



Digitized Automation for a Changing World

## Delta Machine Vision Solutions for Smart Warehousing

- 3D ToF Smart Camera **DMV-T**
- 3D ToF Mini Camera **DMV-TM**
- Machine Vision Platform **DIAVision**

# Delta Machine Vision Solutions

## Optimize Automated Warehouse Logistics

Factories and warehouses strive to enhance performance and efficiency by deploying smart equipment, including robots and AGVs/AMRs. This equipment requires accurate visual data to streamline the manufacturing process and human-robot collaboration.

Delta Machine Vision Solutions combine **3D ToF Camera DMV-T Series** with development software **Machine Vision Platform DIAVision** and provide an ideal integrated machine vision to optimize the automated processes of storage, retrieval and transport. These solutions enhance throughput and support equipment status monitoring to reduce maintenance costs and prevent physical hazards.

Delta's Machine Vision Solutions ensure warehouse and factory operation efficiency as well as safety, and minimize the total costs of ownership to help users accelerate migration into Smart Warehousing.

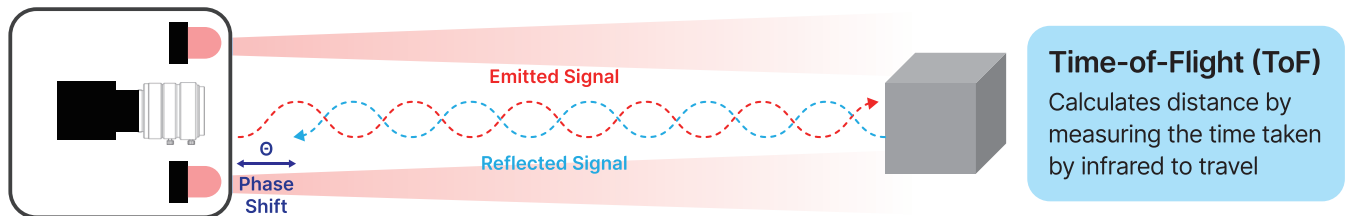


# 3D ToF Smart Camera DMV-T

Sharp Eyes that Help Machines See – Even without Light

- **Highly adaptable:** adopts Time-of-Flight (ToF) technology and offers robust performance in various lighting conditions
- **All-in-one:** integrates imaging, sensing and computing in a compact design
- **Edge computing:** equipped with a dual-core CPU to achieve image processing in real time
- **Quality images:** provides accurate 3D depth information in millimeters

\*For indoor applications only



## Specifications

Sensor	Sony IMX556	OS	Linux
Resolution	640 × 480 px, 0.3 MP	Power Supply	PoE: IEEE 802.3bt / DC: 24V ± 10%
Frame Rate	60 fps	Dimensions	72 × 70 × 70 (L × H × W) (mm)
LD Wavelength	850 nm	Weight	500 g
FOV	67° × 51°	Certification	IP66, IP67, CE, KC, UL
Recommended Working Range	6 m	Interface	10 / 100 / 1000 Mbps Ethernet, GenICam, GigE Vision 2.0 Compliant
Distance Resolution	1 mm	Temperature	Storage: -40 °C to 85 °C Operating: 0 °C to 45 °C
CPU	Dual Cortex-A53 1.2 GHz	Eye Safety	Class I

# 3D ToF Mini Camera DMV-TM

\*Suitable for indoor & outdoor applications

**Small but Precise,  
Ensures Smooth Integration with AGVs/AMRs**

- **Ultra lightweight:** size reduced by 65% compared to the DMV-T, specialized for installation in AGVs/AMRs
- **Highly adaptable:** ToF enables ambient light immunity, suitable for various lighting conditions
- **Accurate navigation:** high resolution images help AGVs/AMRs navigate and avoid collision



