

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

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.



EtherNet/IP™

Why worry about networking?

Once you have implemented the Anybus CompactCom concept, you don't have to worry about network upgrades or certifications. HMS takes care of the network maintenance, so you can focus on your products.

If you need fast EtherNet/IP communication

The Anybus CompactCom M40 enables fast communication between your device and EtherNet/IP. The module supports generic device profiles and comes with a dual port switch implemented in the network processor — the Anybus NP40.

Beacon-based DLR, QuickConnect Class B and CIP energy objects are other supported features.

Features and benefits

- A complete, interchangeable communication module with connectors.
- Short in-design with free assistance from HMS ensures a fast time to market.
- Pre-certified for network compliance (enables faster network certification).
- Fast data transfer:
 - Up to 1448 bytes of process data in each direction.
 - Up to 1500 bytes of explicit messaging
- Very low latency <300µs.
- 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 high speed SPI. I/O (shift register interface) is also available.
- One hardware platform for all Ethernet versions. Simply download new firmware to enable communication with another network for example PROFINET or EtherCAT.
- Firmware management tool enables easy download via FTP or serial connection.
- Extended flash-based file system with two-disc access (internal and external).
- 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.

CompactCom 40-series

The M40 is part of the Anybus CompactCom 40-series — communication products in chip, brick and module formats. These are all built on the Anybus NP40 processor making them especially suitable for modern and demanding industrial applications.



Innovative mounting

The Anybus module plugs into a CompactFlash™ connector which is integrated onto the host PCB. HMS offers a CompactFlash connector specifically tailored for the CompactCom module.



Best-in-class processor

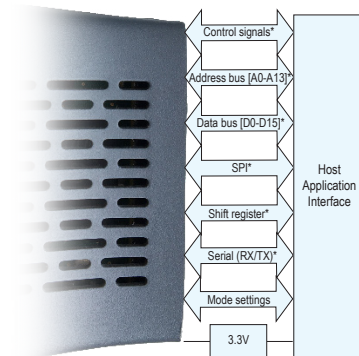
The M40 is equipped with the best network processor on the market according to independent analyst firm Frost & Sullivan.

Technical specifications

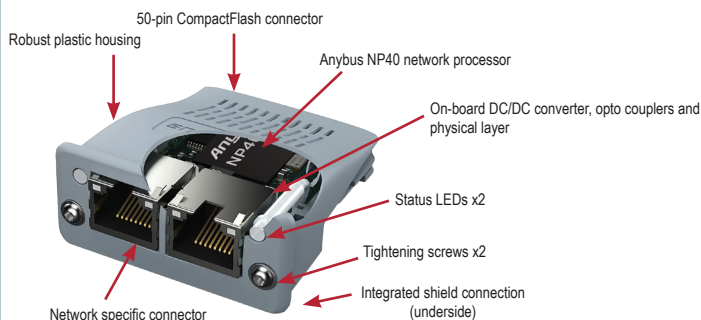
Technical Details	
Dimensions (L • W • H)	52•50•22 mm, 2.04•1.97•0.86" 51•37•16 mm, 2.01•4.46•0.63" (modules without housing)
Protection class	IP20
RoHS Compliance	Yes
Galvanically isolated network interface	Yes
Application interfaces	- 8/16-bit parallel (30 ns access) - High speed SPI, baudrate configurable 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 SSI support and JSON functionality)
Internal file system size	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 indicator	Integrated on front (with housing), via application interface (without housing). Indicates Module Status and Network Status.
Certifications	
UL, cUL	Yes
Network conformance	Yes (Interoperability tested, plugfest approved)
CE - Declaration of Pre-Conformity	
Emission EN 61000-6-4	EN55016-2-3 Radiated emission EN55022 Conducted emission
Immunity EN 61000-6-2	EN61000-4-2 Electrostatic discharge, EN61000-4-3 Radiated immunity. EN61000-4-4 Fast transients/burst, EN61000-4-5 Surge immunity. EN61000-4-6 Conducted immunity.
Electrical Characteristics	
Power requirements	3.3 VDC, +/- 0.15 VDC
Environmental Characteristics	
Operating temp	-40 to 70 °C, -40-158 °F -40 to 85 °C, -40-176 °F (modules without housing)
Humidity	5-95 % non-condensing

EtherNet/IP-specific technical highlights	
Support for Generic Device profile	
Dual port cut-through switch implemented in the Anybus NP40 processor	
Device Level Ring (DLR) Beacon-based	
Support QuickConnect Class A	
CIP energy object support	
CIP safety support	
Dual port Ethernet	
100 Mbit/s Full Duplex	
Real-time Ethernet	
Customized identity information	
Explicit messaging up to 1500 using Large Forward Open	
Multiple I/O assembly support	
Modular device support	
CIP Sync Support	

Block diagram



Anybus slot and 50-pin CompactFlash connector on the PCB of the host device



Module mounting

The CompactCom module slides into a pre-designated slot in the host automation device PCB. The module is secured with an innovative mechanism by tightening the two screws located on the front cover of the CompactCom module. HMS offers a customized CompactFlash connector for Anybus CompactCom. The module insertion can be made at any stage in the logistical chain between the automation device manufacturer and the end customer. CompactCom slot cover available on request from HMS.

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