering Scheme

VN – 200M X – M 30

Series
VN Series

Sensor Resolution
200M – 200 Megapixels

Interface
X – CoaXPress

Frame Rate
30 – 30.9 fps

Mono / Color
M – Monochrome
C – Color

Connector Specification

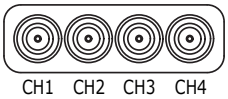
Power

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



CH1: Master Connection
(75 Ω, DIN 1.0/2.3)

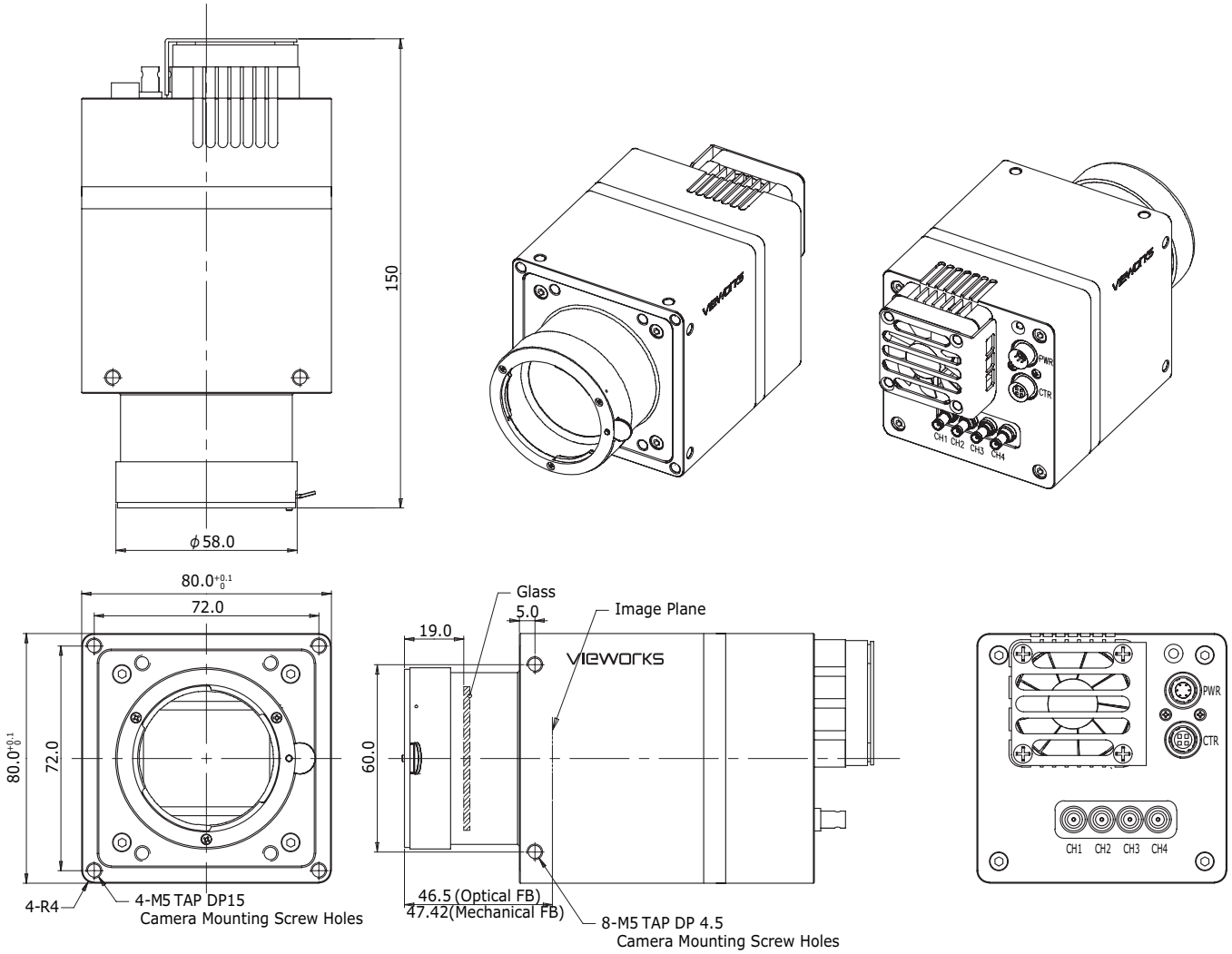
Connectors on camera body

VN-200MX

200 MEGAPIXEL PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

Mechanical Dimensions

Unit: mm



For more information please contact local distributor or
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VN-29MC-M/C 5

