

VT-16K5X-E300A-64 VT-16K5X-H300A-256

High Speed & High Sensitivity 16k TDI Line Scan Cameras



CoaXPRESS[®]

The VT-16K5X-E300A-64 and VT-16K5X-H300A-256, the new hybrid Time Delayed Integration (TDI) line scan cameras equipped with eight CoaXPRESS channels, 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-16K5X-E300A-64 camera delivers line rates of up to 300 kHz at 16k resolution with 64× higher sensitivity. Even superior sensitivity, up to 16384 pixel resolution at a maximum line rate of 300 kHz and 256× greater sensitivity can be achieved using the VT-16K5X-H300A-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.

VT-16K5X-E300A-64 / VT-16K5X-H300A-256

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Main Features

- 16k Hybrid TDI Line Scan
- CoaXPress Interface up to 300 kHz at 50 Gbps using 8 CH
- Bidirectional Operation with up to 256 TDI Stages
- Advanced DSNU and PRNU Correction
- Trigger Rescaler and Strobe Output Control
- GenICam Compatible – XML based Control

Applications

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

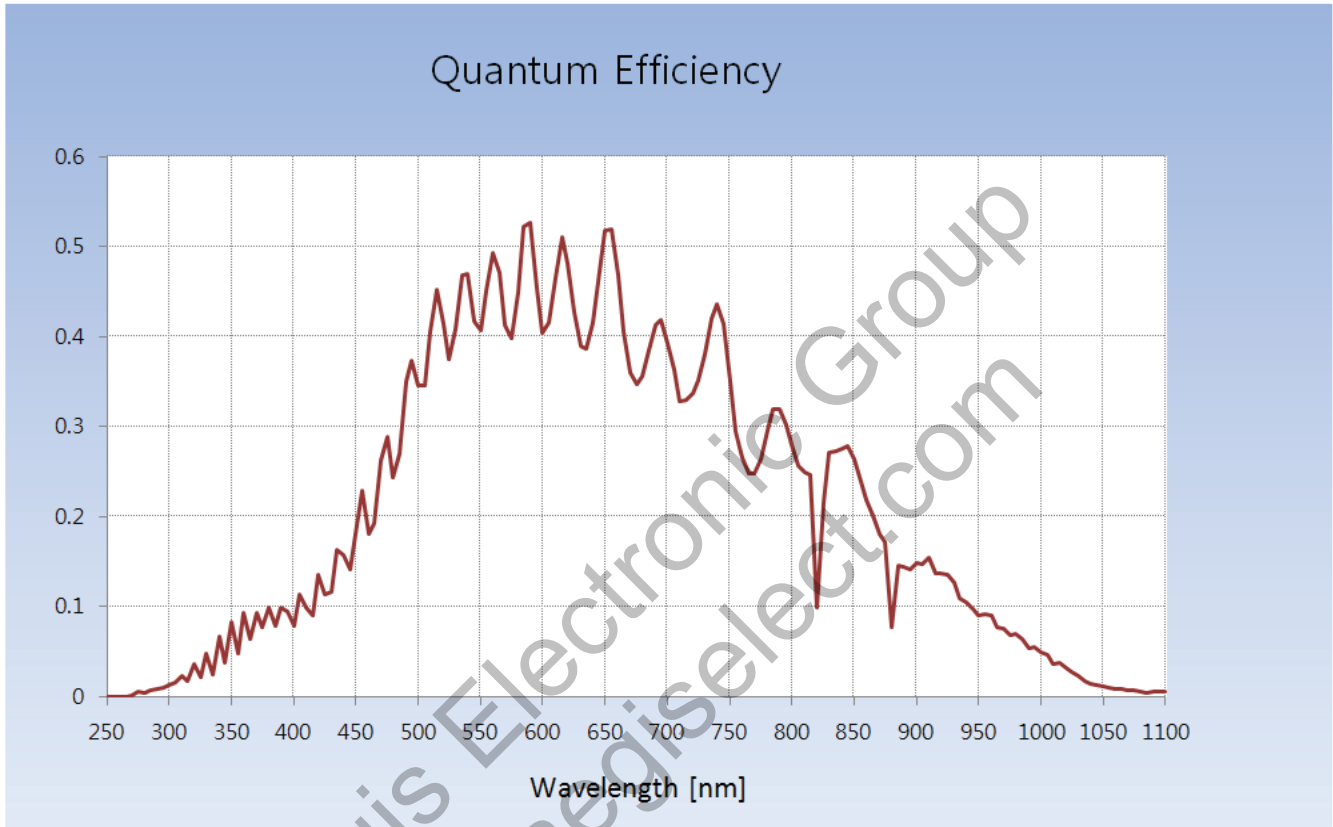
Specifications

| Model | VT-16K5X-E300A-64 | VT-16K5X-H300A-256 |
|--------------------------------|---|---|
| Resolution (H × V) | 16384 × 64 | 16384 × 256 |
| Sensor | Hybrid TDI Line Scan | |
| Pixel Size | 5.0 μm × 5.0 μm | |
| Interface | CoaXPress (CXP-6, 8 CH) | |
| Max. Line Rate | 300 kHz (ROI 16,000 pixels) | |
| Max. Line Rate (2 × 2 Binning) | 257 kHz | |
