

Anybus CompactCom M40 Module EtherCAT



EtherCAT®

The Anybus CompactCom M40 for EtherCAT is a complete communication module which enables your products to communicate on an EtherCAT network. The module supports fast communication speeds, making it suitable also for high-end industrial devices.

INTERCHANGEABLE WITH OTHER NETWORKS

By implementing the CompactCom concept into your product line, you will have instant access to any other industrial network by simply plugging in another Anybus module.

GET REAL-TIME ETHERCAT COMMUNICATION

The Anybus CompactCom M40 enables fast communication between your device and the EtherCAT network. The module supports generic device profiles and black channel for FSOE implementation. It also comes with a dual port switch implemented in the network processor — the award-winning Anybus NP40.

With its fast data transfer and very low latency, it's the perfect match for even the most demanding industrial applications.

Features and benefits

- A complete, interchangeable communication module with connectors
- Short in-design with free assistance from HMS ensures a fast time to market
- ETG pre-certified for network compliance (enables faster network certification)
- EtherCAT Semiconductor device profile support
- Fast data transfer: Up to 1486 bytes of process data in each direction, Up to 1500 bytes of explicit messaging
- Very low latency <15μs.
- Event-based interface method enables easy access to input and output data at any time
- Fast, event-based application hardware interfaces: 8/16-bit parallel and highspeed SPI. I/O (shift register interface) is also available.
- Black channel support enables Functional Safety over EtherCAT (FSOE) implementation
- IIoT ready: (EoE) Includes Email Client, Web server with customizable content, SSI functionality and FTP server
- Extended flash-based file system with two-disc access (internal and external)
- Transparent Socket Interface handling the complete Ethernet frame (support for 20 socket connections).
- Solid security: Mandatory software signatures prevent unauthorized software to be downloaded to the module. Furthermore, encryption is used to prevent illicit copying.

EtherCAT Slave interface

- CANopen over EtherCAT (CoE)
- Support for Modular Device Profile, DS301 compliant
- Network Identity customization
- EMCY support
- Up to 57343 ADIs can be accessed from the network in generic mode
- Up to 16383 ADIs can be accessed from the network when modular device profile is enabled
- Up to 1486 bytes of fast cyclic I/O in each direction
- Support for Sync0 functionality using distributed clocks
- Ethernet over EtherCAT (EoE)
- File access over EtherCAT (FoE)
- Support for process data remap from the network
- Black channel for FSOE supported
- Network cycle time down to 100 μs
- Possible to implement DS402 drive profiles
- Semiconductor Device Profile support: Common Device Profile (ETG.5003.1) and Specific Device Profile (ETG.5003.2xxx)
- 2x RJ-45 EtherCAT 100 Mbit/s ports available simultaneously

Technical specifications

Dimensions (L•W•H)	52 x 50 x 22 mm, 51 x 37 x 16 mm (without housing)
Operating temperature	-40 to +70 °C, -40 to +85 °C (without housing)
Power requirements	3.3 VDC, +/- 0.15 VDC
Application Interface	8/16-bit parallel (30 ns access) High speed SPI, baudrate configurable up to 20 MHz I/O (shift register interface, cyclical update time 82 µs) UART (for backwards compatibility with 30-series, max 625kbps)
Profile support	Generic device
Ethernet features	Transparent socket interface Support of HTTP forwarding via socket interface Integrated 2-port switch IT functions (FTP server, E-mail client, web server with JSON and SSI support)
Internal file system	Configurable up to 28 MB Two discs are available: One internal (28 MB capacity), and one reserved for accessing the application file system (capacity determined by application).
LED indicators	Integrated on front (with housing), via application interface (without housing). Indicates Module Status and Network Status.
Connectors	2x RJ45 100 Mbit/s
Galvanic isolation	YES
Mechanical rating	IP20, NEMA rating 1
Mounting	PCB mounting via a customized CompactFlash connector available from HMS
Certifications	CE, CULUS, RoHS