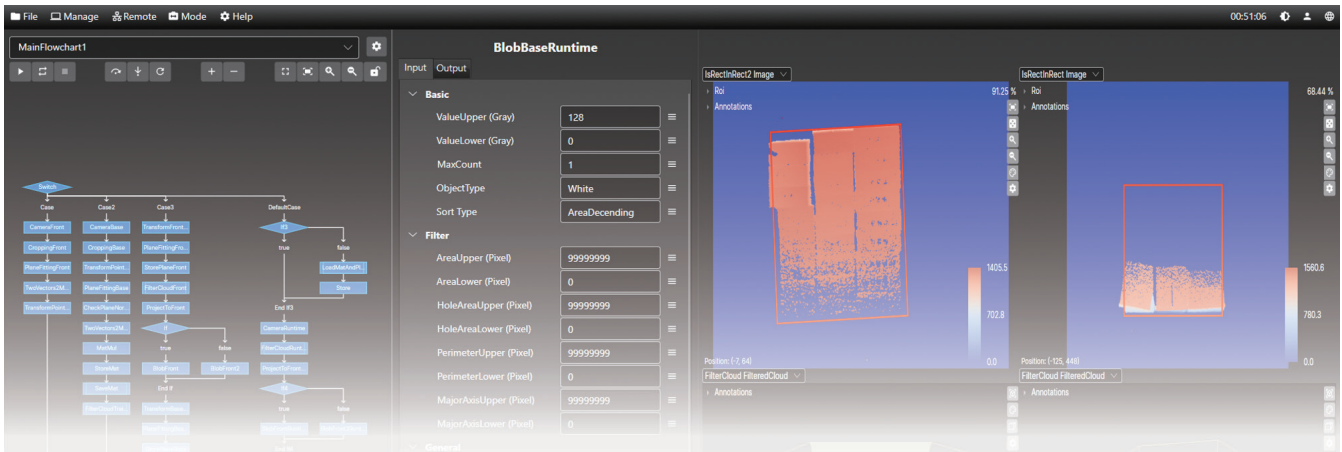
## Ideal for AGV/AMR Navigation and Collision Avoidance



## Specifications

Dimensions	99.5 × 33 × 37.5 (L × H × W) mm	RGB Shutter	Global Shutter
Working Distance	0.15~4m	Power Supply	PoE: IEEE 802.3bt / DC: 24V ± 10%
FOV	105° × 78°	Protocol	GigE
Resolution	640 × 480 (0.3M)	Power Consumption	Average 8 W
Frame Rate	30 fps	IP Rating	IP65
RGB Resolution	1440 x 1080 (1.6 M)	Certification	UL, CE

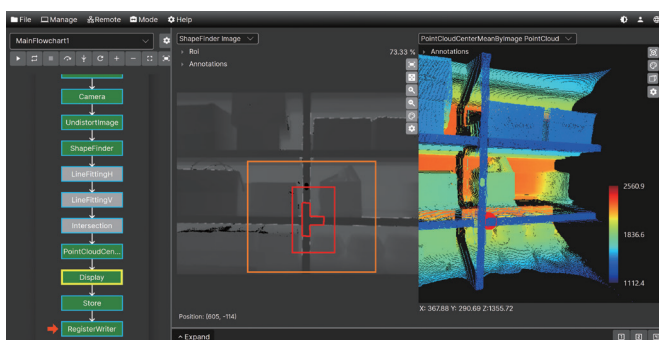
# Machine Vision Platform DIAVision



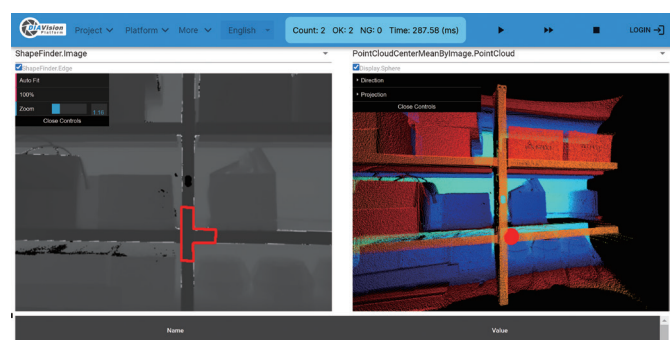
## A Versatile No-Code Software Development Platform to Accelerate Your Application Implementation

- High development flexibility:**  
 supports Linux and Windows as well as Web-based design, provides a friendly no-code drag-and-drop interface for customized design, and complies with industry standards for cameras, robots and embedded systems integration
- Shortens time-to-market:**  
 provides hundreds of vision function blocks for application software development, a repository of function blocks to save time, and a centralized platform for application design, development and deployment
- Trustworthy security:**  
 offers multiple protection mechanisms, including multi-level access control, flexible license models, and a project/process lock mode to protect your intellectual property

