



# SIM2500-2P03G10

SIM2x00

SENSOR INTEGRATION MACHINE

**SICK**  
Sensor Intelligence.



### Ordering information

| Type            | Part no. |
|-----------------|----------|
| SIM2500-2P03G10 | 1092673  |

You can find additional information on the device and firmware releases in the SICK Support Portal. A complete overview of the connecting cables for SIMxxx is also available in the Support Portal. You must register before logging in.

Other models and accessories → [www.sick.com/SIM2x00](http://www.sick.com/SIM2x00)



### Detailed technical data

#### Features

|                             |  |
|-----------------------------|--|
| <b>Product category</b>     | Programmable   |
| <b>Generation</b>           | Second generation  |
| <b>Supported products</b>   | 2D and 3D cameras from SICK or based on the GigE machine vision standard<br>2D and 3D LiDAR sensors<br>Image-based code readers<br>Bar code scanners<br>RFID read/write device<br>Displacement measurement sensors<br>Incremental and absolute encoders<br>Photoelectric sensors |
| <b>Processor</b>            | 8-core ARM Cortex-A72 CPU with NEON accelerator<br>FPGA co-processor for image (pre-)processing  |
| <b>Random Access Memory</b> | 4 GB DDR4  |
| <b>Flash memory</b>         | 7 GB eMMC, of which 5 GB are available for applications  |
| <b>Programming software</b> | SICK AppStudio<br>Can be programmed within the SICK AppSpace environment   |
| <b>Toolkit</b>              | SICK algorithm API<br>HALCON (image processing library)  |
| <b>Further functions</b>    | FPGA for I/O handling<br>Dedicated fieldbus controller   |

#### Mechanics/electronics

| Connections  |  |
|--------------|--|
| I/O          | 1 x M12, 8-pin female connector, A-coded |
| Power        | 1 x M12, 4-pin male connector, T-coded   |
| SERIAL       | 1 x M12, 8-pin female connector, A-coded |
| INC          | 1 x M12, 8-pin female connector, A-coded |
| Fieldbus     | 2 x M12, 4-pin female connector, D-coded |
| CAN          | 1 x M12, 5-pin female connector, A-coded |
| SENSOR S1-S4 | 4 x M12, 5-pin female connector, A-coded |

|                               |                   |   |
|-------------------------------|-------------------|---|
|                               | SENSOR S5-S6      | 2 x M12, 5-pin female connector, A-coded  |
|                               | Ethernet with PoE | 4 x M12, 8-pin female connector, X-coded  |
|                               | USB               | 1 x Micro-B, Under the servicing panel  |
| <b>Supply voltage</b>         |                   | 24 V DC, $\pm 10\%$   |
| <b>Power consumption</b>      |                   | Typ. 45 W, without connected sensor   |
| <b>Power output</b>           |                   | 140 W, total, all connections   |
| <b>Output current</b>         |                   |   |
|                               | SENSOR S1-S4      | $\leq 1$ A (on power supply pin)  |
|                               | SENSOR S5-S6      | $\leq 2.5$ A (on power supply pin)  |
|                               | SENSOR S5-S6      | $\leq 10$ kHz, rise time/fall time/delay $< 10\mu\text{s}$ when power gate-API used |
|                               | CAN               | $\leq 3.2$ A (on power supply pin)  |
|                               | SERIAL            | $\leq 1$ A (on power supply pin)  |
|                               | INC               | $\leq 0.5$ A (on power supply pin)  |
|                               | I/O               | $\leq 500$ mA (on power supply pin)   |
| <b>Enclosure rating</b>       |                   | IP65  |
| <b>Protection class</b>       |                   | III   |
| <b>Electrical safety</b>      |                   | EN 61010  |
| <b>Housing material</b>       |                   | Aluminum die cast   |
| <b>Housing color</b>          |                   | Light blue (RAL 5012)   |
| <b>Weight</b>                 |                   | 1,995 g   |
| <b>Dimensions (L x W x H)</b> |                   | 176 mm x 83 mm x 196 mm   |

