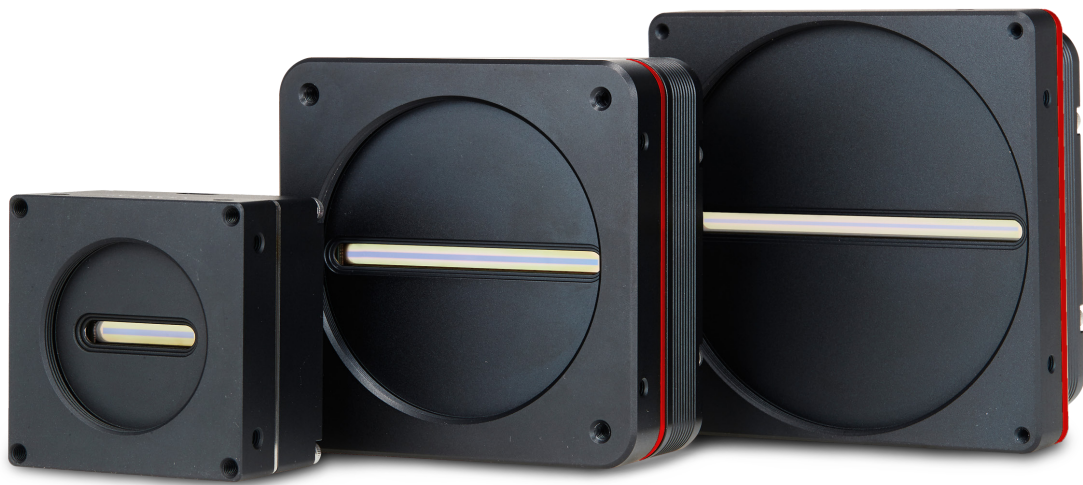


VT Series

High Sensitivity & High Speed TDI Line Scan Cameras



VTDI

- Next generation hybrid TDI line scan technology
- Up to 250 kHz at 9k resolution and 100 kHz at 23k resolution
- Greater sensitivity at faster speed with very low noise



VIEWWORKS

www.viewworks.com

VT Series – High Sensitivity TDI Line Scan Cameras

Overview

VT series, Vieworks' Time Delayed Integration line scan cameras, is designed for applications where faster line rates and higher sensitivity are crucial.

Vieworks' advanced TDI line scan technology based on the outstanding hybrid imaging sensors allows image captures as fast as 250 kHz line rates with up to 128× higher sensitivity using the M72 mount based VT-9K7X camera.

Even superior resolution and sensitivity, up to 23360 pixel resolution at 100 kHz line rate and 256× greater sensitivity can be achieved using the M95 mount based VT-23K3.5X camera.

A diverse lineup of VT TDI line scan cameras is now available at reasonable prices to meet various system design requirements including resolution, line rate, sensitivity and lens mount (M42/M72/M95) specifications.

VT series is available with Camera Link or the latest CoaXPress interface standard to meet application-specific requirements.

Featured with high speed and high sensitivity, this brand new technology is ideal for demanding applications such as flat panel display inspection, wafer inspection, printed circuit board inspection, and high-performance document scanning.

Main Features

- 3k / 4k / 6k / 9k / 12k / 16k / 18k / 23k TDI Line Scan Cameras
- Bidirectional Operations with up to 256 TDI stages
- CoaXPress or Camera Link Interface
- Anti-blooming
- Exposure Control
- Advanced PRNU and DSNU Correction
- Area Scan Mode for Camera Alignment

Applications

- Flat Panel Display Inspection
- Printed Circuit Board Inspection
- Wafer Inspection
- High Performance Document Scanning



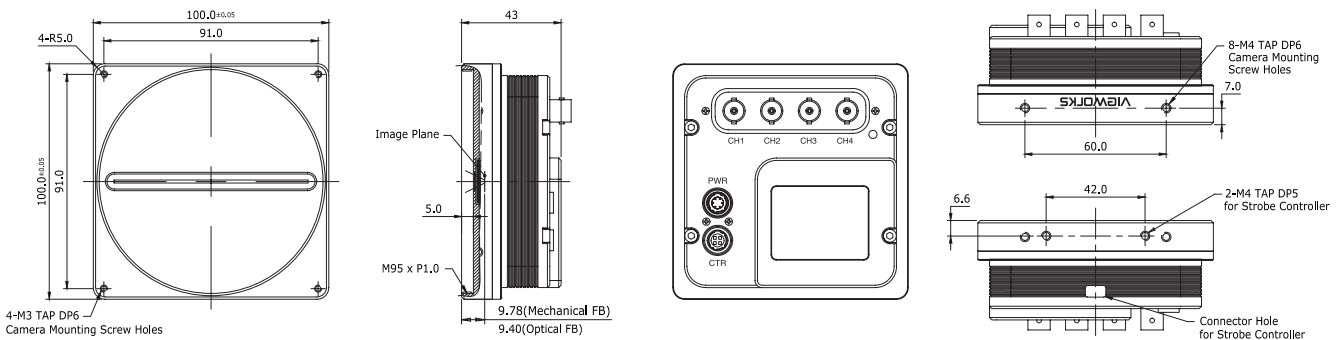
VT Series – High Sensitivity TDI Line Scan Cameras

M95 Mount based VT Series Specifications



| Model | VT-16K5X-H140 | VT-23K3.5X-H100 |
|-----------------------------------|-----------------------------------------------------------------------------|----------------------|
| Resolution (H × V) | 16384 × 256 | 23360 × 256 |
| Pixel Size | 5.0 μm × 5.0 μm | 3.5 μm × 3.5 μm |
| Interface | CoaXPress | |
| Max. Line Rate | 140 kHz (@ROI 16384) | 100 kHz (@ROI 23360) |
| Max. Line Rate (2 × 2 Binning) | 120 kHz | 100 kHz |
| Min. Line Rate | 1 kHz | |
| Pixel Data Format | 8 / 10 / 12 bit | |
| TDI Stage | 64 / 128 / 192 / 256 | 64 / 128 / 192 / 256 |
| Trigger Mode | Free-Run, Timed, Trigger Width | |
| Throughput | 2.29 Gpix/s | 2.34 Gpix/s |
| Gamma Correction | User Defined Lookup Table (LUT) | |
| Black Level | Adjustable (-255 ~ 255 at 8 bit) | |
| Gain Control | Analog Gain: ×1, ×2, ×3, ×4 / Digital Gain: ×1.0 ~ ×8.0 | |
| Lens Mount | M95 × 1 | |
| Dimension / Weight | 100 mm × 100 mm × 43 mm / 608 g | |
| Temperature | Ambient Operating: 0°C ~ 50°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C | |
| Power | 10 ~ 30 V DC | |
| Power Dissipation | Typ. 12 W | Typ. 15 W |
| API SDK | Vieworks Imaging Solution 7.X | |

