Millimetre-precise 3D depth images in industrial manufacturing processes, logistics and robotics

AM-T100
3D CAMERA

NEW

SCHMERSAL
THE DNA OF SAFETY

AM-T100
TIME OF FLIGHT CAMERA

The AM-T100 is a time-of-flight (ToF) camera that uses a Sony DepthSense™ sensor to produce millimetre-precise 3D depth images. The high frame rate of up to 60 fps enables efficient use in industrial manufacturing processes, logistics and robotics.

With powerful IR illumination and 640 x 480 pixel image resolution, the AM-T100 achieves a 67° x 51° field of view with a range of up to 6 m*.

High-performance algorithms enable pre-filtering of the data so that the camera can be optimally adapted to different ambient conditions. The AM-T100 is a GigE vision camera that makes its image data available to common image processing software via the standardised data interface GenICam. An integrated Software Development Kit (SDK) supports software developers and system integrators in configuring the camera and creating software applications.

AM-T100
THE ADVANTAGES AT A GLANCE

- Sony DepthSense™ technology for millimetre-precise 3D depth images
- High frame rate of up to 60 fps
- 67° x 51° field of view with a range of up to 6 m*.
- Optimally adaptable to different ambient and mounting conditions
- Easy data exchange via standardised data interface GenICam
- Software for easy configuration of 3D monitoring areas

Original size

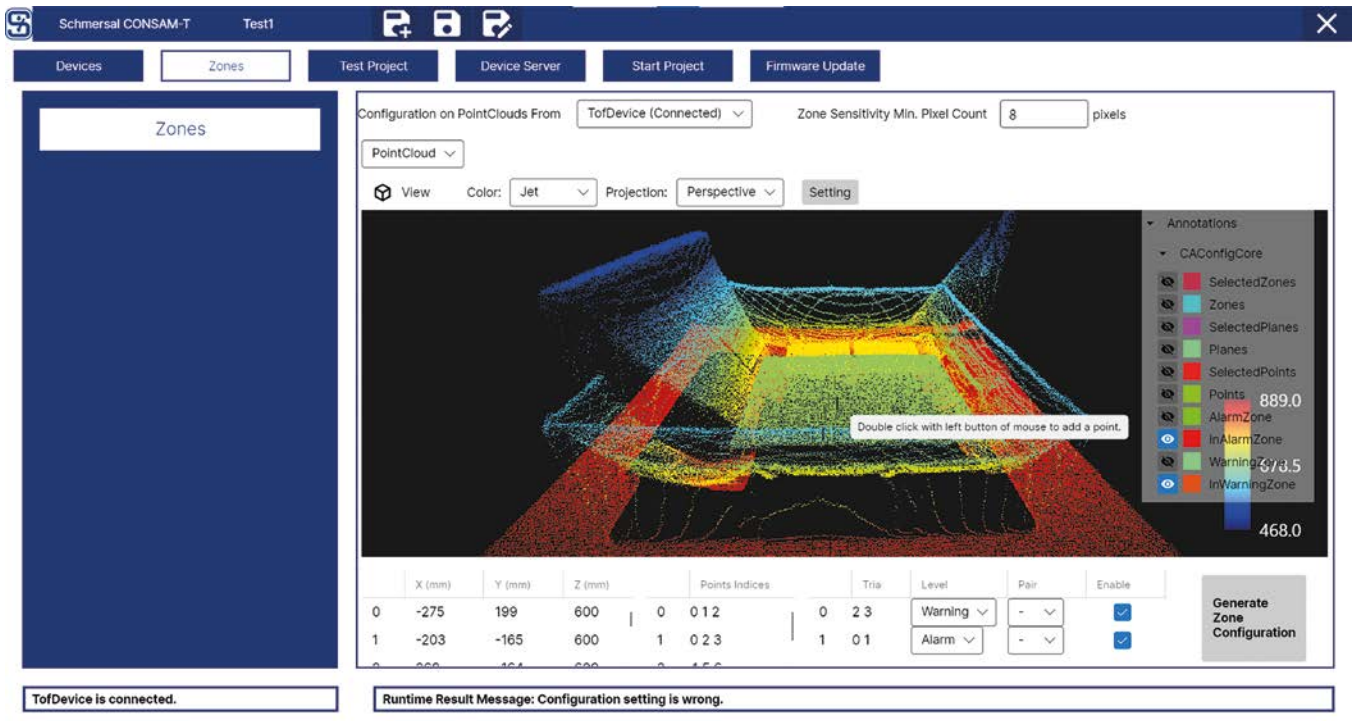
* Depending on the remission properties of the target objects, a range of up to 30 m can be achieved.

