



vieworks

VH-310G / VH-2MG VH-4MG / VH-5MG

VGA/ 2M/ 4M/ 5M MEGA PIXEL RESOLUTION, HIGH SPEED,
GigE INTERFACE, PROGRAMMABLE DIGITAL CAMERA



The VH series with GigE Vision digital output provides you the flexibility to easily connect multiple cameras together through a network switch or connect directly to a Gigabit LAN card. These cameras offer fast readout rates up to 264 Hz, progressive scan readout, electronic shutter, and are available in either monochrome or color. The VH series with GigE Vision digital output are ideal for Industrial, Military, Aerial, and Scientific market applications.

Main Features

- *GigE Interface
- *Kodak & Sony Progressive Scan IT CCD Imager
- *8/10/12 bit Data Output, User Defined LUT
- *Flat Field Correction
- *Field Upgradable Firmware
- *Defective Pixel Compensation
- *Available in Color or Monochrome

Applications

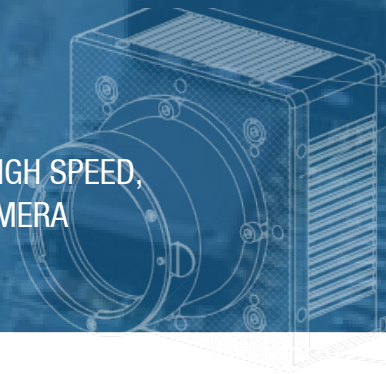
- *Flat Panel Display Inspection
- *Research and Scientific Imaging
- *Machine Vision Inspections
- *Microscopy and Metrology
- *Remote Sensing and Scanning

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VH-310G / VH-2MG VH-4MG / VH-5MG

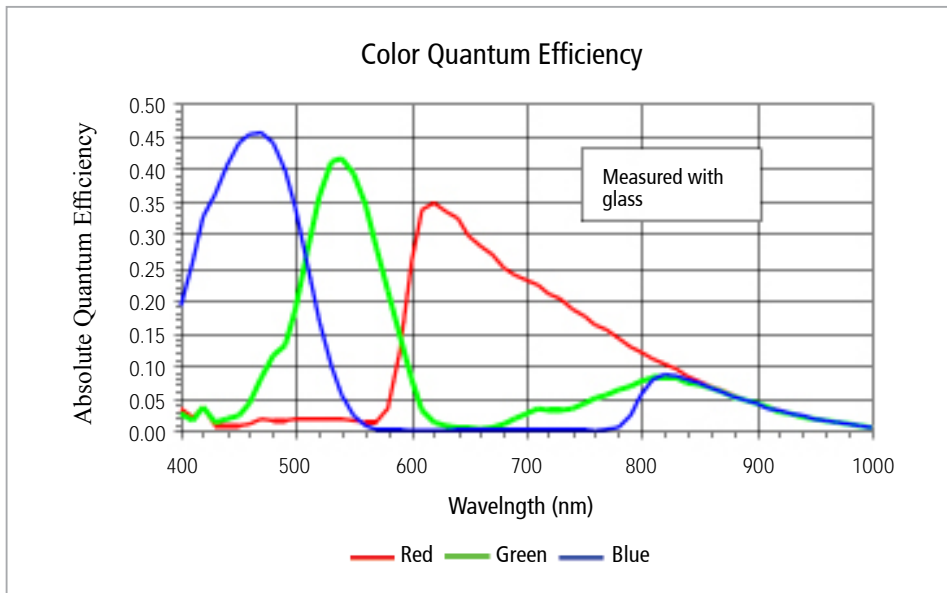
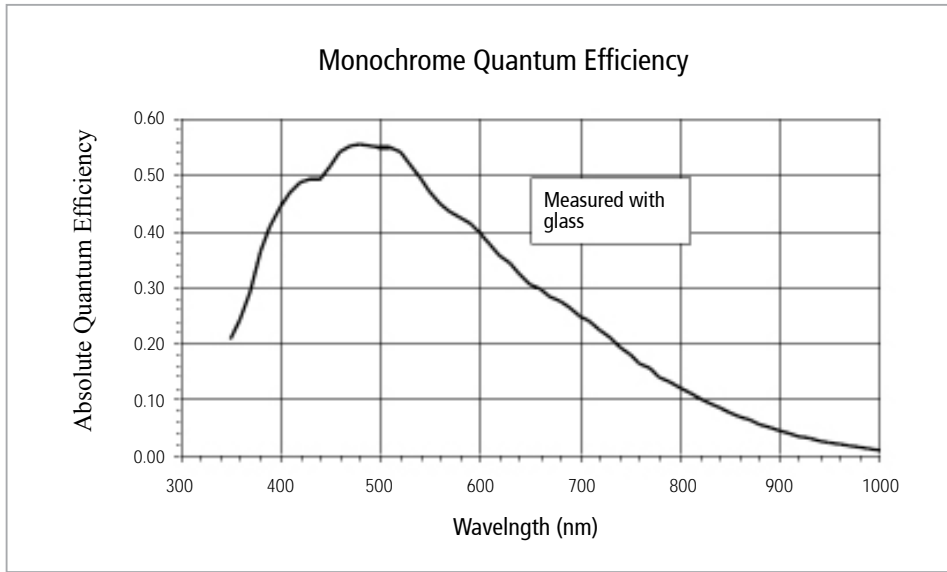
VGA/ 2M/ 4M/ 5M MEGA PIXEL RESOLUTION, HIGH SPEED,
GigE INTERFACE, PROGRAMMABLE DIGITAL CAMERA



