

# VT Series

M42 Mount based TDI Line Scan Cameras with the GigE Interface



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-E38A-32 camera features up to 35 kHz line rates at 3k resolution and 32× greater sensitivity.

Even superior resolution and sensitivity, up to 18 kHz line rates at 6k resolution and 256× greater sensitivity can be achieved using the VT-6K3.5G-H19A-256 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.

**VIEWWORKS**

[vision.viewworks.com](http://vision.viewworks.com)

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

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## 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

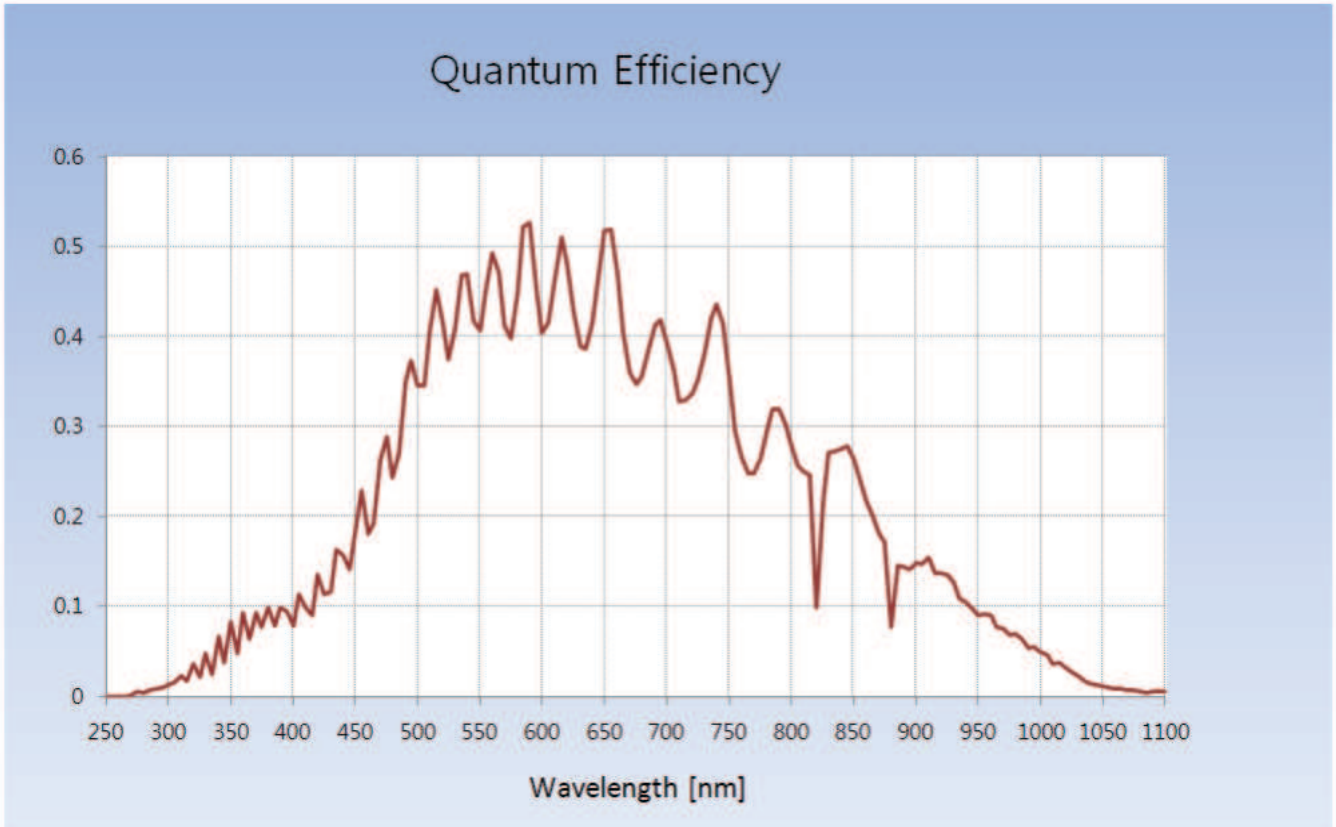
## Specifications

| Model                   | VT-3K7G-<br>E38A-32   | VT-3K7G-<br>H38A-128 | VT-4K5G-<br>E26A-64 | VT-4K5G-<br>H26A-256 | VT-6K3.5G-<br>E19A-64 | VT-6K3.5G-<br>H19A-256 |
|-------------------------|---|----------------------|---------------------|----------------------|-----------------------|------------------------|
| Resolution (H × V)      | 3200 × 32   | 3200 × 128           | 4640 × 64           | 4640 × 256           | 6560 × 64             | 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          | 35 kHz  |                      | 25 kHz              |                      | 18 kHz                |                        |
| Min. Line Rate          | 1 kHz   |                      |                     |                      |                       |                        |
| Pixel Format            | 8/10/12 bit   |                      |                     |                      |                       |                        |
| TDI Stages              | 32  | 32/64/96/128         | 64                  | 64/128/192/256       | 64                    | 64/128/192/256         |
| Trigger Synchronization | Free-Run, External  |                      |                     |                      |                       |                        |
| Throughput              | 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 mm (C or F-mount available upon request)                            |                      |                     |                      |                       |                        |
| Dimension/Weight        | 60 mm × 60 mm × 36 mm, 223 g  |                      |                     |                      |                       |                        |
| Temperature             | Ambient Operating: 0°C ~ 50°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C |                      |                     |                      |                       |                        |
| Power                   | External  | 10 ~ 30 V DC         |                     |                      |                       |                        |
|                         | Dissipation   | Typ. 3.5 W           |                     | Typ. 4.0 W           |                       | Typ. 4.5 W             |
| Compliance              | CE, FCC, KC, UKCA   |                      |                     | CE, FCC, KC          |                       |                        |
| API SDK                 | Vieworks Imaging Solution 7.X   |                      |                     |                      |                       |                        |

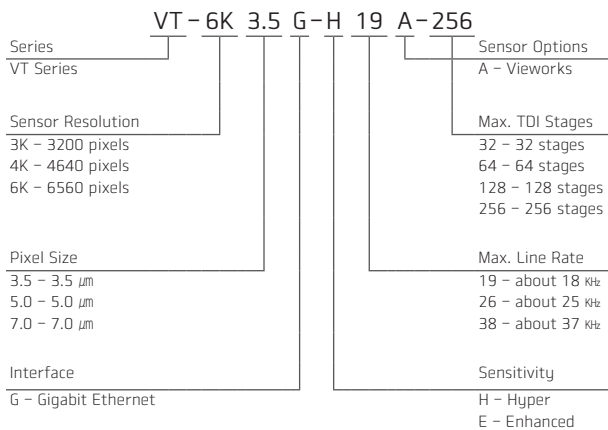
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## Quantum Efficiency Curves

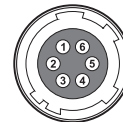


## Ordering Scheme



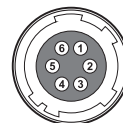
## Connector Specification

### Power Input Receptacle



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

### 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

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## Mechanical Dimensions

Unit: mm