Nano Stage Pixel Shifting Camera for Extended Resolutions

The VN-29MC is a 29 megapixel CCD camera equipped with the Camera Link interface. This camera is designed for applications where the object is stationary and extremely high resolution is required. Equipped with the Vieworks' advanced pixel shifting technology based on a precise piezoelectric stage, its resolution can be extended from 29 megapixels up to 260 megapixels. With the VN-29MC, customers in the industrial imaging market can take advantage of 260 million pixel resolution at the 9 shot mode. This camera is ideal for applications such as FPD inspection, document/film scanning, research and scientific imaging.

VN-29MC-M/C 5

Nano Stage Pixel Shifting Camera for Extended Resolution

Main Features

- Nano Stage Pixel Shifting Mechanism
- Extended Resolutions up to 260 Megapixels
- True Color Full Image Resolution
- Improved Fill Factor
- Progressive Scan Interline Transfer CCD Imager
- Flat Field Correction
- Pixel Defect Correction
- Field Upgradable Firmware

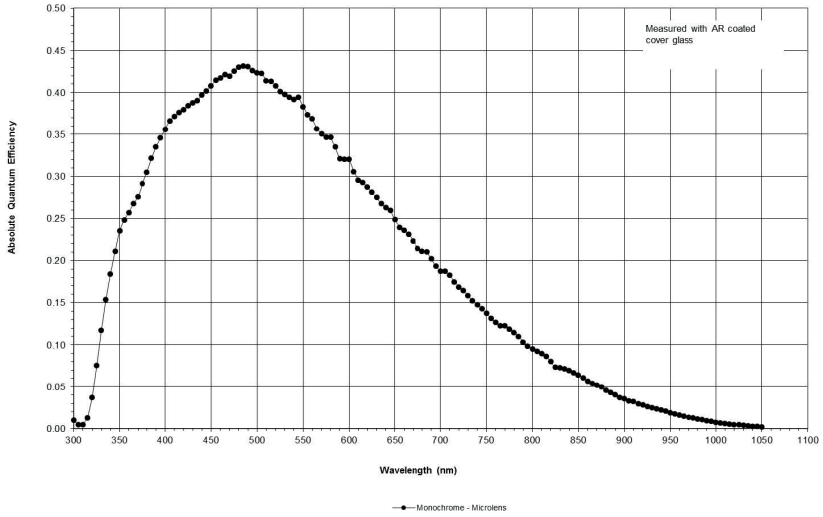
Applications

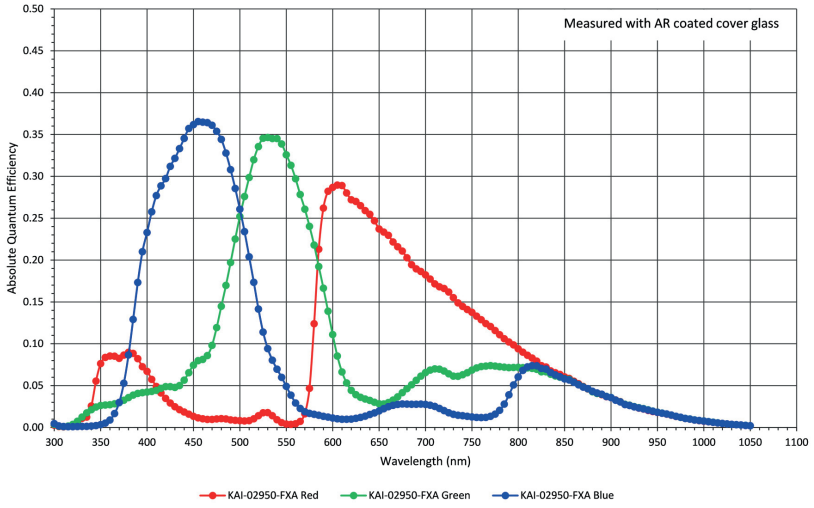
- Flat Panel Display Inspection
- Electronics and Semiconductor Inspection
- Digitizing and Scanning
- Scientific Imaging