## Interfaces

|                     |                        |   |
|---------------------|------------------------|---|
| <b>Ethernet</b>     |                        | ✓ (4), TCP/IP, FTP, OPC UA, MQTT                                |
|                     | Remark                 | GigE machine vision/GenICAM                                     |
|                     | Function               | Data output, Configuration, firmware update, image transmission |
|                     | Data transmission rate | 10/100/1,000/2,500 Mbit/s                                       |
| <b>PROFINET</b>     |                        | ✓ (2)   |
|                     | Remark                 | Fieldbus ports, in preparation                                  |
|                     | Function               | Dual port Ethernet-based fieldbus                               |
|                     | Data transmission rate | 10/100 MBit/s   |
| <b>EtherNet/IP™</b> |                        | ✓ (2)   |
|                     | Remark                 | Fieldbus ports, in preparation                                  |
|                     | Function               | Dual port Ethernet-based fieldbus                               |
|                     | Data transmission rate | 10/100 MBit/s   |
| <b>EtherCAT</b>     |                        | ✓ (2)   |
|                     | Remark                 | Fieldbus ports, in preparation                                  |
|                     | Function               | Dual port Ethernet-based fieldbus                               |
|                     | Data transmission rate | 10/100 MBit/s   |
| <b>IO-Link</b>      |                        | ✓ (4)   |
|                     | Remark                 | SENSOR S1-S4  |
|                     | Function               | IO-Link Master 1.1  |
|                     | Data transmission rate | $\leq 230$ kBaud  |

|                                   |   |
|-----------------------------------|---|
| <b>Serial</b>                     | ✓, RS-232, RS-422, RS-485   |
| Function                          | Can also be configured as an encoder interface, max. frequency 2 MHz  |
| Data transmission rate            | RS-232: 115,2 kBaud, RS-422/RS-485: 2 MBaud   |
| <b>Incremental</b>                | ✓ (4), RS-422   |
| Function                          | Interface for encoder, Also configurable as RS-422  |
| Data transmission rate            | Max. frequency 2 MHz; RS-422: 2 MBaud   |
| <b>CAN</b>                        | ✓   |
| Function                          | SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server) with activatable termination resistor |
| Data transmission rate            | 20 kbit/s ... 1 Mbit/s  |
| <b>USB</b>                        | ✓, USB 2.0  |
| Function                          | For configuration, diagnosis, firmware update   |
| <b>Operator interfaces</b>        | Web server (GUI), SICK AppStudio (programming), SICK AppManager (app installation, firmware update)               |
| <b>Data storage and retrieval</b> | Image and data logging via optional microSD memory card, internal RAM and external FTP                            |
| <b>Memory card(s)</b>             | Industry-grade microSD memory card (flash card), max. 32 GB, optional   |
| <b>Digital inputs/outputs</b>     |   |
| I/O                               | 2 opto-decoupled inputs (Max. frequency: 30 kHz)  |
| I/O                               | 2 inputs/outputs (can be configured) (Max. frequency: 30 kHz)   |
| SENSOR S1-S4                      | 1 input each (Max. frequency: 30 kHz)   |
| SENSOR S1-S4                      | 1 input/output each (can be configured) (Max. frequency: 30 kHz)  |
| SENSOR S5-S6                      | 1 input each (Max. frequency: 10 kHz)   |
| SENSOR S5-S6                      | 2 inputs/outputs each (can be configured) (Max. frequency: 30 kHz)  |
| <b>Control elements</b>           | 1 selector switch (under the servicing panel)<br>1 functional button (under the servicing panel)                  |

### Ambient data

|  |   |
|--|---|
| <b>Electromagnetic compatibility (EMC)</b> | IEC 61000-6-2:2016, EN IEC 61000-6-2:2019, IEC 61000-6-3:2020 |
| <b>Shock load</b>                          | IEC 60068-2-27:2008   |
| <b>Ambient operating temperature</b>       | 0 °C ... +50 °C <sup>1) 2)</sup>                              |
| <b>Ambient temperature, storage</b>        | -20 °C ... +70 °C <sup>1)</sup>                               |

<sup>1)</sup> Permissible relative air humidity: 0 % ... 90 % (non-condensing).