Specifications

Model	VH-310G-M72/C72	VH-310G-M264/C264	VH-2MG	VH-4MG	VH-5MG
Active Image	640(H) × 480(V)	640(H) × 480(V)	1600(H) × 1200(V)	2048(H) × 2048(V)	2448(H) × 2056(V)
Pixel Clock	30 MHz		50 MHz		60 MHz
Pixel size	9.0 μm × 9.0 μm		7.4 μm × 7.4 μm		3.45 μm × 3.45 μm
Video Output	8/10/12 bits, 1Tap		8/10/12 bits, 1 or 2 Tap		8/10/12 bits, 2 Tap
Camera Interface	GigE				
Max. Frame Rate	72 fps (single)	264 fps (dual) / 140 fps (single)	42 fps (dual) / 23 fps (single)	20 fps (dual) / 11 fps (single)	16 fps (dual)
Exposure Time	1/40000 sec ~7 sec (10 μs step)	1/40000 sec ~7 sec (10 μs step)	1/20000 sec ~7 sec (10 μs step)	1/14000 sec ~7 sec (10 μs step)	1/14000 sec ~7 sec (10 μs step)
Partial Scan	215 fps at 100 Lines (max. speed)	930 fps at 100 Lines (max. speed)	136 fps at 150 Lines (max. speed)	73 fps at 256 Lines (max. speed)	52 fps at 256 Lines (max. speed)
Gamma Correction	User defined LUT (Look Up Table)				
Black Offset	Adjustable (0~127 LSB at 12 bit , 256 step)				
Video Gain	Analog: 0 ~ 32 dB, 900 step				
Trigger Mode	Mode(free run , standard, fast, double, overlap) Programmable exposure time, Programmable trigger polarity				
External Trigger	External, 3.3V - 5.0V, 10mA, optically isolated				
Dynamic Range	> 60 dB		> 62 dB		>54 dB
Lens Mount	C-mount		C-mount, F-mount optional		
Power	10~14V DC , MAX. 8W				
Environmental	-5°C~+40°C, storage : -30°C~65°C				
Mechanical	49mmX49mmx61.4mm, 210g (w/ C-mount adaptor)		68mmX68mmx62.1mm, 455g (w/ C-mount adaptor) 68mmX68mmx91.1mm, 495g (w/ F-mount adaptor)		



Quantum Efficiency Curves



Ordering Scheme

VH - 5MG- M16B0	
Series	Sensor Option
VH series	A0 - Kodak B0 - Sony
Sensor Resolution	Frame Rate
310 - VGA	16 - 16 fps
2M - 2 Mega-pixels	20 - 20 fps
4M - 4 Mega-pixels	42 - 42 fps
5M - 5 Mega-pixels	264 - 264 fps
Interface	Mono / Color
G - GigE	M - Monochrome C - Color