Specifications

Model		VN-29MC-M/C 5
Resolution (H × V)	×1 Mode	6576 × 4384, 28.8M
	×4 Mode	13152 × 8768, 115.3M
	×9 Mode	19728 × 13152, 259.5M
Sensor (On Semiconductor)		KAI-29050
Sensor Size (Optical Format)		35 ㎜
Sensor Type		Progressive Scan Interline Transfer CCD
Pixel Size		5.5 ㎛ × 5.5 ㎛
Interface		Camera Link
Max. Frame Rate (40 ㎒)	×1 Mode	4.8 fps
	×4 Mode	1.2 fps
	×9 Mode	0.5 fps
Exposure Time (10 ㎲ step)		1/100000 s – 7 s
Partial Scan (Max. Speed)		15.2 fps at 1000 Lines
Pixel Data Format		8 / 10 / 12 bit
Electronic Shutter		Global Shutter
Camera Link Pixel Clock		40/80 ㎒
Trigger Mode		Free-Run, Overlap, Fast, Double – Programmable Exposure Time and Trigger Polarity
Dynamic Range		62 dB
Shift Range		0 ~ 15 ㎛, 1 ㎚ step
Shift Resolution		0.001 ㎛
Shift Control		Manual Mode or Sequence Mode (4/9 Shot Mono, 4/16/36 Shot Color)
Shift Latency		< 8 ㎳
Dimension / Weight		90 ㎜ × 90 ㎜ × 123.5 ㎜, 1200 g
Temperature		Operating: 10℃ ~ 40℃, Storage: -40℃ ~ 70℃
Lens Mount		F-mount, Custom mount available upon request
Power		10~14 V DC, Typ. 10 W
Compliance		CE, FCC, KC
Configuration Software		Configurator

Quantum Efficiency Curves





Ordering Scheme

VN – 29M C – M 5

- Series: VN Series
- Sensor Resolution: 29M – 29 Megapixels
- Interface: C – Camera Link
- Mono / Color: M – Monochrome; C – Color
- Frame Rate: 5 – 4.8 fps