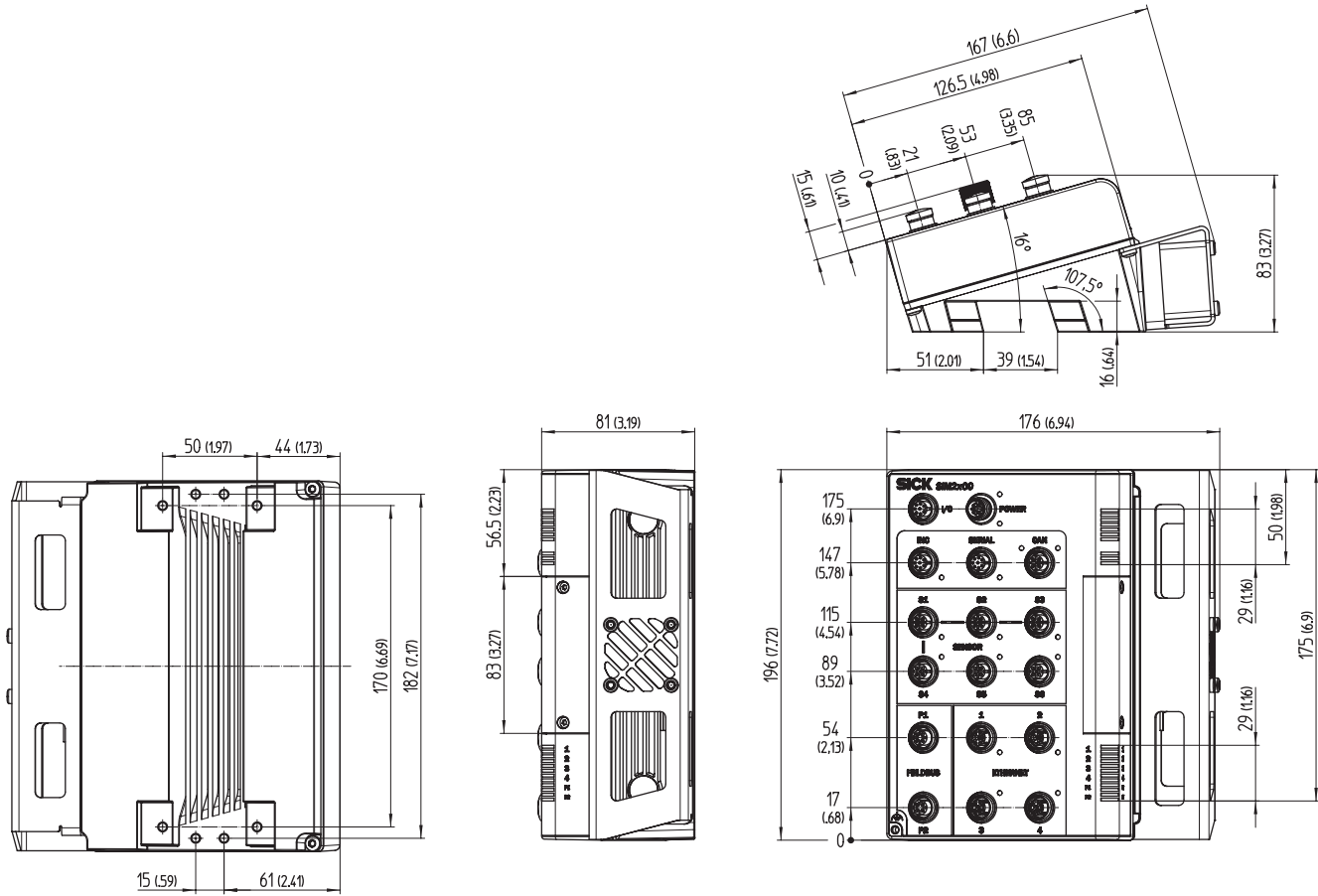
<sup>2)</sup> While taking account of the mounting requirements described, see operating instructions. In the event of overtemperature, the device protects itself by resetting and then restarting.

### Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27242208 |
| <b>ECLASS 5.1.4</b> | 27242608 |
| <b>ECLASS 6.0</b>   | 27242608 |
| <b>ECLASS 6.2</b>   | 27242608 |
| <b>ECLASS 7.0</b>   | 27242608 |
| <b>ECLASS 8.0</b>   | 27242608 |
| <b>ECLASS 8.1</b>   | 27242608 |
| <b>ECLASS 9.0</b>   | 27242608 |
| <b>ECLASS 10.0</b>  | 27242608 |

|                       |          |
|-----------------------|----------|
| <b>ETIM 5.0</b>       | EC001604 |
| <b>ETIM 6.0</b>       | EC001604 |
| <b>ETIM 7.0</b>       | EC001604 |
| <b>ETIM 8.0</b>       | EC001604 |
| <b>UNSPSC 16.0901</b> | 32151705 |

**Dimensional drawing** (Dimensions in mm (inch))



### Overview

SICK AppSpace



### Recommended services

Additional services → [www.sick.com/SIM2x00](http://www.sick.com/SIM2x00)

|  | Type                   | Part no.   |
|--|------------------------|------------|
| <b>Function Block Factory</b> <ul style="list-style-type: none"> <li>• <b>Description:</b> The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&amp;R. More information on the FBF can be found <a href="https://fbf.cloud.sick.com">here</a>.</li> <li>• <b>Note:</b> You can configure your function block at <a href="https://fbf.cloud.sick.com">Function Block Factory</a>. As a login please use your SICK ID.</li> </ul> | Function Block Factory | On request |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)