VT Series

M42 Mount based TDI Line Scan Cameras with the GigE Interface

GigE VISION

The VT-3K7G, VT-4K5G and VT-6K3.5G, the new hybrid Time Delayed Integration (TDI) line scan cameras equipped with the GigE interface, provide faster line rates and higher sensitivity than existing line scan cameras. With hybrid TDI line scan technology combining the strengths of both CCD and CMOS image sensors, the VT-3K7G camera allows image capture with up to 128✕ higher sensitivity. Even superior resolution and sensitivity, up to 256✕ greater sensitivity can be achieved using the VT-6K3.5G camera. Featured with high speed and high sensitivity, these cameras are ideal for demanding applications such as flat panel inspection, wafer inspection, printed circuit board inspection, and high-performance document scanning.

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VT-3K7G / VT-4K5G / VT-6K3.5G

M42 Mount based TDI Line Scan Cameras with the GigE Interface

Main Features

- M42-mount based 3k / 4k / 6k TDI Line Scan Cameras
- GigE Interface
- Bidirectional Operation with up to 256 TDI Stages
- Exposure Control
- Advanced DSNU and PRNU Correction
- Trigger Rescaler and Strobe Output Control

Applications

- Flat Panel Display Inspection
- PCB Inspection
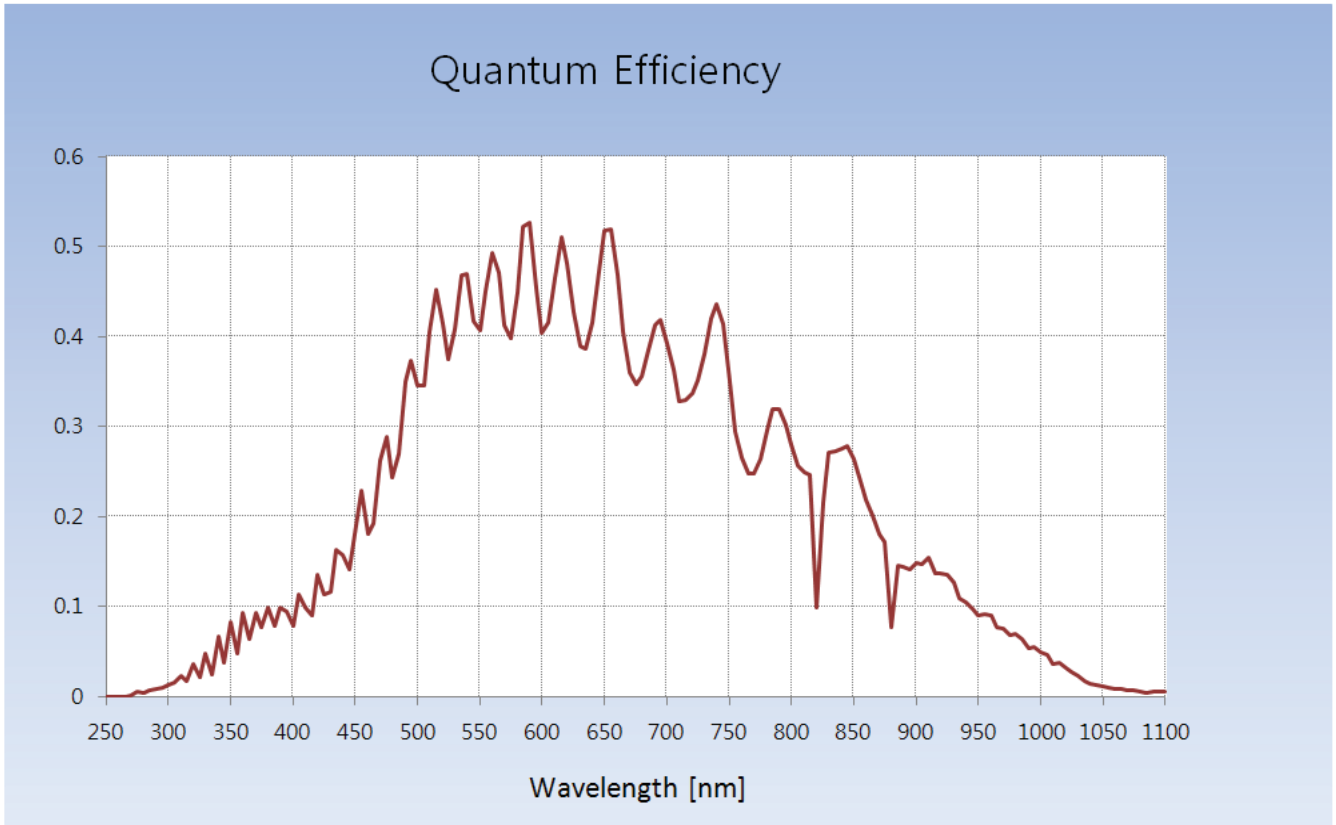- Machine Vision Inspection
- Microscopy and Metrology

