

Preliminary

VL-2K7NG-M/C VL-4K3.5NG-M/C

Line Scan Cameras with 5GigE Interface



VL-2K7NG-M/C and VL-4K3.5NG-M/C, the new line scan cameras provide a fast line rate equipped with the 5GigE (NBASE-T) interface, compatible with 2.5GigE and 1GigE.

The VL-2K7NG-M/C and VL-4K3.5NG-M/C cameras feature line rates of up to 170kHz at 2K resolution. The GL3504 image sensors support $7\mu\text{m}$ pixel lines at 2k resolution and $3.5\mu\text{m}$ pixel lines at 4k resolution. VL-2K7NG-M/C and VL-4K3.5NG-M/C are small format cameras compatible with M42 and C-mount lenses. Featuring high speed and color variation, the VL-2K7NG-M/C and VL-4K3.5NG-M/C cameras are ideal for a wide range of demanding applications, such as food and agricultural inspection, pharmaceutical inspection, wood inspection, and fabric inspection.

VIEWORKS

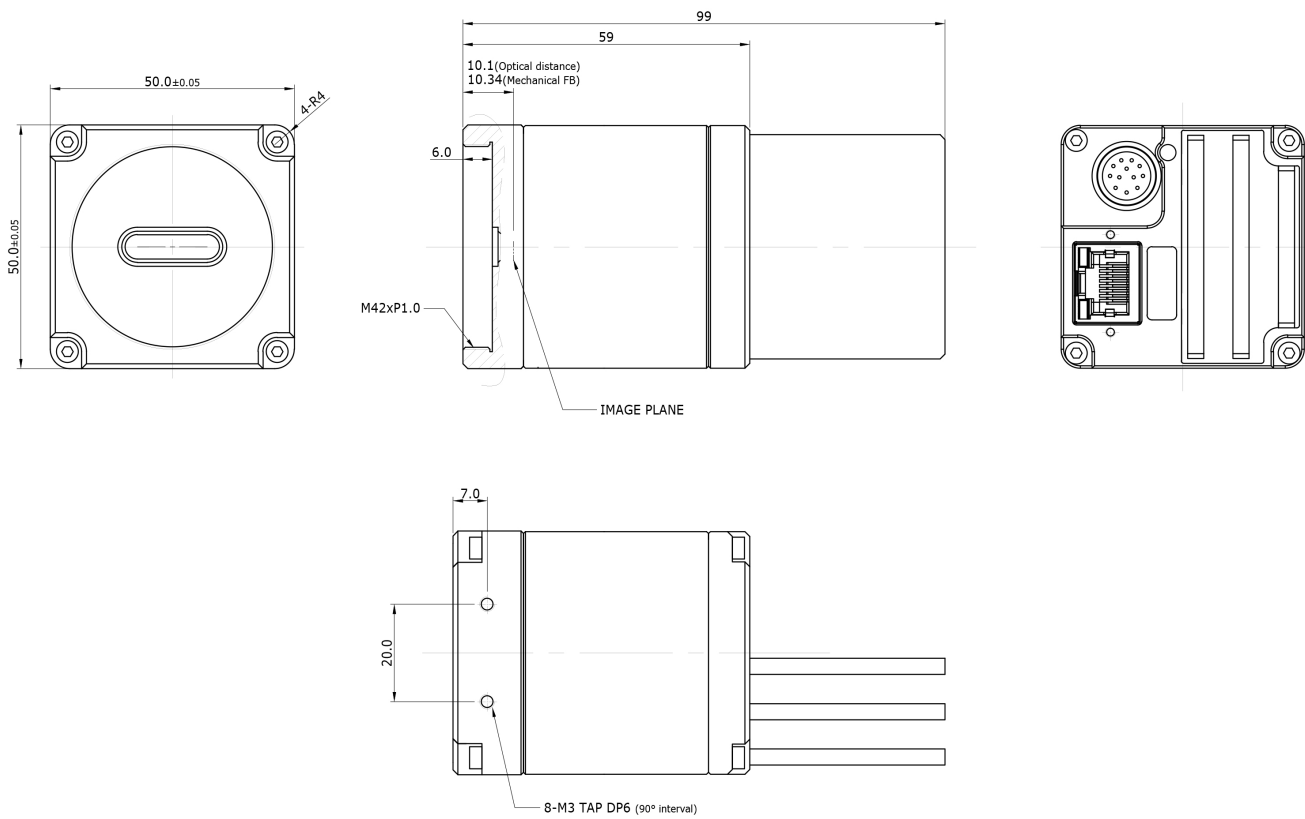
vision.vieworks.com

VL-2K7NG-M/C / VL-4K3.5NG-M/C

Line Scan Camera with 5GigE Interface (Nbase-T)