Mechanical Dimension in mm



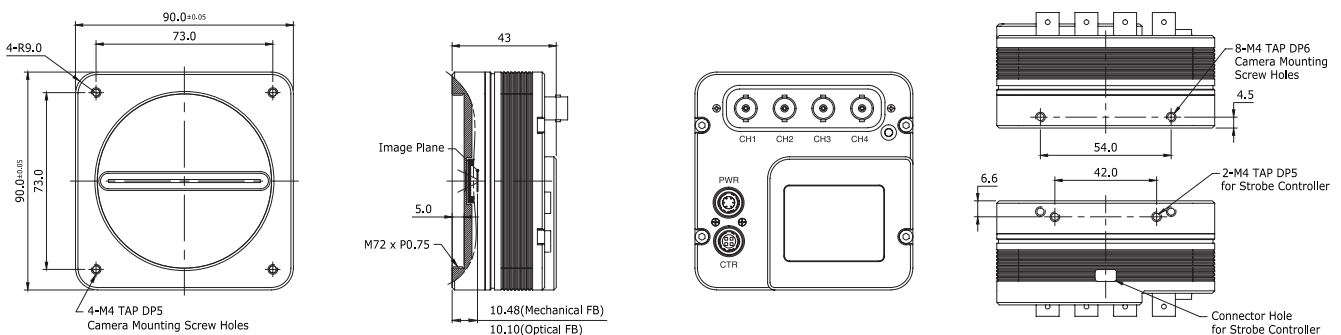
VT Series – High Sensitivity TDI Line Scan Cameras

M72 Mount based VT Series Specifications



| Model | VT-18K3.5X-H140 | VT-12K5X-H200 | VT-9K7X-H250 | VT-6K10X-H170 |
|-----------------------------------|-----------------------------------------------------------------------------|----------------------------------------------|---------------------|---------------------|
| Resolution (H × V) | 17824 × 256 | 12480 × 256 | 8912 × 128 | 6240 × 128 |
| Pixel Size | 3.5 μm × 3.5 μm | 5.0 μm × 5.0 μm | 7.0 μm × 7.0 μm | 10.0 μm × 10.0 μm |
| Interface | CoaXPRESS | | | |
| Max. Line Rate | 134 kHz (@ROI 17824) 140 kHz (@ROI 17120) | 192 kHz (@ROI 12480) 200 kHz (@ROI 12000) | 250 kHz (@ROI 8912) | 172 kHz (@ROI 6240) |
| Max. Line Rate (2 × 2 Binning) | 140 kHz | 172 kHz | 208 kHz | – |
| Min. Line Rate | 1 kHz | | | |
| Pixel Data Format | 8 / 10 / 12 bit | | | |
| TDI Stage | 64 / 128 / 192 / 256 | | 32 / 64 / 96 / 128 | |
| Trigger Mode | Free-Run, Timed, Trigger Width | | | |
| Throughput | 2.42 Gpix/s | 2.40 Gpix/s | 2.23 Gpix/s | 1.07 Gpix/s |
| Gamma Correction | User Defined Lookup Table (LUT) | | | |
| Black Level | Adjustable (-255 ~ 255 at 8 bit) | | | |
| Gain Control | Analog Gain: ×1, ×2, ×3, ×4 / Digital Gain: ×1.0 ~ ×8.0 | | | |
| Lens Mount | M72 × 0.75 | | | |
| Dimension / Weight | 90 mm × 90 mm × 43 mm / 500 g | | | |
| Temperature | Ambient Operating: 0°C ~ 40°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C | | | |
| Power | 10 ~ 30 V DC | | | |
| Power Dissipation | Typ. 12 W | Typ. 10 W | Typ. 10 W | Typ. 10 W |
| API SDK | Vieworks Imaging Solution 7.X | | | |

Mechanical Dimension in mm



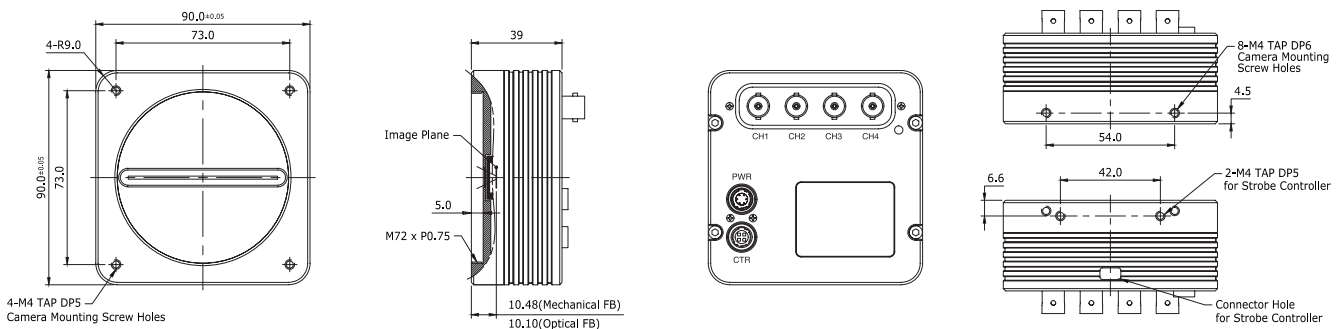
VT Series – High Sensitivity TDI Line Scan Cameras

M72 Mount based VT Series Specifications



| Model | VT-18K3.5X-H80 | VT-12K5X-H100 | VT-9K7X-H120 |
|--------------------------------|-----------------------------------------------------------------------------|----------------------|---------------------|
| Resolution (H × V) | 17824 × 256 | 12480 × 256 | 8912 × 128 |
| Pixel Size | 3.5 μm × 3.5 μm | 5.0 μm × 5.0 μm | 7.0 μm × 7.0 μm |
| Interface | CoaXPRESS | | |
| Max. Line Rate | 80 kHz (@ROI 17824) | 100 kHz (@ROI 12480) | 125 kHz (@ROI 8912) |
| Max. Line Rate (2 × 2 Binning) | 80 kHz | 100 kHz | 125 kHz |
| Min. Line Rate | 1 kHz | | |
| Pixel Data Format | 8 / 10 / 12 bit | | |
| TDI Stage | 64 / 128 / 192 / 256 | | 32 / 64 / 96 / 128 |
| Trigger Mode | Free-Run, Timed, Trigger Width | | |
| Throughput | 1.43 Gpix/s | 1.25 Gpix/s | 1.11 Gpix/s |
| Gamma Correction | User Defined Lookup Table (LUT) | | |
| Black Level | Adjustable (-255 ~ 255 at 8 bit) | | |
| Gain Control | Analog Gain: ×1, ×2, ×3, ×4 / Digital Gain: ×1.0 ~ ×8.0 | | |
| Lens Mount | M72 × 0.75 | | |
| Dimension / Weight | 90 mm × 90 mm × 39 mm / 500 g | | |
| Temperature | Ambient Operating: 0°C ~ 40°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C | | |
| Power | 10 ~ 30 V DC | | |
| Power Dissipation | Typ. 12 W | Typ. 10 W | Typ. 10 W |
| API SDK | Vieworks Imaging Solution 7.X | | |

