

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.

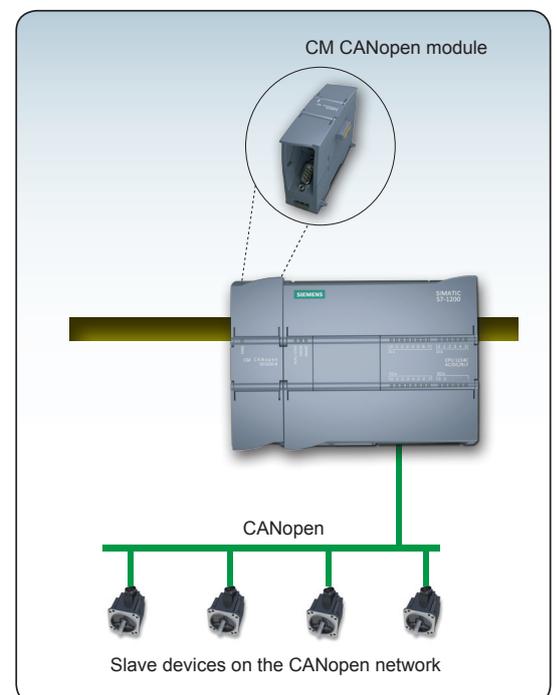
The CM CANopen can be configured to be both Master or Slave. No programming is needed to create the configuration.

In short

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

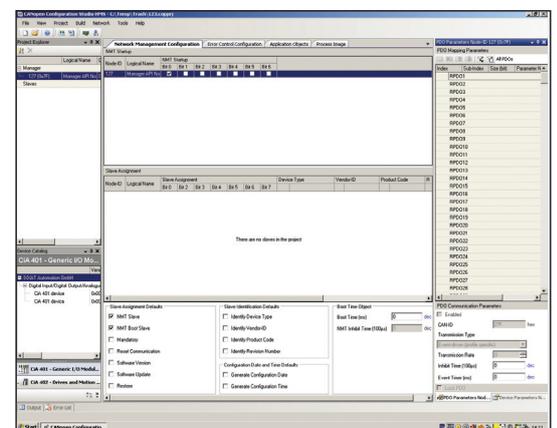
Key features

- 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

Part Number	Description
021620	The CM CANopen module. DSUB with screw terminals for subnetwork. CM CANopen configuration Studio CD, USB configuration cable



CANopen Configuration Studio

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.



HMS provides a full 3 year product guarantee

TECHNICAL SPECIFICATIONS

CM CANopen		
Max amount of slaves	16	
CANopen network connector	DSUB9M	
Baud rate	Up to 1 Mbit/s	
I/O data	64 PDOs Receive/64 PDOs Transmit, 256 bytes IN/OUT	
Extras	CANopen specification CiA 301 V4.2 and CiA 302 V4.1	
Technical Details		Standard
Weight	120 g, 0.26 lb	
Dimensions (width)	30 mm, 1.18"	
Protection class	IP20	
Mounting	DIN rail (35*7,5/15)	EN 50022
Certifications		
UL	File number: E214107	UL 508 Ind. Cont. Eq.
CE	2004/108/EC	EN 55016-2-3:2007 Class A EN 61131-2:2007 Clause 8
Hardware Characteristics		
Galvanic isolation on subnetwork	Yes	
Environmental Characteristics		
Operating temp	0 to 60 °C, 32 to 140 °F	IEC 60068-2-1 IEC 60068-2-2
Storage temp	-40 to 70 °C, -40 to 158 °F	IEC 60068-2-1 IEC 60068-2-2
Relative Humidity	5-95 % non condensing	IEC 60068-2-30
Installation altitude	Up to 2 000 m	
Immunity and Emission for Industrial Environment		
Electrostatic discharge	+/- 4 kV	EN 61000-4-2
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	EN 61000-4-3
Fast Transients	+/- 1 kV	EN 61000-4-4
Surge protection	+/- 1 kV	EN 61000-4-5
RF conducted interference	10 Vrms	EN 61000-4-6
Emission (at 3 m)	50 dB 30 MHz - 230 MHz 57 dB 30 MHz - 1 GHz	EN 55016-2-3
Single Pack Accessories		
• Resource CD • Installation sheet • DSUB with screw terminals for subnetwork		



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

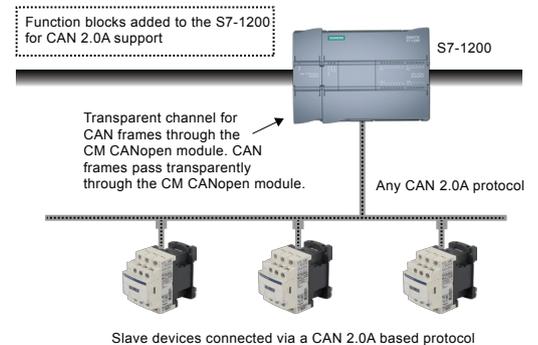
- SDO (Service Data Objects) Server functionality
- NMT (Network Management Telegrams) Master to be able to start-up and monitor the network
- Node guarding - producer/consumer
- Synchronization - producer/consumer

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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The CM CANopen module for the SIMATIC S7-1200 PLC is developed, manufactured and maintained by HMS Industrial Networks AB in Sweden, in consent with Siemens AG, Germany. HMS Industrial Networks is a world leading supplier of industrial network technology. HMS develops and manufactures products used for interfacing automation devices to industrial networks. S7-1200, TIA and SIMATIC are trademarks of Siemens AG.

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