Mechanical Dimensions

Unit: mm



VL-2K7NG-M/C / VL-4K3.5NG-M/C

Line Scan Camera with 5GigE Interface (Nbase-T)

Main Features

- M42-mount based 2k / 4k Line Scan Cameras
- Supports NBASE-T and backward compatibility (5GigE, 2.5GigE, 1GigE)
- Supports 2 stage TDI (Mono)
- GL3504 2k color supports 3-line true color with RGBW Quad-Linear method
- Individual Gain/Exposure Control
- Supports PoE (IEEE 802.3af)
- Optimized for M42, 50x50mm size (C-Mount possible when using adapter)
- Defective Pixel Correction
- GenICam Compatible – XML based Control

Applications

- Food & Agricultural Inspection
- Pharmaceutical Inspection
- Wood Inspection
- Fabric Inspection

Specifications

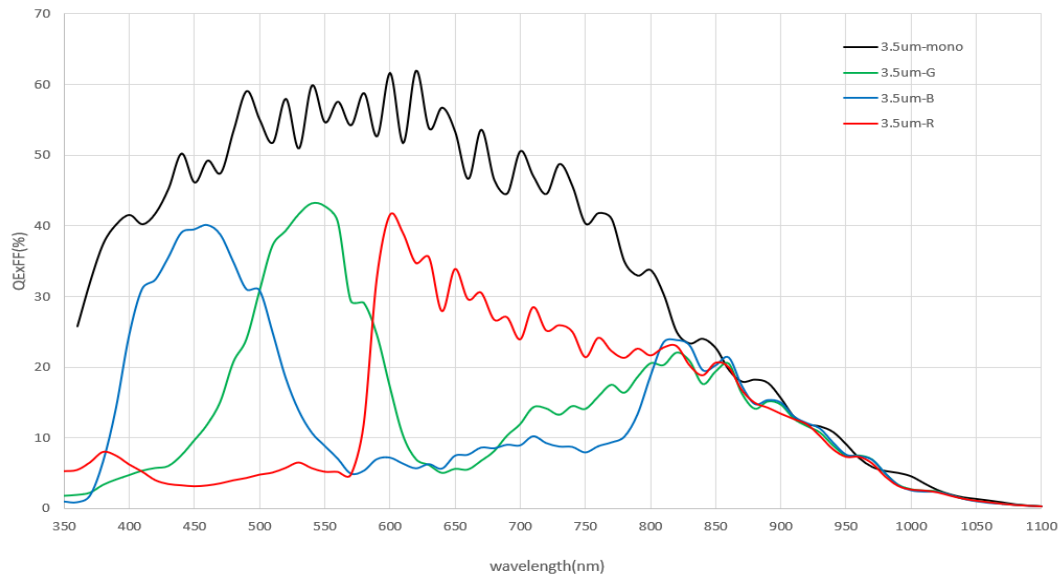
Model	VL-2K7NG-M170I-2	VL-2K7NG-C44I-4	VL-4K3.5NG-M83I-2	VL-4K3.5NG-C42I-2
Active Image (H × V)	2048 × 2	2048 × 4	4096 × 2	4096 × 2
Sensor	GL3504			
Pixel Size	7.0 μm × 7.0 μm		3.5 μm × 3.5 μm	
Interface	5 GigE (Nbase-T)			
Dynamic Range	65.5dB		65.8dB	
Line Rate	170kHz (@Single line)	44kHz (@Quad line)	83kHz (@Single line)	42kHz (@Dual line)
Pixel Data Format	Mono 8/10/12 Mono 10/12 Packed	RGB/BGR 8/10/12 RGBa/BGRa 8	Mono 8/10/12 Mono 10/12 Packed	RGB/BGR 8/10/12
Black Level Control	Adjustable (-2048 ~ 2048 LSB at 12 bits)			
Gain Control	Individual Band Gain: x1.0 ~ x4.0 Digital Gain: x1.00 ~ x32.00			
Exposure Time	0.1 ~ 1000μs (All or Individual band)			
Trigger Synchronization	Free-Run, Hardware Trigger or Software Trigger			
External Trigger	External, 3.3V ~ 5.0V			
Gamma Correction	User defined LUT (Look Up Table)			
Offset and Gain Correction	DSNU, PRNU			
Lens Mount	M42, C-mount (Adaptor)			
Mechanical	50mm x 50mm x 99mm, 279g			
Temperature	Storage: -40°C ~ 70°C			
Power	External	11 ~ 24V		
	Dissipation	Max. 10W (@PoE)		
	PoE	48VDC, 802.3af (Class 0)		
API SDK		Vieworks Imaging Solution 7.x		