Mechanical Dimension in mm



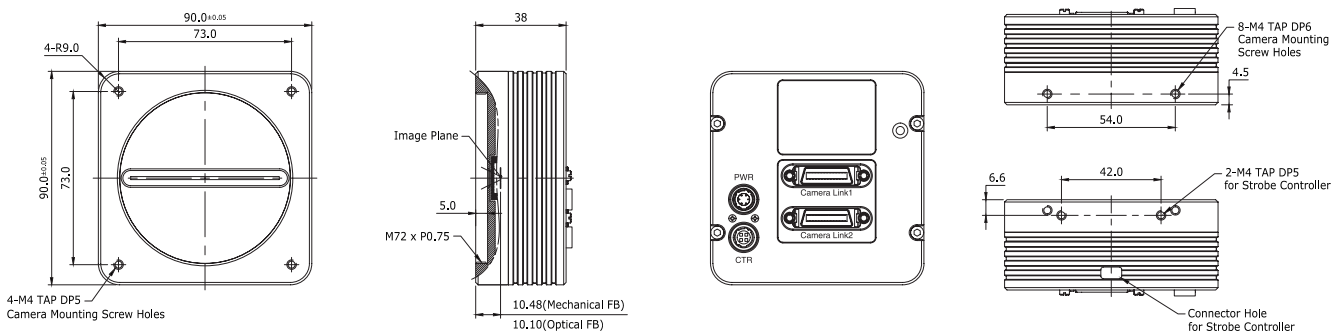
VT Series – High Sensitivity TDI Line Scan Cameras

M72 Mount based VT Series Specifications



| Model | VT-18K3.5C-H40 | VT-12K5C-H60 | VT-9K7C-H80 | VT-4K14C-H120 | VT-4K7C-H120 |
|--------------------------------|-----------------------------------------------------------------------------|--------------------|-------------------|--------------------|-------------------|
| Resolution (H × V) | 17824 × 256 | 12480 × 256 | 8912 × 128 | 4096 × 64 | 4096 × 128 |
| Pixel Size | 3.5 μm × 3.5 μm | 5.0 μm × 5.0 μm | 7.0 μm × 7.0 μm | 14.0 μm × 14.0 μm | 7.0 μm × 7.0 μm |
| Interface | Camera Link | | | | |
| Max. Line Rate | 47kHz(@ROI 17824) | 67kHz(@ROI 12480) | 94kHz(@ROI 8912) | 125kHz(@ROI 4096) | 125kHz(@ROI 4096) |
| Max. Line Rate (2 × 2 Binning) | 80 kHz | 100 kHz | 120 kHz | – | 120 kHz |
| Min. Line Rate | 1 kHz | | | | |
| Pixel Data Format | 8 bit (2/4/8/10 Tap) / 10 bit (2/4 Tap) / 12 bit (2/4 Tap) | | | | |
| TDI Stage | 64 / 128 / 192 / 256 | 32 / 64 / 96 / 128 | 16 / 32 / 48 / 64 | 32 / 64 / 96 / 128 | |
| Trigger Mode | Free-Run, Timed, Trigger Width | | | | |
| Throughput | 0.83 Gpix/s | 0.83 Gpix/s | 0.83 Gpix/s | 0.51 Gpix/s | 0.51 Gpix/s |
| Gamma Correction | User Defined Lookup Table (LUT) | | | | |
| Black Level | Adjustable (-255 ~ 255 at 8 bit) | | | | |
| Gain Control | Analog Gain: ×1, ×2, ×3, ×4 / Digital Gain: ×1.0 ~ ×8.0 | | | | |
| Lens Mount | M72 × 0.75 | | | | |
| Dimension / Weight | 90 mm × 90 mm × 38 mm / 500 g | | | | |
| Temperature | Ambient Operating: 0°C ~ 40°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C | | | | |
| Power | 10 ~ 30 V DC | | | | |
| Power Dissipation | Typ. 12 W | | | | |
| Configuration Software | Configurator | | | | |

Mechanical Dimension in mm



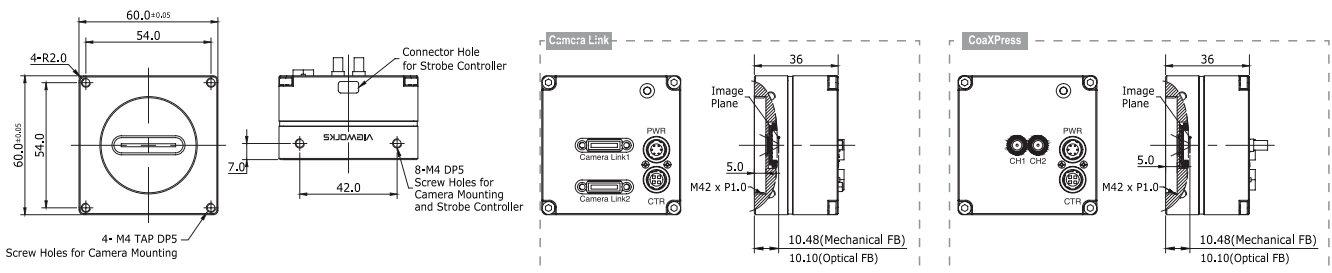
VT Series – High Sensitivity TDI Line Scan Cameras