Connector Specification

Power

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

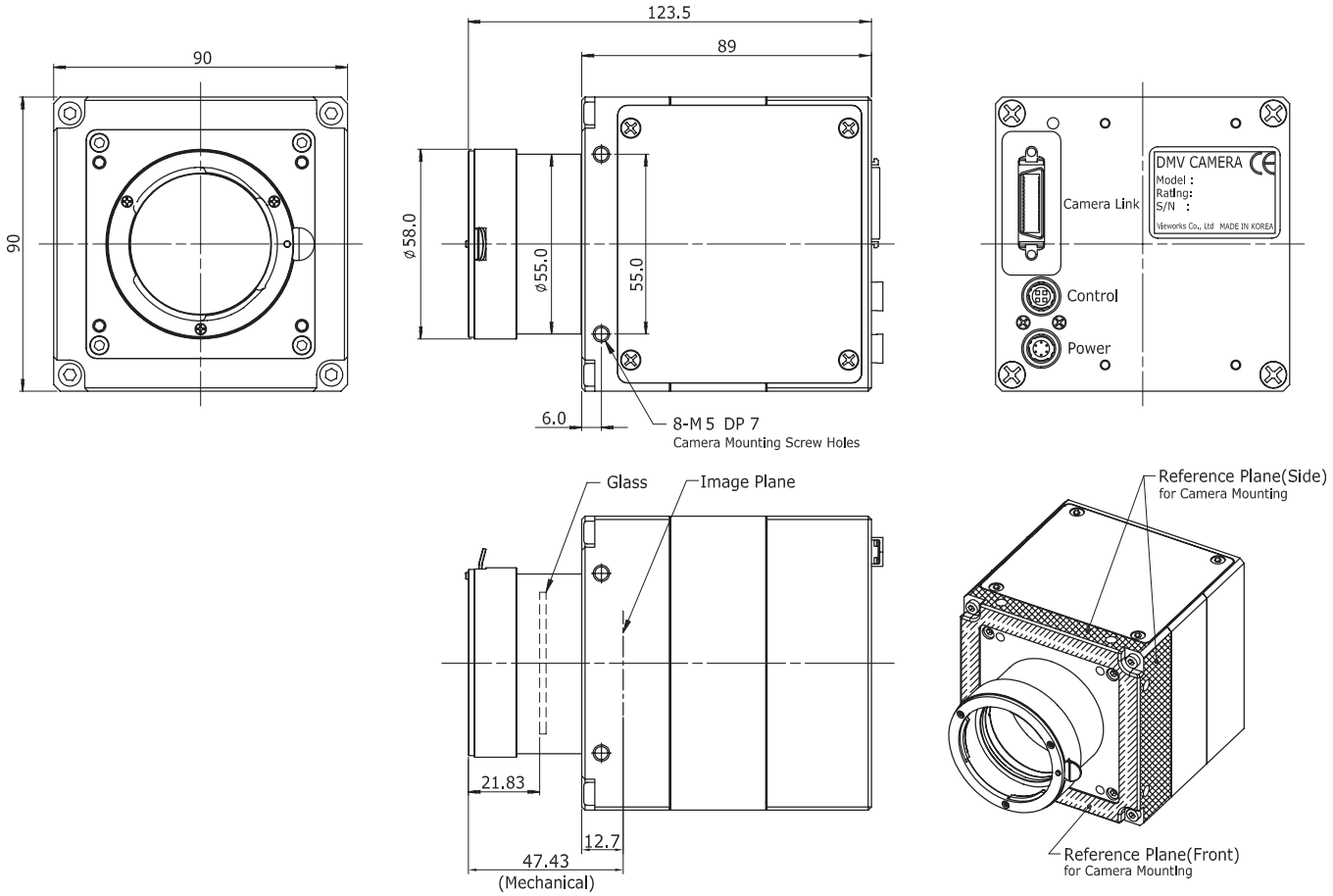
Control

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

Connectors on camera body

Mechanical Dimensions

Unit: mm



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VN-25MX-M/C 72

PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

CoaXPress®

The VN-25MX, the new model of the VN series, is the world first CMOS pixel shifting camera equipped with new CoaXPress interface and based on the latest CMOS global shutter imager. It features 25 megapixel resolutions with frame rate up to 72 fps. This is the first CMOS pixel shifting camera whose resolution is extended from 25 MP up to 235 MP through vieworks' iconic pixel shifting technology.
With the VN-25MX, customers in the industrial market can take advantage of 235 million pixels resolution at 8 fps. Its CoaXPress interface supports transmitting image data at up to 6.25 Gbps using a single coaxial cable and up to 25 Gbps using four cables. Featured with high speed and high resolution, this new technology is ideal for inspection systems such as FPD, PCB and semiconductor as well as 3D imaging and digitizing of different objects.

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VN-25MX

PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

Main Features

* 25 Megapixels Resolution
* High Speed Progressive Scan CMOS Image Sensor
* Global Shutter CMOS Technology
* CoaXPress Interface up to 72 fps at 25 Gbps using 4 coax cables (4 CH)
* Pixel Shifting Mechanism
* Extended Resolution up to 235 MP at 8 fps (9 Shot Mode)

Applications

* FPD and PCB Inspection
* Semiconductor Inspection
* High Speed 3D Imaging
* Digitizing and Scanning
* Research and Scientific Imaging

