VTD-16K5X2-H150A-256 (M95)

16K Hybrid TDI Line Scan Camera with Dual Imaging Technology

CoaXPress®

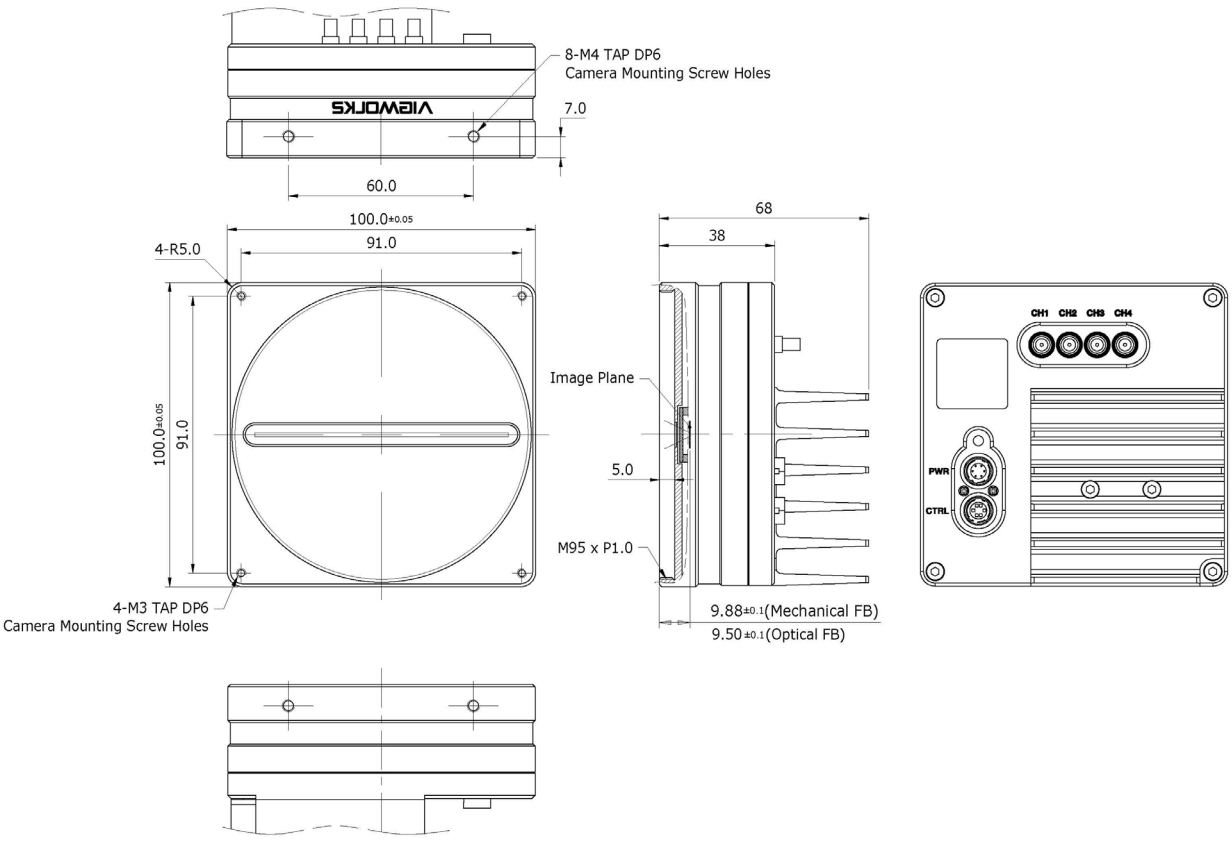
The VTD-16K5X2-H150A-256, a hybrid TDI line scan camera with Dual Imaging technology manufactured by Vieworks, can acquire two distinct 16,384-pixel datasets with 256 times enhanced sensitivity at speeds of up to 150 kHz. With Dual Imaging technology, two different images can be captured simultaneously in a single scan under varying lighting conditions, such as bright field or dark field. This feature enables a simplified and cost-effective system configuration by eliminating the need for multiple cameras, repeated scans, or lighting of different wavelengths. This camera, with its Dual Imaging capability and high sensitivity, is ideal for FPD inspection, PCB inspection, and semiconductor inspection.