M42 Mount based VT Series Specifications



| Camera Link | VT-3K7C-E100 | VT-3K7C-H100 | VT-4K5C-E100 | VT-4K5C-H100 | VT-6K3.5C-E100 | VT-6K3.5C-H100 |
|--------------------------------|-------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------|----------------|----------------------------------------------------|----------------|
| CoaXPRESS | VT-3K7X-E250 | VT-3K7X-H250 | VT-4K5X-E200 | VT-4K5X-H200 | VT-6K3.5X-E160 | VT-6K3.5X-H160 |
| Resolution (H × V) | 3200 × 32 | 3200 × 128 | 4640 × 64 | 4640 × 256 | 6560 × 64 | 6560 × 256 |
| Pixel Size | 7.0 μm × 7.0 μm | | 5.0 μm × 5.0 μm | | 3.5 μm × 3.5 μm | |
| Interface | Camera Link / CoaXPRESS 2CH | | | | | |
| Max. Line Rate | 100 kHz (Camera Link) 250 kHz (CXP 2CH) | | 100 kHz (Camera Link) 200 kHz (CXP 2CH) | | 100 kHz (Camera Link) 160 kHz (CXP 2CH) | |
| Max. Line Rate (2 × 2 Binning) | 100 kHz (Camera Link) 208 kHz (CXP 2CH) | | 100 kHz (Camera Link) 176 kHz (CXP 2CH) | | 100 kHz (Camera Link) 140 kHz (CXP 2CH) | |
| Min. Line Rate | 1 kHz | | | | | |
| Camera Link Pixel Clock | 40 MHz / 60 MHz / 80 MHz / 85 MHz | | | | | |
| Pixel Data Format | Camera Link: 8 bit (2/4/8/10 Tap) / 10 bit (2/4 Tap) / 12 bit (2/4 Tap) CoaXPRESS: 8 / 10 / 12 bit | | | | | |
| TDI Stage | 32 | 32/64/96/128 | 64 | 64/128/192/256 | 64 | 64/128/192/256 |
| Trigger Mode | Free-Run, Timed, Trigger Width | | | | | |
| Throughput | 0.32 Gpix/s (Camera Link) 0.80 Gpix/s (CXP 2CH) | | 0.46 Gpix/s (Camera Link) 0.93 Gpix/s (CXP 2CH) | | 0.66 Gpix/s (Camera Link) 1.05 Gpix/s (CXP 2CH) | |
| Gamma Correction | User Defined Lookup Table (LUT) | | | | | |
| Black Level | Adjustable (-255 - 255 LSB 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 is 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 | 10 - 30 V DC | | | | | |
| Power Dissipation | Typ. 3.5 W | | Typ. 4 W | | Typ. 4.5 W | |
| API SDK for CXP | Vieworks Imaging Solution 7.X | | | | | |
| Config. SW for CL | Configurator | | | | | |

Mechanical Dimension in mm



VT Series – High Sensitivity TDI Line Scan Cameras

Specifications

Connector Specification

Power



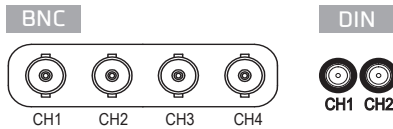
1 2 3: +12V DC, 4 5 6: GND
(HR10A-7R-6PB)

Control



1: Trigger IN, 2: Direction IN
3: DC Ground, 4: Strobe OUT+
(HR10A-7R-4S)

Data Transfer/Communications



CH1: Master Connection (75 Ω)

Connectors on camera body



Ordering Scheme

| VT - 23K 3.5 X - H 100 | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Series VT Series | Line Rate 40 - 47 KHz 60 - 67 KHz 80 - 80 KHz / 94 KHz 100 - 100 KHz 120 - 125 KHz 140 - 140 KHz 160 - 160 KHz 170 - 172 KHz 200 - 200 KHz 250 - 250 KHz |
| Sensor Resolution 3K - 3200 pixels 4K - 4096 pixels / 4640 pixels 6K - 6240 pixels / 6560 pixels 9K - 8912 pixels 12K - 12480 pixels 16K - 16384 pixels 18K - 17824 pixels 23K - 23360 pixels | Sensitivity E - Enhanced H - Hyper |
| Pixel Size 3.5 - 3.5 μm 5 - 5.0 μm 7 - 7.0 μm 10 - 10.0 μm 14 - 14.0 μm | |
| Interface X - CoaXPRESS C - Camera Link | |

For more information please contact:



BOCK OPTRONICS INC.
14 Steinway Blvd., Unit 7
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804
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www.bockoptronics.ca

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 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.

