CM CANopen for SIMATIC S7-1200

The CM CANopen module from HMS Industrial Networks enables you to connect CANopen devices to your SIMATIC S7-1200 PLC. You can also connect devices running Transparent CAN 2.0A.

How it works
The CM CANopen is a plug-in module between the SIMATIC S7-1200 PLC and any device running CANopen. You attach the CM CANopen to the S7-1200 and set up how you want the data to flow in the accompanying Configuration Studio Software.

The CM CANopen can be configured to be both Master or Slave. No programming is needed to create the configuration.

In short
The CM CANopen is the fastest and easiest way to connect CANopen devices to the SIMATIC S7-1200 PLC.

Key features
- Able to connect 3 modules per CPU
- Connects up to 16 CANopen slave nodes
- 256 byte input and 256 byte output per module
- 3 LEDs provide diagnostic information on module, network and I/O status
- The module is integratable in the hardware catalogue of the TIA Portal configuration suite
- CANopen configuration via the included CM CANopen Configuration Studio or via any other external CANopen configuration tool
- Complies to the CANopen communication profiles CiA 301 rev. 4.2 and the CiA 302 rev. 4.1
- Supports transparent CAN 2.0A for custom protocol handling
- Pre-made function blocks available for easy PLC programming in TIA portal

Ordering information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>021620</td>
<td>The CM CANopen module. DSUB with screw terminals for subnetwork. CM CANopen configuration Studio CD, USB configuration cable</td>
</tr>
</tbody>
</table>

Connect. Configure. Done!
In the CANopen Configuration Studio Software, you set up how you want the data to flow between the CANopen device and the S7-1200. No programming is necessary.
TECHNICAL SPECIFICATIONS

CM CANopen

- Max amount of slaves: 16
- CANopen network connector: DB9MBM
- Baud rate: Up to 1 Mbit/s
- I/O data: 64 PDOs Receive/64 PDOs Transmit, 256 bytes IN/OUT
- Extra: CANopen specification CiA 301 V4.2 and CiA 302 V4.1

Technical Details

<table>
<thead>
<tr>
<th>Weight</th>
<th>120 g, 0.26 lb</th>
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<tbody>
<tr>
<td>Dimensions (width)</td>
<td>30 mm, 1.18&quot;</td>
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<tr>
<td>Protection class</td>
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<tr>
<td>Mounting</td>
<td>DIN rail (35•7,5/15)</td>
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<td>UL File number</td>
<td>E214107</td>
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<td>CE</td>
<td>2004/108/EC</td>
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</table>

Certifications

- UL 508 Ind. Cont. Eq.
- EN 50022

Hardware Characteristics

- Galvanic isolation on subnetwork Yes
- Operating temp: 0 to 60 °C, 32 to 140 °F
- Storage temp: -40 to 70 °C, -40 to 158 °F
- Relative Humidity: 5-95 % non condensing
- Installation altitude: Up to 2 000 m

Environmental Characteristics

- Electromagnetic RF fields: 10 V/m 80 MHz - 1 GHz, 3 V/m 1.4 GHz - 2.0 GHz, 3 V/m 2.0 GHz - 2.7 GHz
- Fast Transients: +/- 1 kV
- Surge protection: +/- 1 kV
- RF conducted interference: 10 Vrms
- Emission (at 3 m): 50 dB 30 MHz - 230 MHz, 57 dB 30 MHz - 1 GHz

Immunity and Emission for Industrial Environment

- Electrostatic discharge: +/- 4 kV
- EN 61000-4-2
- EN 61000-4-3
- EN 61000-4-4
- EN 61000-4-5
- EN 61000-4-6
- EN 50016-2-3
- EN 55016-2-3

CANopen features

- CANopen implementation according to CANopen specification CiA301 rev. 4.2 and CANopen Master according to CiA302 (Part 1-5)
- PDO (Process Data Objects) functionality, Push and Pull
- 64 Receive and 64 Transmit PDOs
- SDO Client functionality (Expedited & Segmented Upload/Download Domain Protocol)
- Configuration possibility via SDOs
- Heartbeat producer/consumer functionality
- Selectable baud rate from 20 kbit/s – 1 Mbit/s
- Supported PDO message types: COS (Change Of State), Cyclic Synchronous, Acyclic Synchronous

Master specific features

- SDO (Service Data Objects) Server functionality
- NMT (Network Management Telegrams) Master to be able to start-up and monitor the network
- Node guarding - producer/consumer
- Synchronization - producer/consumer

Slave specific features

- NMT (Network Management Telegrams) Slave state machine
- Node guarding - consumer
- Synchronization - consumer

Transparent CAN 2.0A features

- Implements any custom CAN protocol which is controlled by the PLC
- CAN frames pass transparently through the CM CANopen module
- Special PLC function block available for easy integration into TIA portal
- Able to transmit and receive CAN frames inside TIA portal
- Supports the CAN 2.0A standard (11-bit CAN identifiers)
- Selectable baud rate from 20 kbit/s – 1 Mbit/s
- CANopen functionality disabled when using Transparent CAN mode

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