| Min. Line Rate | 1 kHz | |
| Pixel Data Format | 8 / 10 / 12 bit | |
| TDI Stages | 64 | 64 / 128 / 192 / 256 |
| Trigger Synchronization | Free-Run, External or CoaXPress | |
| Throughput | 4.8 Gpix/s | |
| Gamma Correction | User Defined Lookup Table (LUT) | |
| Black Level Control | -255 ~ 255 at 8 bit | |
| Gain Control | Analog Gain: 1×, 2×, 3×, 4× / Digital Gain: 1.0× ~ 8.0× | |
| Lens Mount | M95 × 1 mm | |
| Dimension / Weight | 100 mm × 100 mm × 72 mm / 860 g | |
| Temperature | Ambient Operating: 0°C ~ 40°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C | |
| Power | External | 10 ~ 30 V DC |
| | Dissipation | Typ. 18.0 W |
| | PoCXP | 24 V DC, Minimum of two PoCXP cables required |
| Compliance | CE, FCC, KC | |
| API SDK | Vieworks Imaging Solution 7.X | |

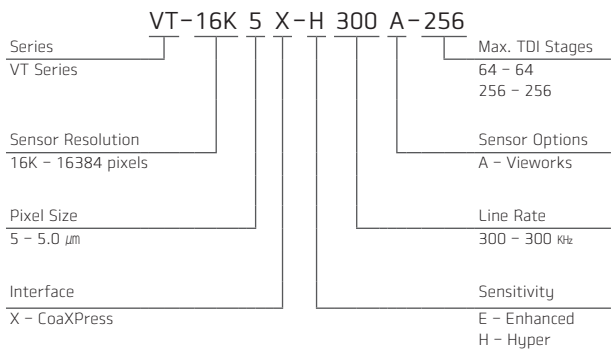
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Quantum Efficiency

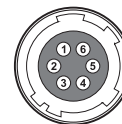


Ordering Scheme



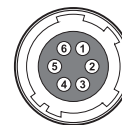
Connector Specification

Power



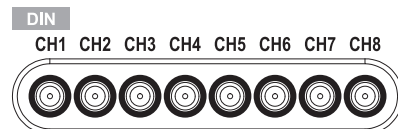
1, 2, 3: +12 V DC
4, 5, 6: GND
(HR10A-7R-6PB)

Control



1: Trigger IN 2: Direction IN
3: GND 4: GND
5: NC 6: Strobe Out
(HR10A-7R-6SB)

Data Transfer / Communications



CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8

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

Connectors on camera body

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Mechanical Dimensions

Unit: mm