### Integrator User Interface



### End User Interface



# DMV-T Series × DIAVision

Delta's Integrated Machine Vision Solutions for Robots Safeguard 24/7 Automated Warehouse Operations



Effortlessly conduct object measurement, recognition, positioning, robot vision and more with a user-friendly interface



## Measurement

of object volume, shape, distance and position



## Recognition

of object structure, color



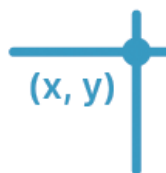
## Detection

of object presence, orientation and position



## Pick-and-Place

supports position and orientation calibration for precise robot pick-and-place



## Positioning

guides robots' movement with changes in process

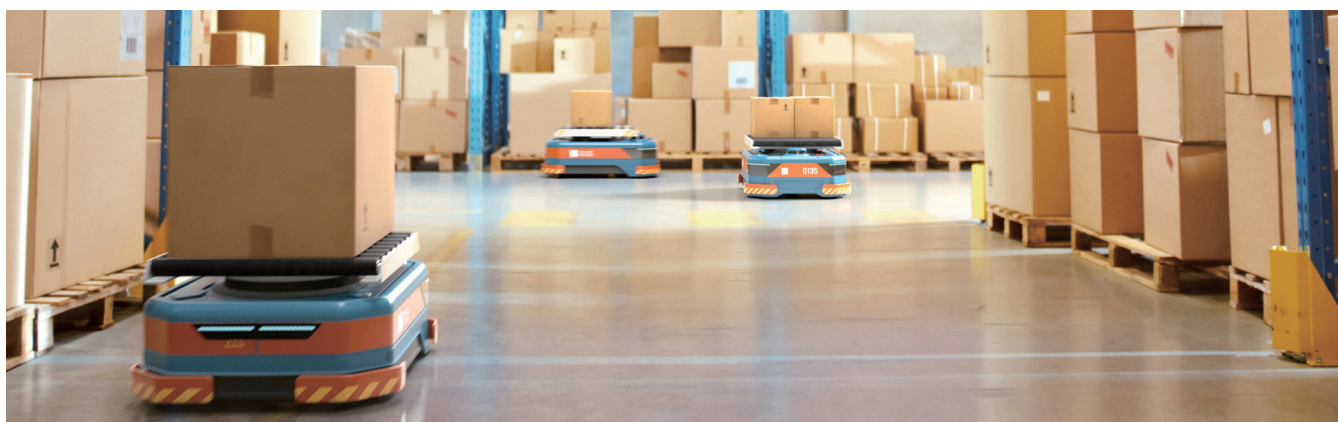


## Navigation

for AGVs/AMRs to transport goods while accomplishing obstacle avoidance

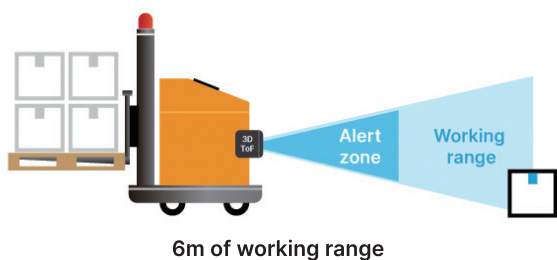


# Obstacle Detection and Avoidance



To help forklifts and AGVs/AMRs navigate and avoid collision in factories and warehouses requires real-time calculation of various visual data, including position, distance, and angles.

Delta's **3D ToF Smart Camera DMV-T** adopts Time-of-Flight (ToF) technology to capture quality images with ambient light immunity and ensures 60 fps to detect obstacles in real time for forklifts and AGVs/AMRs. When obstacles are detected, the **Machine Vision Platform DIAVision** triggers an alert, and slows or stops the equipment to enhance operation safety.



## More Warehouse Applications



**Rack Deformation and Displacement Inspection**



**Goods Measurement and Positioning**



**Forklift Speed Detection and Machine Learning**





Smarter. Greener. Together.

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