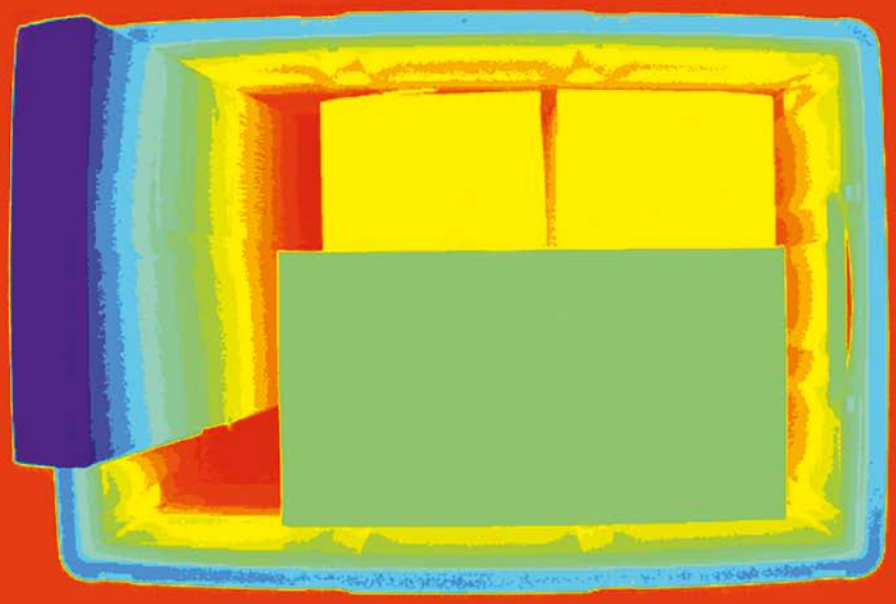
Photo with standard camera

THE CONFIGURATION SOFTWARE

The configuration software CONSAM-T is pre-installed on the AM-T100. With the help of this software, the camera can be configured to monitor complex 3D zones.

If objects enter these zones, digital outputs are switched.
In addition, digital inputs can be used to switch back and forth between different 3D zones so that complex sequences and processes can be monitored.





Depth image with 3D camera AM-T100

ACCURACY

(Exposure 1000 µs, Range mode 7500 mm)

Objects with high reflectivity (80 %) At distance 6 m	
Accuracy	± 50 mm
Trueness	< 16 mm
Precision	< 23 mm
Objects with low reflectivity (10 %) Max. distance: 3 m	
Accuracy	± 50 mm
Trueness	< 13 mm
Precision	< 23 mm

TECHNICAL DATA

Technical data	
Dimensions (W × H × L)	70 x 70 x 72 mm
Weight	0.5 kg
Degree of protection	IP67 [1]
Eye safety	Laser class 1
Sensor technology	iToF (indirect Time-of-Flight)
Resolution	640 × 480 px
Frame rate	max. 60 fps
Laser diode wavelength (nm)	850 nm
Field of view	67° × 51°
Range	6 m [2]
Recommended target reflectivity	20 % ~ 90 %
Measurement precision	< 1 %
Depth resolution	1 mm
Temperature, storage	–20 °C ... +85 °C
Temperature, operation	0 °C ... +45 °C [3]
Standards	EN 61326-1, EN IEC 60825-1
Connections	1x M12 A-coded 8-pole I/O connecting cable 1x M12 X-coded Ethernet connector
Power supply	PoE: IEEE802.3bt I/O connector: DC 24 V ± 10 %
Power consumption	Typical: 15 W Peak: 40 W
Interfaces	
Ethernet	10/100/1000 Mbps Ethernet, GigE Vision 2.0 Compliant
I/O	2x digital output 2x digital input

[1] If both plug connections are closed.
[2] Depending on the remission properties of the target objects, a range of up to 30 m can be achieved.
[3] The camera can be operated at an ambient temperature from –20 °C after a warm-up period of 30 minutes.

ACCESSORIES

Mounting bracket	Connecting cable	Ethernet connector
		
Mounting bracket for AM-T100 ■ ACC-AM-MS-F Camera AM-T100 not included in the scope of delivery.	**Connecting cable M12, 8 pole, A-coded** ■ ACC-AM-CON-A-K8P-M12-G-5M-S	**Ethernet connector M12, X-coded** ■ ACC-AM-CON-VIE-SS8P-M12-RJ45-G-5M-S

THE SCHMERSAL GROUP
PROTECTION FOR MAN AND MACHINE

In the demanding field of machine safety, the owner-managed Schmersal Group is one of the international market leaders. The company, which was founded in 1945, has a workforce of about 2,000 people and seven manufacturing sites on three continents along with its own companies and sales partners in more than 60 nations.

Customers of the Schmersal Group include “Global Players” in mechanical engineering and plant manufacturing and operators of machinery. They benefit from the company’s extensive expertise as a provider of systems and solutions for machine safety. In addition, Schmersal specialises in various areas including intralogistics, foodstuff production, the packaging industry, machine tool industry, lift switchgear, heavy industry and the automotive industry.

A major contribution to the systems and solutions offered by the Schmersal Group is made by tec.nicum with its comprehensive range of services: Certified Functional Safety Engineers advise machinery manufacturers and machinery operators in all aspects relating to machinery and occupational safety – and do so with product and manufacturer neutrality. Furthermore, they design and realise complex solutions for safety around the world in close collaboration with the clients.

SAFETY PRODUCTS

- Safety switches and sensors, solenoid interlocks
- Safety controllers and safety relay modules, safety bus systems
- Optoelectronic and tactile safety devices
- Automation technology: position switches, proximity switches

SAFETY SYSTEMS

- Complete solutions for safeguarding hazard areas
- Individual parametrisation and programming of safety controllers
- Tailor-made safety technology – be it for individual machines or a complex production line
- Industry-specific safety solutions

SAFETY SERVICES

- tec.nicum academy – Seminars and training
- tec.nicum consulting – Consultancy services
- tec.nicum engineering – Design and technical planning
- tec.nicum integration – Execution and installation

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