VIEWWORKS

www.viewworks.com

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

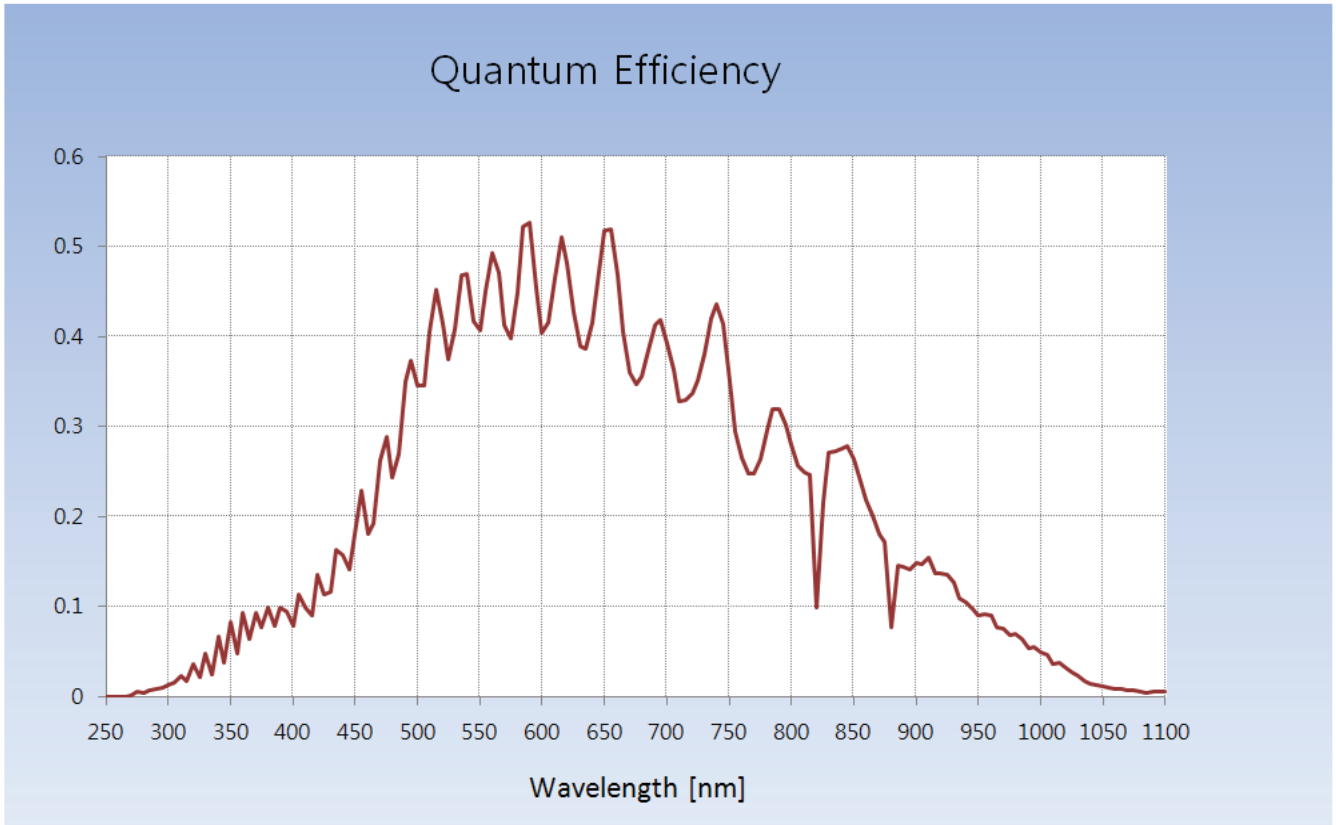
Specifications

| 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 mm × 60 mm × 36 mm, 223 g | | |
| Temperature | Operating: 0°C ~ 50°C, Storage: -40°C ~ 70°C | | |
| Power | External | 10 ~ 30 V DC | |
| | Dissipation | Typ. 3.5 W | Typ. 4.0 W |
| Compliance | CE, FCC, KC | | |
| API SDK | Vieworks Imaging Solution 7.X | | |

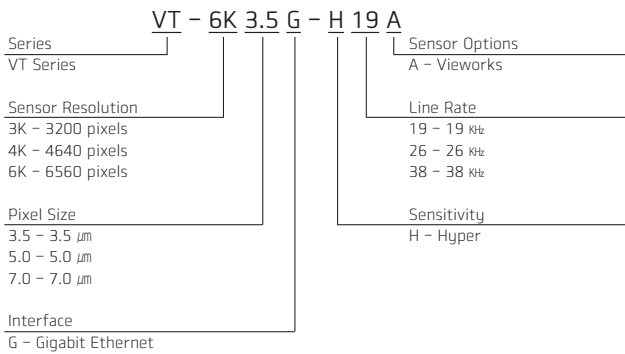
VT-3K7G / VT-4K5G / VT-6K3.5G

M42 Mount based TDI Line Scan Cameras with the GigE Interface

Quantum Efficiency Curves



Ordering Scheme



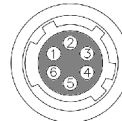
Connector Specification

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)

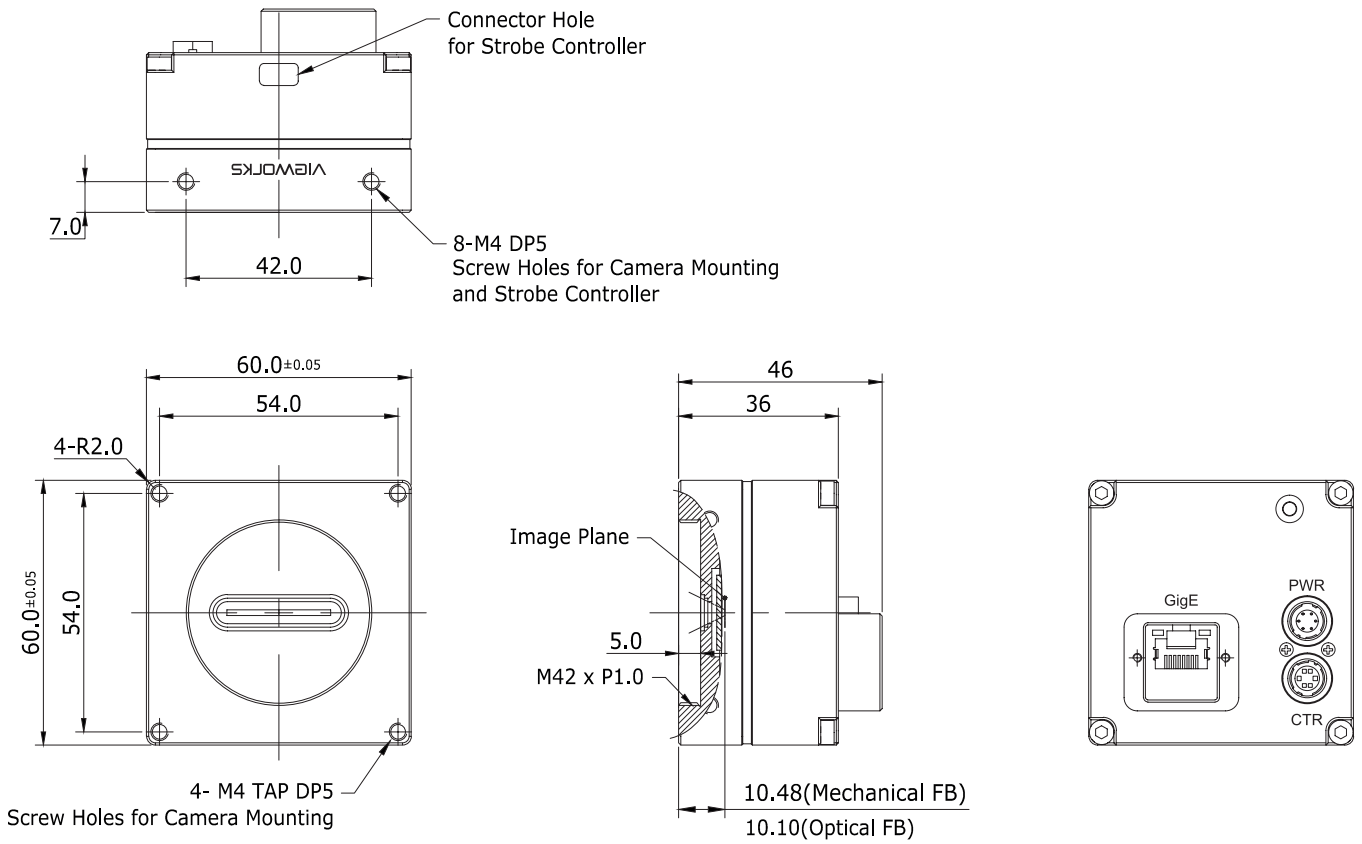
Connectors on camera body

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

M42 Mount based TDI Line Scan Cameras with the GigE Interface

Mechanical Dimensions

Unit: mm



For more information please contact:



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www.bockoptronics.ca

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.