VL-2K7NG-M/C / VL-4K3.5NG-M/C

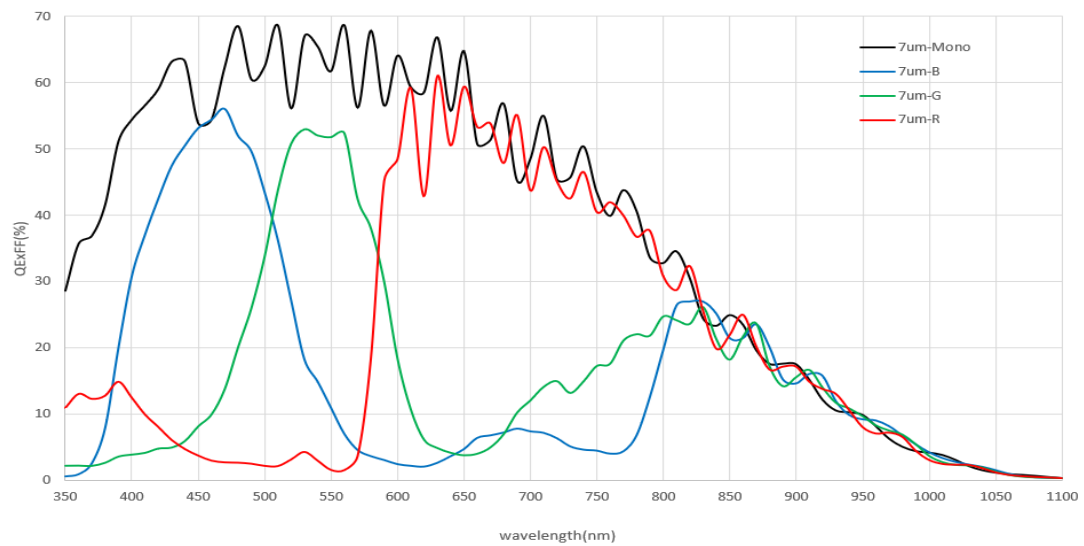
Line Scan Camera with 5GigE Interface (Nbase-T)

Spectral Response

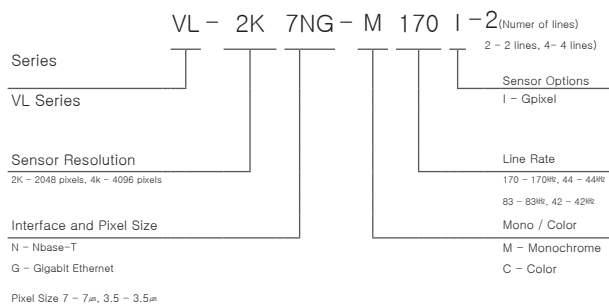
- VL-4K3.5NG-M/C



- VL-2K7NG-M/C



Ordering Scheme



Connector Specification

Power/Control



- | | |
|------------------|------------------------------------|
| 1: DC Ground | 2: +12 VDC |
| 3: Signal Ground | *4: Line3+ |
| 5: Signal Ground | *6: Line0+ |
| 7: NC | 8: NC |
| *9: Line1+ | *10: Line2+ |
| 11: NC | 12: Signal Ground (HR10A-10R-12PB) |

- *Line3+ is connected with Output function
- *Line0+ is connected with Trigger In+ function
- *Line1+ is connected with Scan direction In+
- *Line2+ is connected with Frame Start In+

Connectors on camera body