

## MCS Series DATA SHEET

PN: 602345210, Model: C6-S7-4090-MCS-20-420-530-DX-1G-660-3R



The Modular 3D Compact Sensor (MCS) from AT - Automation Technology is revolutionizing 3D image processing with its unique modularity, flexibility and high performance. This innovative system allows individual configuration in terms of scan width, measurement accuracy, speed, triangulation angle and working distance to perfectly match the needs of specific applications. With an unprecedented profile speed of 200 kHz and a resolution of 4096 points per profile, the MCS sets technological standards. It overcomes traditional hurdles such as high NRE costs and long development times by combining the reliability of a series product with the flexibility of a customized solution, without additional costs or minimum order quantities.

- **Freely configurable, factory-calibrated modular 3D sensors for individual solutions**
- **Five triangulation angles available (15, 20, 25, 30, 40)**
- **Four different sensor resolutions available (1280, 2040, 3070, 4090)**
- **No extra costs, long delivery times or minimum order quantities**
- **Available with different laser classes and wavelengths**

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Model Information

|             |                                        |
|-------------|----------------------------------------|
| Model Name  | C6-S7-4090-MCS-20-420-530-DX-1G-660-3R |
| Part Number | 602345210                              |

General Data

|                                   |                               |
|-----------------------------------|-------------------------------|
| Points per Profile                | 4096                          |
| Triangulation Angle               | 20 °                          |
| Working Distance                  | 536 mm                        |
| Laser Safety Class                | class3r                       |
| Laser Wavelength                  | 660 nm                        |
| Laser Output Power                | -                             |
| Laser Line Width                  | -                             |
| Linearity Z-Axis                  | 0.007 % of calibrated Z-Range |
| Profile speed with 200-row region | 2092 Hz                       |
| Maximum profile speed             | 24875 Hz                      |

Field of View

|              | Nominal  | Near Field | Far Field |
|--------------|----------|------------|-----------|
| Scan Width   | 419.9 mm | 274.4 mm   | 566.1 mm  |
| X-Resolution | 102.5 µm | 67 µm      | 138.2 µm  |
| Z-Resolution | 5.5 µm   | -          | -         |

Z-Range

|         | Full   | Near Field | Far Field |
|---------|--------|------------|-----------|
| Z-Range | 400 mm | 200 mm     | 200 mm    |

Technical Specifications

|                          |                                                                                                                            |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Interface                | Gigabit-Ethernet (1GigE)                                                                                                   |
| Inputs                   | Encoder A+, A-, B+, B-, Z+, Z- (TTL level)<br>Two freely configurable digital inputs (+5 to +24 VDC)                       |
| Outputs                  | Two freely configurable digital outputs (+5 to +24 VDC)                                                                    |
| Power Supply             | Sensor supply +10 to +24 VDC (max. +27 VDC )<br>Laser supply +10 to +24 VDC                                                |
| Housing                  | Anodized aluminum<br>IP67 certified                                                                                        |
| Environmental Conditions | Operating temperature: 0 to +40 °C<br>Storage temperature: -20 to +80 °C<br>Relative humidity: 20 to 80 % (non-condensing) |
| Vibration Resistance     | Sinusodial: DIN EN 60068-2-6:2008-10: 2g, 10-150 Hz<br>Random: DIN EN 60068-2-64:2020-09: 7g, 10-500 Hz                    |
| Shock Resistance         | DIN EN 60068-2-27: 2010-02: 15g, 3ms                                                                                       |
| Supported Standards      | GenICam<br>GigEVision                                                                                                      |
| Firmware Features        | RegionTracking, RegionSearch, Multiple Regions, MultiPart, AutoStart, HistoryBuffer, MultiSlope, MultiPeak                 |
| Software                 | SolutionPackage, MetrologyPackage, cxSDK for C, C++, .Net, Python, Matlab, Halcon                                          |

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