

MCS with HIGH LASER POWER

based on AT's unique modular 3D laser triangulation sensor concept

X Field of View	up to 9 ft (2800 mm)
Lateral X Resolution	down to 50 μm
Working Distance	up to 5.57 ft (1700 mm)
Nominal Triangulation Angle	15°
Profile Resolution	3072, 4096 points
Profile Speed	up to 140 kHz
Available Sensor Modules	3070, 3070W (WARP), 4090

Laser Specification

Laser Wavelength	405, 450, 660, 760, 880 nm (more on request)
Laser Power	up to 1700 mW (higher power on request)
Laser Class	3R, 3B

General Specification

Interface	Gigabit Ethernet (1GigE)
Inputs	<ul style="list-style-type: none">Encoder A+, A-, B+, B-, Z+, Z- (TTL level)Two freely configurable digital inputs (+5 to +24 VDC)
Outputs	Two freely configurable digital outputs (+5 to +24 VDC)
Power Supply	<ul style="list-style-type: none">Sensor supply +10 to +24 VDC (max. +27 VDC)Laser supply +10 to +24 VDC
Housing	Anodized aluminum, IP67
Environmental Conditions	<ul style="list-style-type: none">Operating temperature +32 °F to +104 °F (0 °C to +40 °C)Storage temperature -4 °F to +176 °F (-20 °C to +80 °C)Humidity 20 % to 80 % (non-condensing)
Vibration/Shock Ratings	<ul style="list-style-type: none">Vibration resistance (sinusoidal): DIN EN 60068-2-6:2008-10: 2g, 10-150 HzVibration resistance (random): DIN EN 60068-2-64:2020-09: 7g, 10-500 HzShock resistance: DIN EN 60068-2-27: 2010-02: 15g, 3ms
Communication Protocols	<ul style="list-style-type: none">GenICamGigE Vision
Firmware Features	Automatic RegionTracking, Automatic RegionSearch, Multiple Regions, MultiPart, AutoStart, HistoryBuffer, MultiSlope, MultiPeak

Recommended Applications:

- Road Pavement Scanning
- Inspection of cold or red-hot steel parts
- Scanning of railroad infrastructure



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 **Automation
Technology**

3D Scanner with WARP Speed Thanks to AT's Proprietary Sensor Chip

Fast, faster, fastest: AT – Automation Technology has recently developed its own sensor chip that makes the AT 3D sensors the fastest in the world in terms of their combination of resolution and speed. The reason for the extremely fast 3D scans is the on-chip processing of the CMOS chip: This recognizes the laser line and compresses it without loss using intelligent algorithms so that only relevant data is transmitted. As a result, the C6 3070 sensor achieves an unmatched 3D profile pixel rate of up to 128 megapixels, which corresponds to 128 million 3D dots per second.

The particular benefit for customers is the profile speed of up to 140 kHz. The so-called WARP speed enables up to ten times higher measurement speeds and therefore ten times faster 3D scans than with conventional sensors, which opens up completely new possibilities for the modular compact sensor series (MCS) from the North German technology company. The MCS is based on a modular system with different sensor, laser and link modules and can be put together individually thanks to the flexible configuration of triangulation angle and working distance, thus achieving a scan width, measuring accuracy and measuring speed optimized for the application.

For example, the C6 3070 MCS sensor has been specially designed for applications such as road surface surveying. Thanks to its modular design, the sensor has a large field of view, which makes it possible to scan an entire road width. Furthermore, thanks to its high dynamic range, the sensor is able to scan the road surface at different speeds, so that neither motion blur nor different types of road surface pose a problem. The new C6 3070 MCS sensor also boasts an impressively high resolution of 3,072 profile points. The AT sensors also all work in master-slave mode, allowing synchronized and simultaneous operation of several sensors. And with the help of the „MetrologyPackage“ software, which is included free of charge, several sensors can be calibrated to each other in just a few minutes.

AT's on-chip processing has the therefore following advantages:

- **World's fastest 3D profiling**
- **Intelligent data compression directly on the sensor chip**
- **Up to ten times faster 3D scans**

PIXEL/PROFILE	SPEED
3K/4K	≤ 140 kHz
LASER CLASS	FIELD OF VIEW
3R/3B	≤ 9 ft

10x FASTER 3D SCANS!