VTD-16K5X2-H150A-256 (M95)

16K Hybrid TDI Line Scan Camera with Dual Imaging Technology

Mechanical Dimensions

Unit: mm



41-3, Burim-ro 170 beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14055 Republic of Korea
Tel +82-70-7011-6161 **Fax** +82-31-386-8631 **E-mail** vision@vieworks.com **Web** vision.vieworks.com

VTD-16K5X2-H150A-256 (M95)

16K Hybrid TDI Line Scan Camera with Dual Imaging Technology

Main Features

- 16k Dual Imaging Hybrid TDI Line Scan
  * Dual Imaging: Acquisition of two 16k images in a single scan
- Max. 16,384 × 256 (x2) Pixel Resolution
- Bidirectional Operation with up to 256 (x2) TDI Stages
- Anti-blooming
- Trigger Rescaler and Strobe Output Control
- CoaXPress2.0 Interface up to 50 Gbps using 4 coax cables (4 CH)
- 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

Specifications

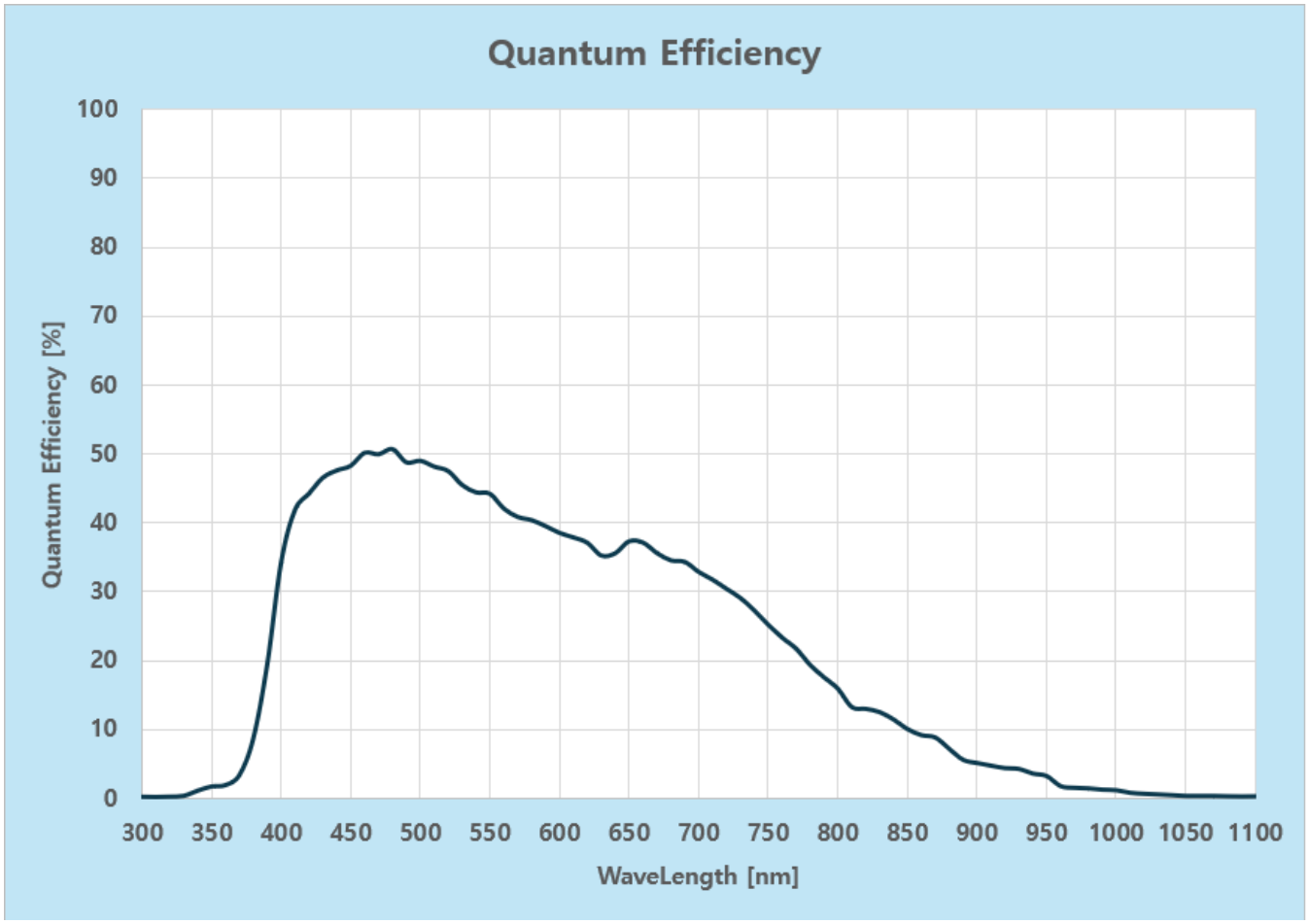
Model		VTD-16K5X2-H150A-256 (M95)
Resolution (H × V)		16,384 × 256 (x2) †
Sensor Type		Hybrid TDI Line Scan
Pixel Size		5.0 ㎛ × 5.0 ㎛
Interface		CoaXPress 2.0 (CXP-12)
Pixel Data Format		8 /10 / 12 bit
TDI Stages		128 / 256 (x2) †
TDI Direction		External Control Port or Programmable
Trigger Synchronization		Free-Run, External Trigger Signal, and CoaXPress Programmable Line Rate and Trigger Polarity
Max. Line Rate		150 ㎑ at ROI 16,000 pixels (x2) †