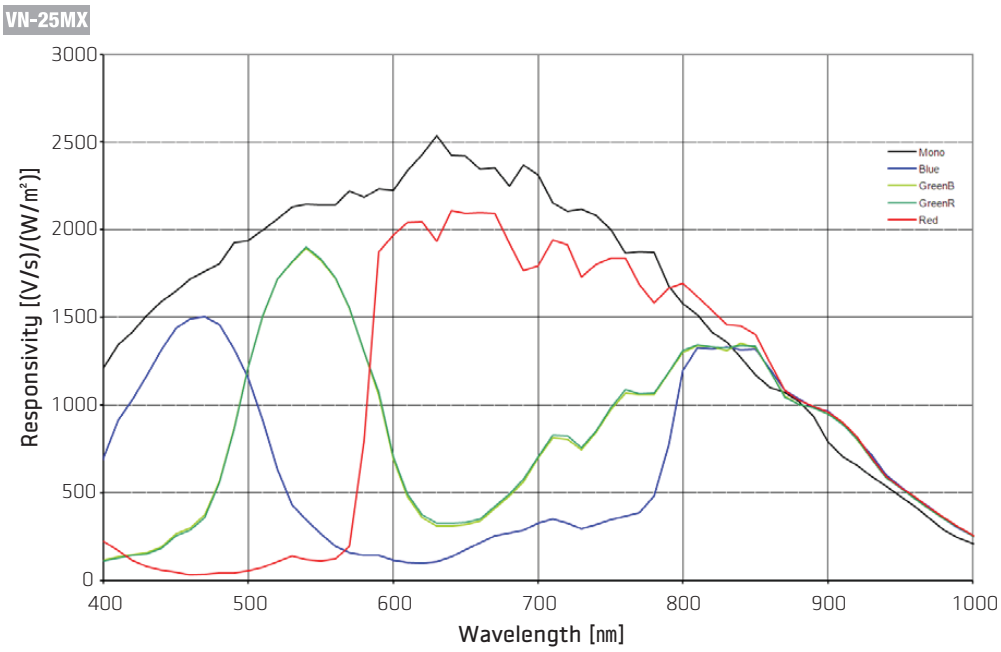
Specifications

Model		VN-25MX-M/C 72
Resolution (H × V)		5120 × 5120
Sensor		On Semiconductor VITA-25K
Sensor Size (Optical Format)		23.04 ㎜ × 23.04 ㎜ (35 ㎜)
Sensor Type		High Speed CMOS Image Sensor
Pixel Size		4.5 ㎛ × 4.5 ㎛
Interface		CoaXPress
Max. Frame Rate	25 MP	2 CH: 36 fps at 6.25 Gbps 4 CH: 72 fps at 6.25 Gbps
	100 MP	2 CH: 9 fps at 6.25 Gbps 4 CH: 18 fps at 6.25 Gbps
	235 MP	2 CH: 4 fps at 6.25 Gbps 4 CH: 8 fps at 6.25 Gbps
Exposure Time (1 ㎲ step)		10 ㎲ – 60 s
Partial Scan (Max. Speed)		7692 fps at 4 Lines (H: 256)
Pixel Data Format	Mono	Mono 8, Mono 10
	Color	Bayer 8, Bayer 10
Electronic Shutter		Global Shutter
Gain Control		×1 ~ ×4
Black Level Control		0 – 16 LSB at 8 bit, 0 – 64 LSB at 10 bit (1 LSB step)
Exposure Mode		Free-Run, Timed, Trigger Width
Dynamic Range		54 dB
Shift Range		0 ~ 7.5 ㎛, 1 ㎚ step
Shift Resolution		0.001 ㎛
Shift Control		Sequence Mode (mono4, mono9, mono2H, mono2V, bayer4, bayer16)
Dimension / Weight		80 ㎜ × 80 ㎜ × 150 ㎜, 1100 g
Temperature		Operating: 0℃ ~ 40℃, Storage: -40℃ ~ 70℃
Lens Mount		F-mount
Power	Adapter	11 ~ 30 V DC, Typ. 13 W
	PoCXP	24 V DC, Minimum of two PoCXP cables required
Compliance		CE, FCC, KC
API SDK		Vieworks Imaging Solution 7.X

VN-25MX

PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

Quantum Efficiency Curves



Ordering Scheme

VN – 25M X – M 72 D0

- Series: VN Series
- Sensor Resolution: 25M – 25 Megapixels
- Interface: X – CoaXPress
- Mono / Color: M – Monochrome; C – Color
- Frame Rate: 72 – 72 fps
- Sensor Options: D0 – On Semiconductor

Connector Specification

Power

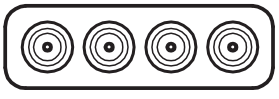
1 2 3: +12V DC, 4 5 6: GND
(HR10A-7R-6PB)

Control

1: Trigger IN+, 2: Trigger IN–
3: DC Ground, 4: Strobe OUT+
(HR10A-7R-4S)