Specifications

Model		VT-3K7G-H 38 A	VT-4K5G-H 26 A	VT-6K3.5G-H 19 A
Resolution (H × V)		3200 × 128	4640 × 256	6560 × 256
Sensor		Hybrid TDI Line Scan		
Pixel Size		7.0 μm × 7.0 μm	5.0 μm × 5.0 μm	3.5 μm × 3.5 μm
Interface		GigE		
Max. Line Rate		38 KHz	26 KHz	19 KHz
Min. Line Rate		1 KHz		
Pixel Data Format		8 / 10 / 12 bit		
TDI Stages		32 / 64 / 96 / 128	64 / 128 / 192 / 256	64 / 128 / 192 / 256
Trigger Synchronization		Free-Run, External		
Throughput		0.12 Gpix/s	0.12 Gpix/s	0.12 Gpix/s
Gamma Correction		User Defined LUT (Lookup Table)		
Black Level Control		-255 ~ 255 at 8 bit		
Gain Control		Analog Gain: 1×, 2×, 3×, 4× / Digital Gain: 1.0× ~ 8.0×		
Lens Mount		M42 × 1 (C or F-mount available upon request)		
Dimension / Weight		60 ㎜ × 60 ㎜ × 36 ㎜, 223 g		
Temperature		Operating: 0℃ ~ 50℃, Storage: -40℃ ~ 70℃		
Power	External	10 ~ 30 V DC		
	Dissipation	Typ. 3.5 W	Typ. 4.0 W	Typ. 4.5 W
Compliance		CE, FCC, KC		
API SDK		Vieworks Imaging Solution 7.X		

Quantum Efficiency Curves

Quantum Efficiency

Ordering Scheme

VT – 6K 3.5 G – H 19 A

Series
VT Series

Sensor Resolution
3K – 3200 pixels
4K – 4640 pixels
6K – 6560 pixels

Pixel Size
3.5 – 3.5 μm
5.0 – 5.0 μm
7.0 – 7.0 μm

Interface
G – Gigabit Ethernet

Sensor Options
A – Vieworks

Line Rate
19 – 19 KHz
26 – 26 KHz
38 – 38 KHz

Sensitivity
H – Hyper
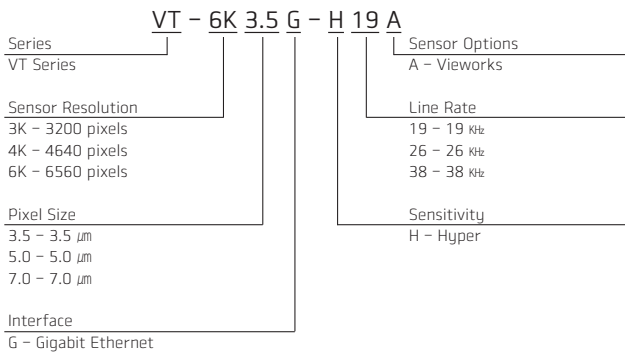
Connector Specification

Power Input Receptacle

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

Control I/O Receptacle for GigE
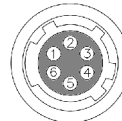
1: Trigger IN1+   2: Trigger IN1–
3: Strobe Out   4: DC Ground
5: Trigger IN2+   6: Trigger IN2–
(HR10A–7R–6SB)

Connectors on camera body

Mechanical Dimensions

Unit: ㎜

Connector Hole
for Strobe Controller

7.0

42.0

8-M4 DP5
Screw Holes for Camera Mounting
and Strobe Controller

$60.0^{±0.05}$

54.0

4-R2.0

$60.0^{±0.05}$

54.0

4- M4 TAP DP5
Screw Holes for Camera Mounting

46

36

Image Plane

5.0

M42 x P1.0

10.48(Mechanical FB)

10.10(Optical FB)

GigE

PWR

CTR

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