Throughput		4.6 Gpix/s
Gamma Correction		User Defined Lookup Table (LUT)
Black Level Control		-255 to 255 at 8 bit
Gain Control		Analog Gain: x1, x2, x3, and x4 / Digital Gain: 1.0x to 32.0x
External Trigger		External, 3.3 V to 5.0 V
Power	Adapter	11 to 24 V DC
	Dissipation	TBD W / Max. 26.0 W
	PoCXP	24 V DC, Minimum of two PoCXP cables required
Temperature		Ambient Operating: 0℃ to 40℃ (Housing: 10℃ to 50℃) Storage: 40℃ to 70℃
Mechanical / Weight		100 ㎜ × 100 ㎜ × 68 ㎜ / 860 g
API SDK		Vieworks Imaging Solution 7.X

† (x2) indicates that two bands acquire two different images in a single scan, where each band consists of 16,384 × 256 resolution.

VTD-16K5X2-H150A-256 (M95)

16K Hybrid TDI Line Scan Camera with Dual Imaging Technology

Spectral Response



Ordering Scheme

VTD – 16K 5 X2 – H 150 A – 256

Series VTD Series	Max. TDI Stages 256 – 256
Sensor Resolution 16K – 16,384 pixels	Sensor Options A – Vieworks
Pixel Size 5 – 5.0 ㎛	Line Rate 150 – 150 ㎑
Interface X2– CoaXPress2.0	Sensitivity H – Hyper

Connector Specification

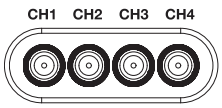
Power

1, 2, 3: +11 to 24V DC
4, 5, 6: GND
(HR10A-7R-6PB)

Control

1: Line0 2: Line1
3: GND 4: GND
5: Line3 6: Line2
(HR10A-7R-6SB)

Data Transfer / Communications



CH1: Master Connection

75 Ω, Micro-BNC(HD-BNC)

Connectors on Camera Body