VIEWORKS

www.vieworks.com

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

High Speed & High Sensitivity 16k TDI Line Scan Cameras

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
- Exposure Control
- 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

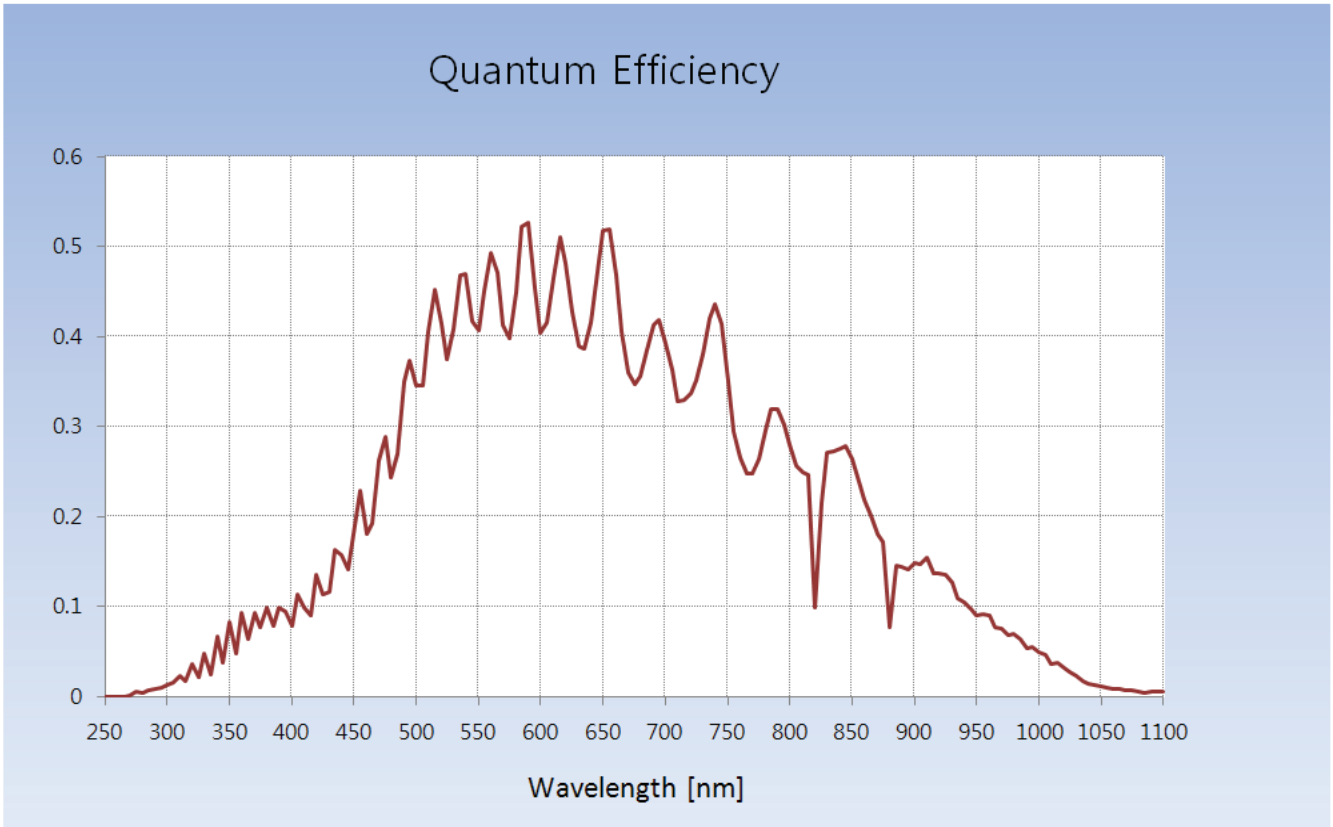
Specifications

| 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 | |

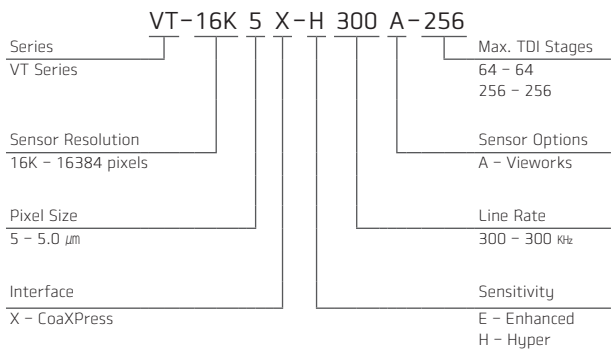
VT-16K5X-E300A-64 / VT-16K5X-H300A-256

High Speed & High Sensitivity 16k TDI Line Scan Cameras

Quantum Efficiency



Ordering Scheme



Connector Specification

Power



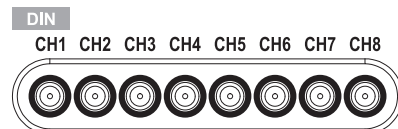
1, 2, 3: +12 V DC
4, 5, 6: GND
(HR10A-7R-6PB)

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)