Data Transfer / Communications

DIN



CH1 CH2 CH3 CH4

CH1: Master Connection

(75 Ω , DIN 1.0/2.3)

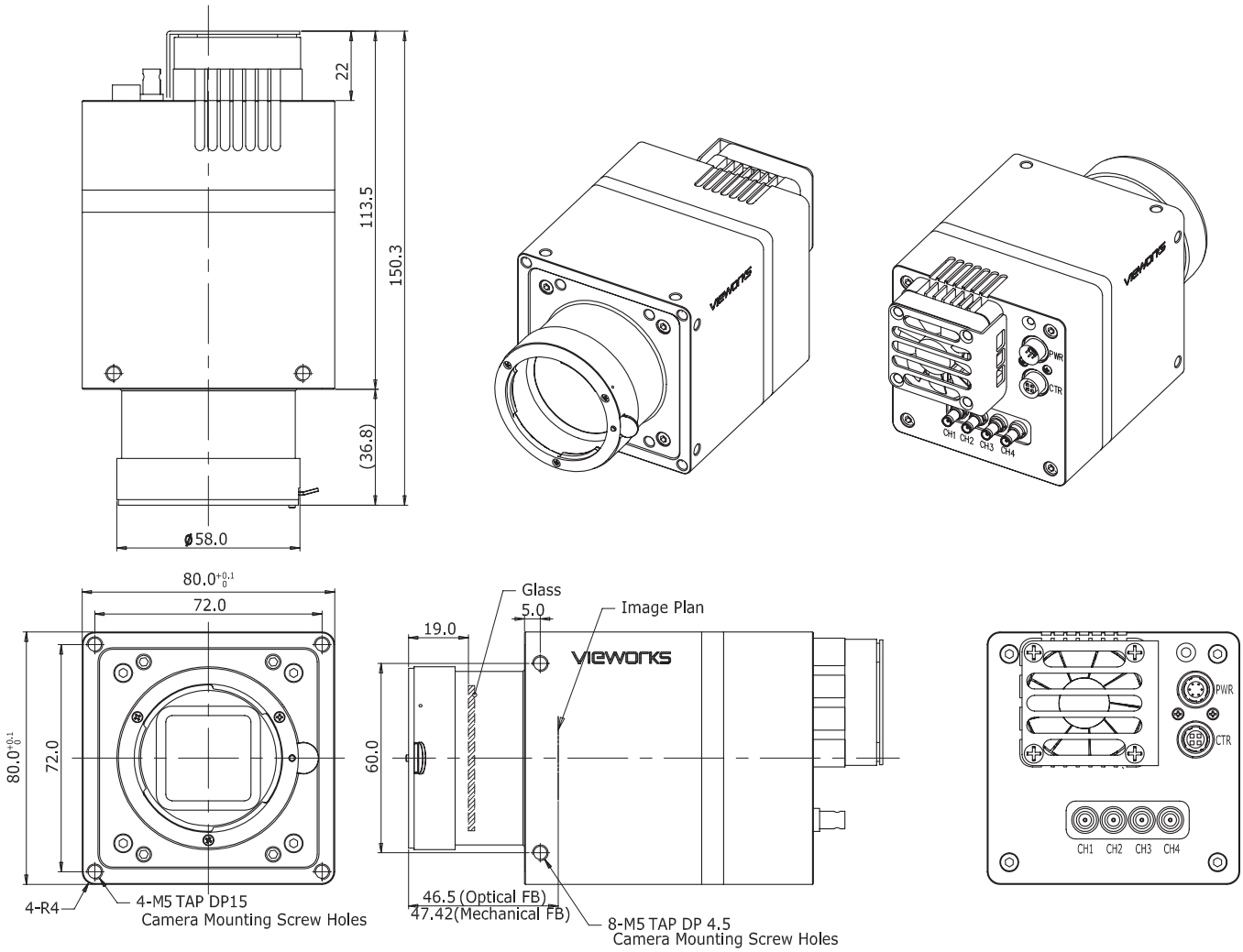
Connectors on camera body

VN-25MX

PIXEL SHIFTING CAMERA WITH COAXPRESS INTERFACE

Mechanical Dimensions

Unit: mm



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RA14-14B-004

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