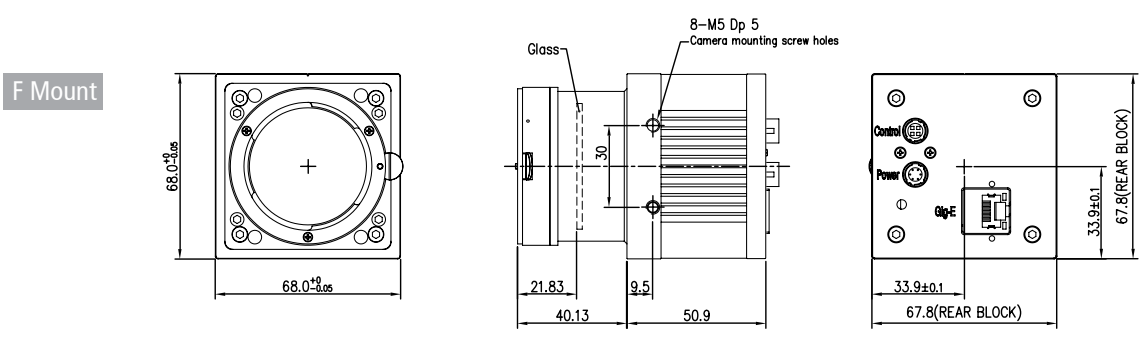
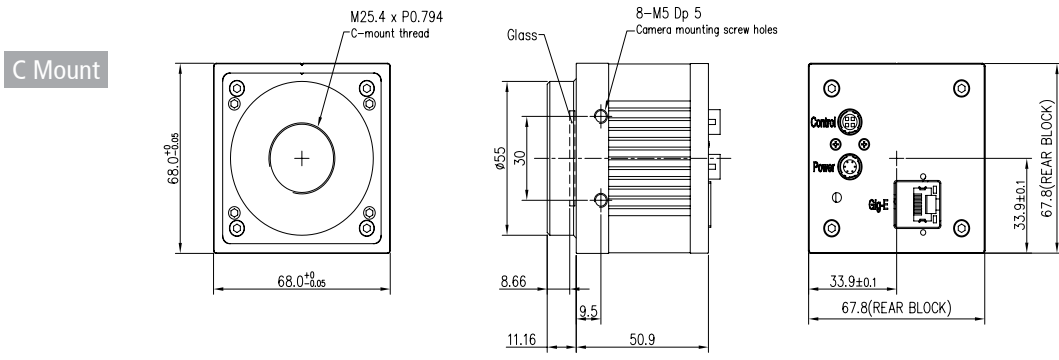
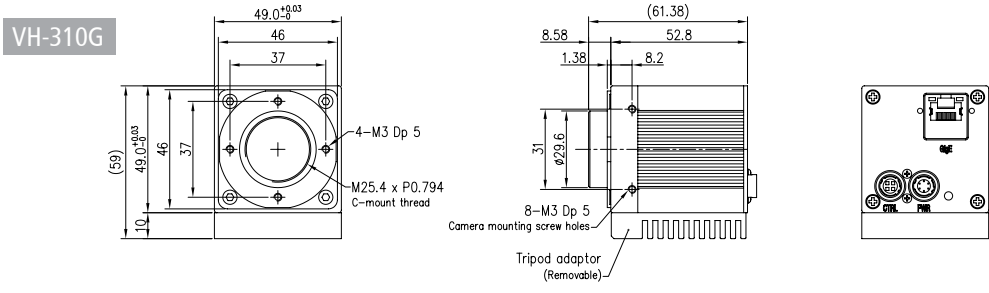
Connector Specifications

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-4SB)

Connectors on camera body

Mechanical Dimensions

Unit : mm



For more information please contact local distributor or visit our website at www.viewworks.com

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VMCB-VHG1-R001EN

ISO-9001, ISO-13485

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VH-11MG / VH-16MG

11 & 16 MEGA PIXEL HIGH RESOLUTION, HIGH SPEED,
GigE INTERFACE, PROGRAMMABLE DIGITAL CAMERA



The VH series with GigE Vision digital output allows you to easily connect multiple cameras together using a network switch or connect directly to a Gigabit LAN card. The VH series cameras feature progressive scan readout, electronic shutter, fast frame rates, and low noise high dynamic range performance. These features make the VH series cameras ideal for Industrial, Military, Aerial, and Scientific market applications.