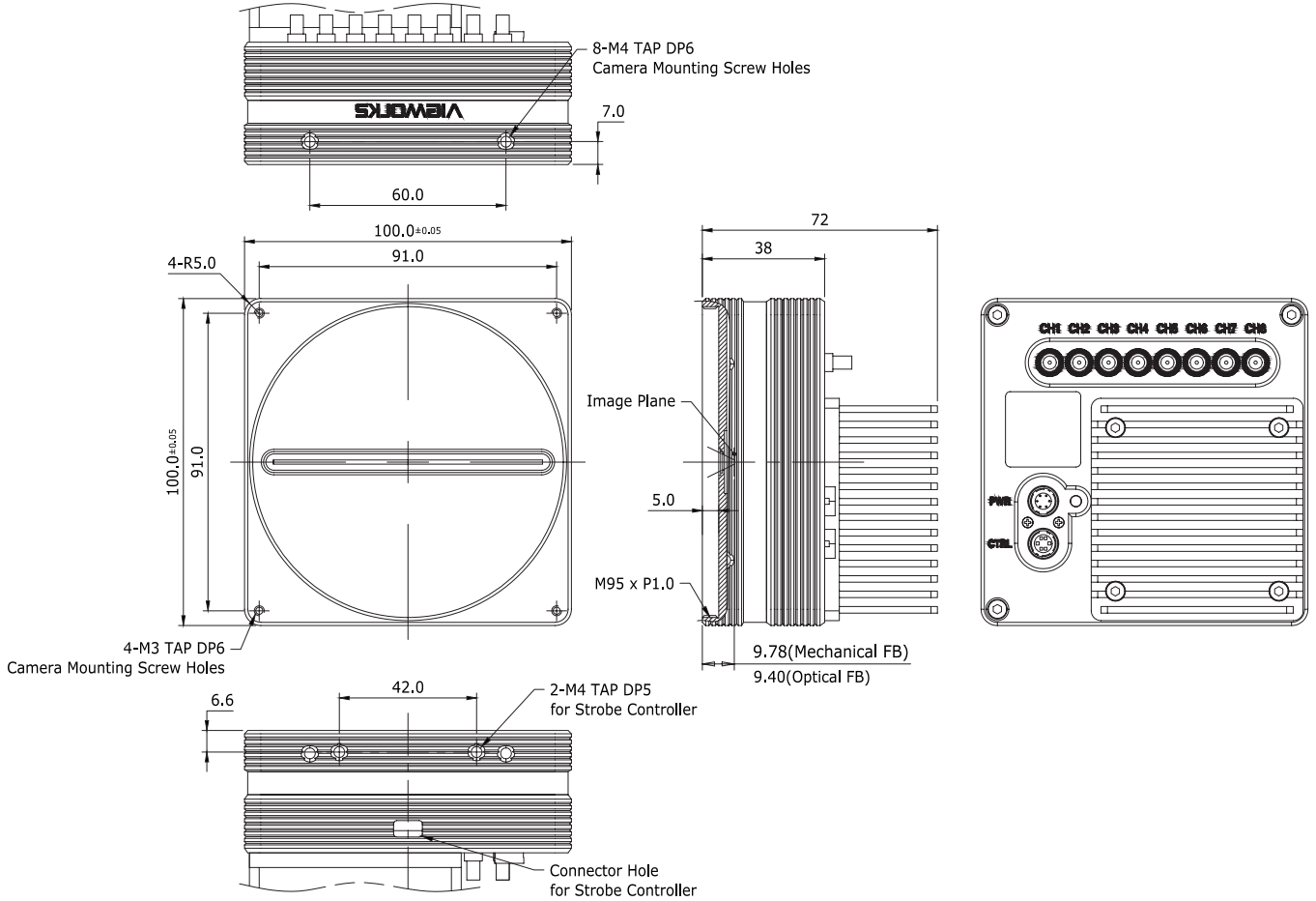
Connectors on camera body

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

High Speed & High Sensitivity 16k TDI Line Scan Cameras

Mechanical Dimensions

Unit: mm



For more information please contact:



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VT-4K5X-E300A-64 VT-4K5X-H300A-256

High Speed & High Sensitivity 4k TDI Line Scan Cameras



CoaXPress[®]

The VT-4K5X-E300A-64 and VT-4K5X-H300A-256, the new hybrid Time Delayed Integration (TDI) line scan cameras equipped with four 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-4K5X-E300A-64 camera delivers line rates of up to 300 kHz at 4k resolution with 64× higher sensitivity. Even superior sensitivity, up to 4640 pixel resolution at a maximum line rate of 300 kHz and 256× greater sensitivity can be achieved using the VT-4K5X-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.

VIEWWORKS

www.viewworks.com

VT-4K5X-E300A-64 / VT-4K5X-H300A-256

High Speed & High Sensitivity 4k TDI Line Scan Cameras

Main Features

- 4k Hybrid TDI Line Scan
- CoaXPress Interface up to 300 kHz at 25 Gbps using 4 CH
- Bidirectional Operation with up to 256 TDI Stages
- Exposure Control
- 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

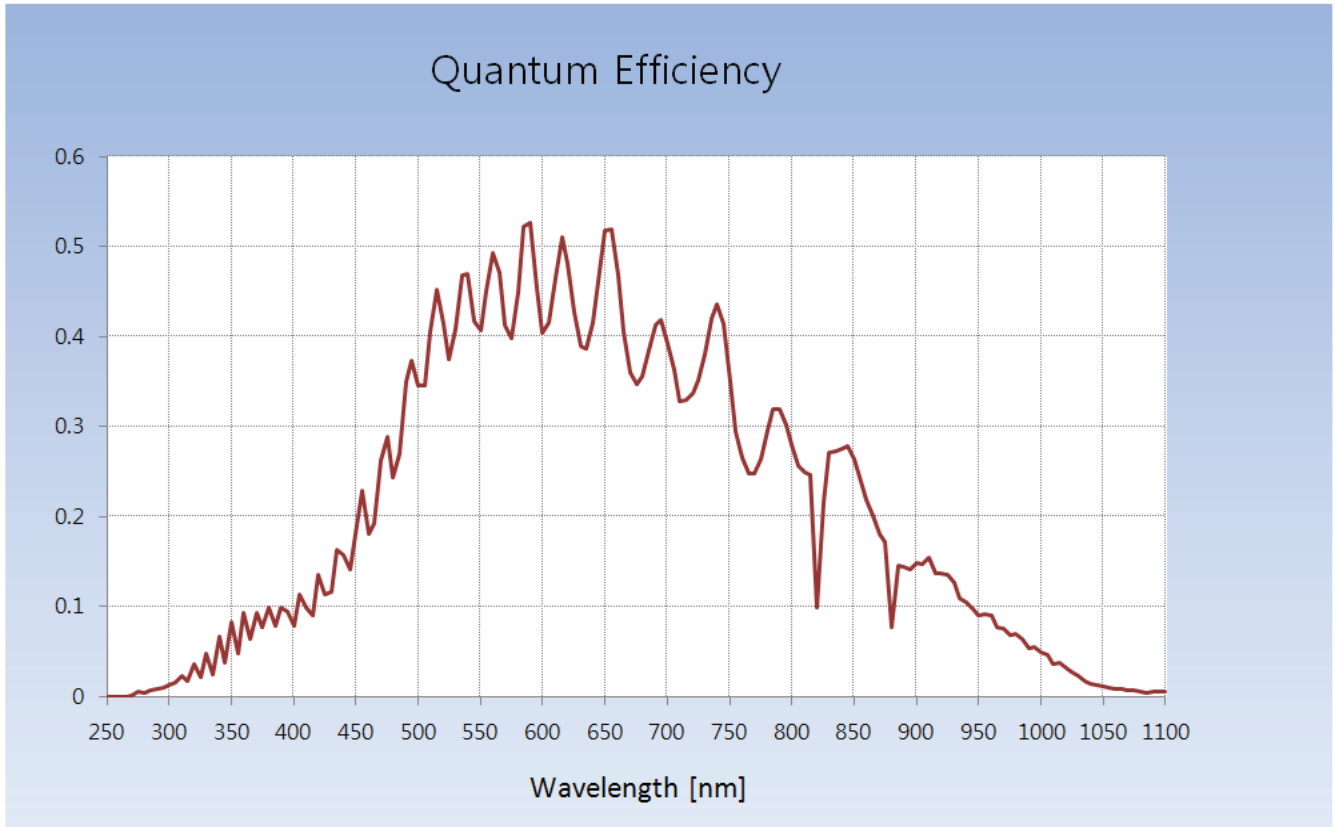
Specifications

| Model | VT-4K5X-E300A-64 | VT-4K5X-H300A-256 |
|-------------------------|-----------------------------------------------------------------------------|----------------------------------------------|
| Resolution (H × V) | 4640 × 64 | 4640 × 256 |
| Sensor | Hybrid TDI Line Scan | |
| Pixel Size | 5.0 μm × 5.0 μm | |
| Interface | CoaXPress (CXP-6, 4 CH) | |
| Max. Line Rate | 300 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 | 1.39 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 | M42 × 1 mm | |
| Dimension / Weight | 60 mm × 60 mm × 37 mm / 245 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. 5.5 W |
| | PoCXP | 24 V DC, Minimum of one PoCXP cable required |
| Compliance | CE, FCC, KC | |
| API SDK | Vieworks Imaging Solution 7.X | |

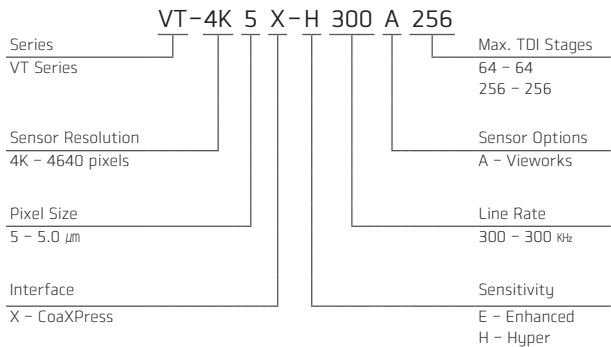
VT-4K5X-E300A-64 / VT-4K5X-H300A-256

High Speed & High Sensitivity 4k TDI Line Scan Cameras

Quantum Efficiency



Ordering Scheme



Connector Specification

Power



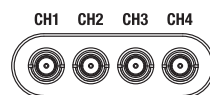
1, 2, 3: +12 V DC
4, 5, 6: GND
(HR10A-7R-6PB)

Control



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

Data Transfer / Communications



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

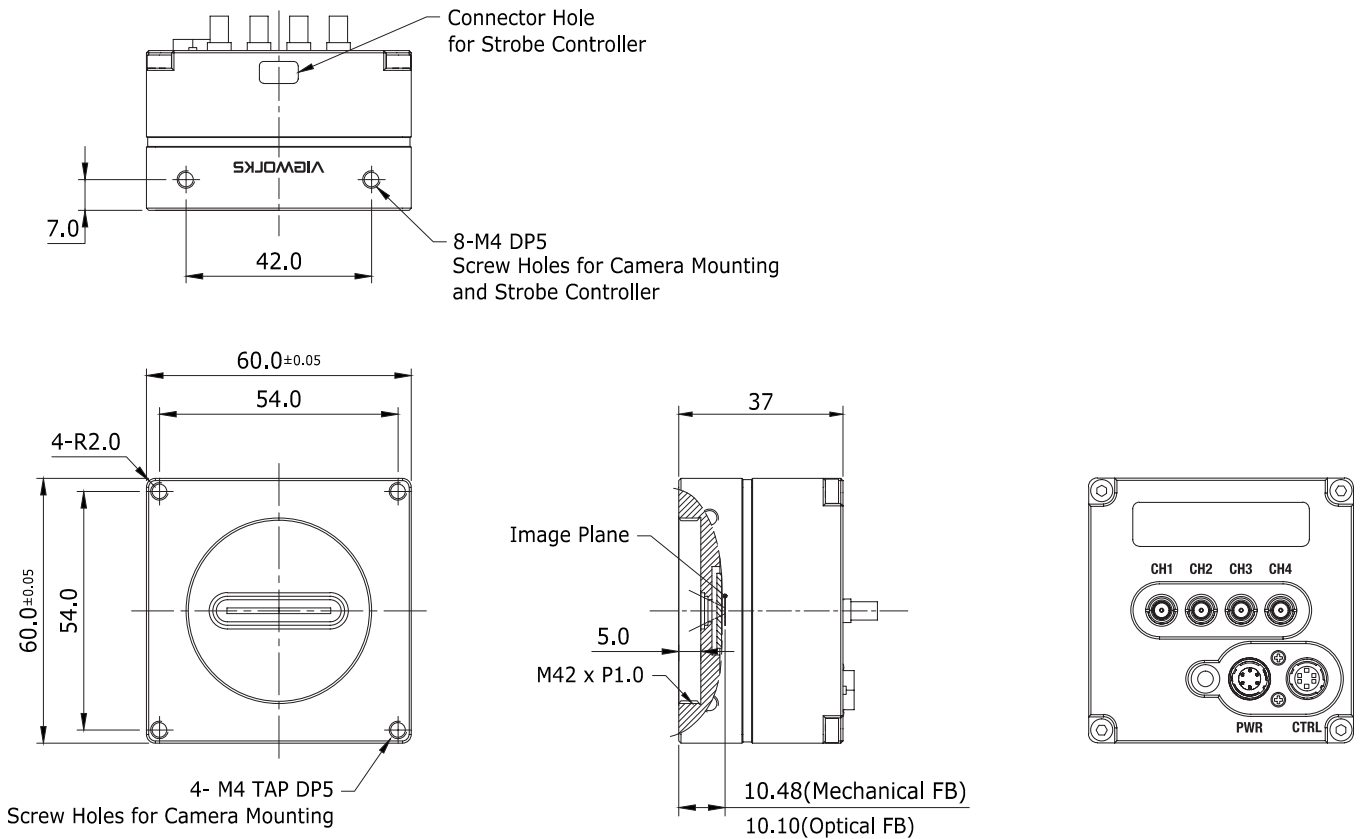
Connectors on camera body

VT-4K5X-E300A-64 / VT-4K5X-H300A-256

High Speed & High Sensitivity 4k TDI Line Scan Cameras

Mechanical Dimensions

Unit: mm



For more information please contact:



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