Main Features

- *GigE Interface
- *Kodak Progressive Scan IT CCD Imager
- *8/10/12 bit Data Output, User Defined LUT
- *Flat Field Correction
- *Field Upgradable Firmware
- *Defective Pixel Compensation
- *Available in Color or Monochrome

Applications

- *Flat Panel Display Inspection
- *Aerial Imaging
- *Persistent Surveillance
- *Remote Sensing
- *Machine Vision Inspection
- *Film Scanning

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VH-11MG / VH-16MG

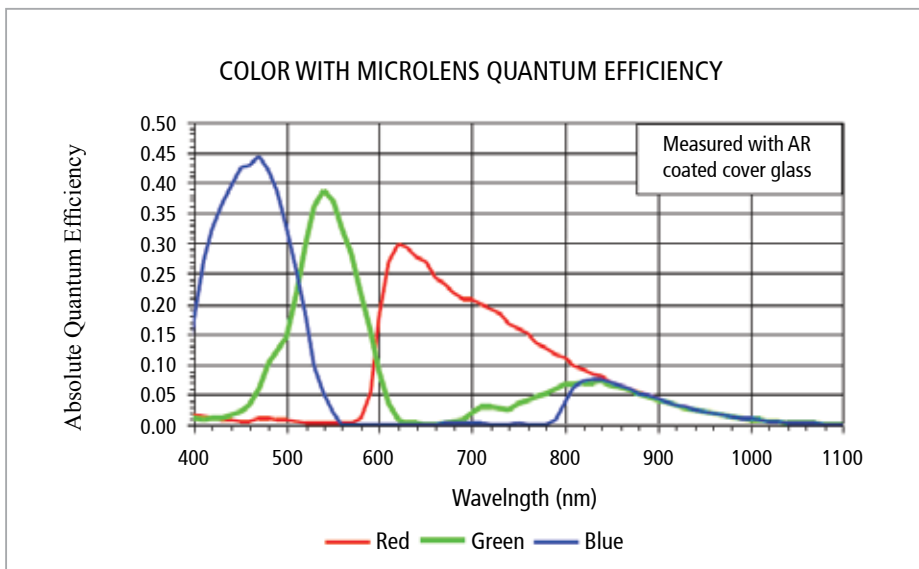
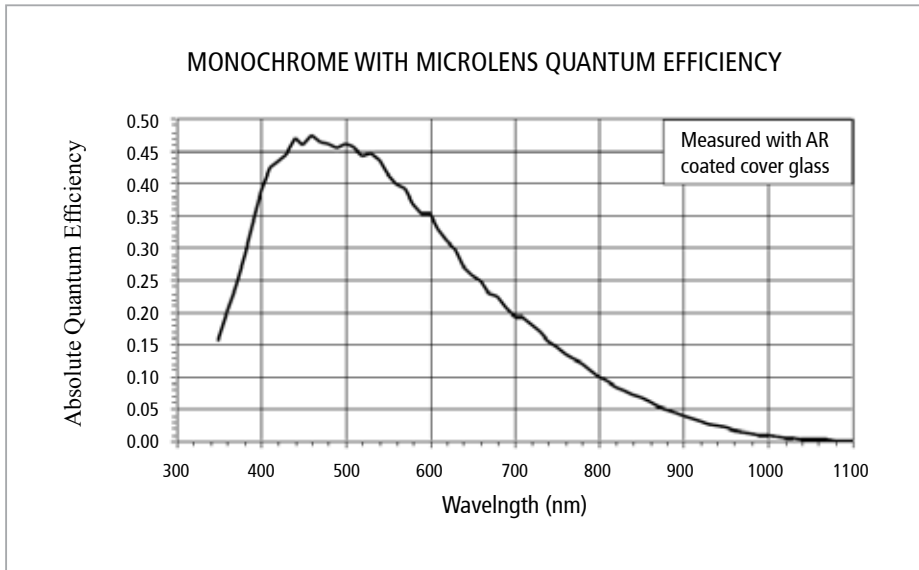
11 & 16 MEGA PIXEL HIGH RESOLUTION, HIGH SPEED,
GigE INTERFACE, PROGRAMMABLE DIGITAL CAMERA



Specifications

Model	VH-11MG	VH-16MG
Active Image	4008(H) × 2672(V)	4872(H) × 3248(V)
Pixel Clock	40 / 30MHz	40 / 30 MHz
Pixel size	9.0 × 9.0 microns	7.4 × 7.4 microns
Video Output	8/10/12 bits, 1 or 2 Tap	
Camera Interface	GigE	
Max. Frame Rate	6.4 /5fps (dual) / 3.4 /2.6 fps (single)	4.2 /3.2 fps (dual) / 2.2 / 1.7 fps (single)
Exposure Time	1/7000 sec ~7 sec (10 μs step)	1/4500 sec ~7 sec (10 μs step)
Partial Scan	27 fps at 334 Lines (max. speed)	17 fps at 406 Lines (max. speed)
Gamma Correction	User defined LUT	
Black Offset	Adjustable (0~127 LSB at 12 bit, 256 step)	
Video Gain	Analog: 0 ~ 32 dB, 900 step	
Trigger Mode	Mode(free run , standard, fast, double, overlap) Programmable exposure time, Programmable trigger polarity	
External Trigger	External, 3.3V - 5.0V, 10mA, optically isolated	
Software Trigger	CC1, programmable expose	
Dynamic Range	> 64 dB	
Lens Mount	F-mount	
Power	10~14V DC , MAX. 8W	
Environmental	-5°C~+40°C, storage :-30°C~65°C	
Mechanical	68mmX68mmx91.1mm, 495g (w/ F-mount adaptor)	

Quantum Efficiency Curves



Ordering Scheme

VH - 16MG - M4AO	
Series	Sensor Option
VH series	A0 - Kodak
Sensor Resolution	Frame Rate
11M - 11 megapixels	4 - 4 fps
16M - 16 megapixels	6 - 6 fps
Interface	Mono / Color
G - GigE	M - Monochrome
	C - Color

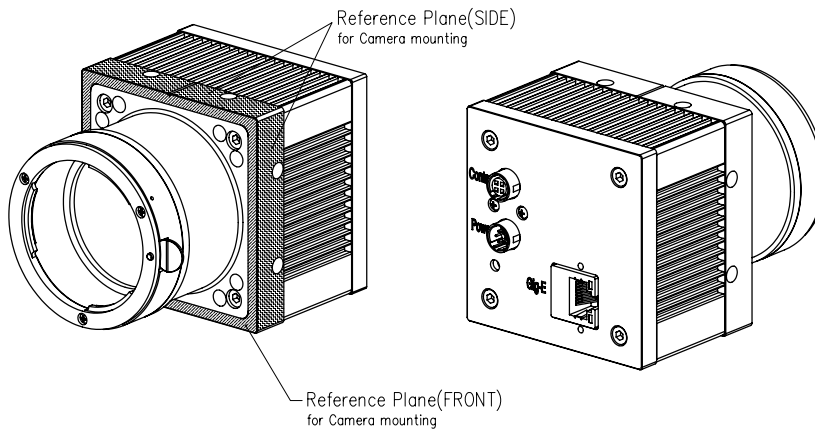
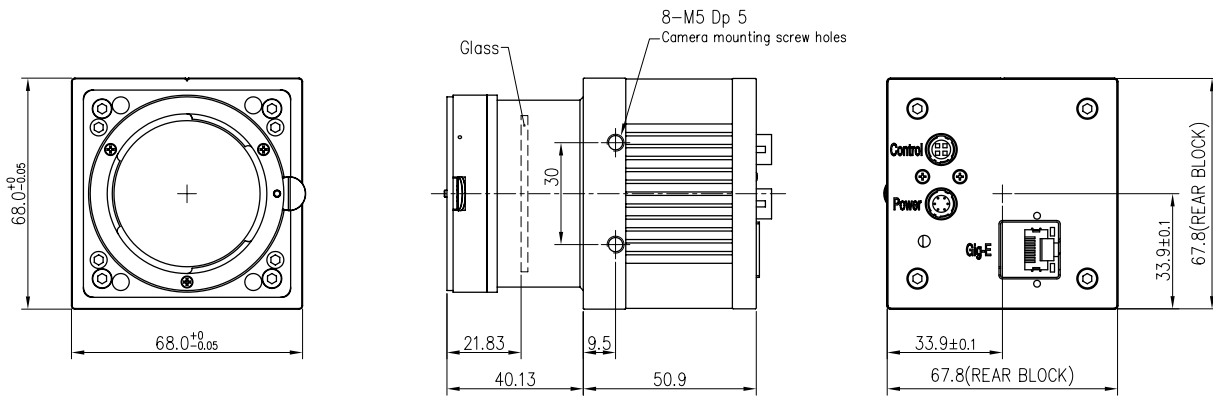
Connector Specifications

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-4SB)

Connectors on camera body

Mechanical Dimensions

Unit : mm



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