CompactCom™ M40 for PROFIBUS

The Anybus CompactCom M40 for PROFIBUS is a complete communication module which enables your products to communicate on a PROFIBUS network.

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.

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 PROFIBUS communication

The Anybus CompactCom M40 enables communication between your device and PROFIBUS. The module handles data lengths up to 488 bytes (244 bytes input and 244 output) and supports both PROFIBUS DP-V0 and DP-V1 according to IEC61158 type 3.

Features and benefits for the CompactCom 40-series

- 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: 244 bytes in each direction for PROFIBUS

- Very low latency.

- 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.

- Firmware management tool enables easy download via serial connection.

- 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.

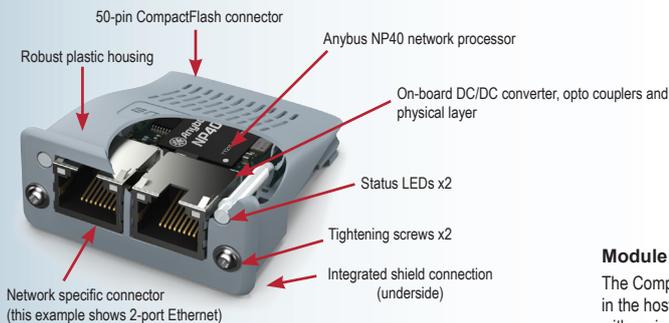# Technical specifications

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	I/O
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

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 ℃, -40-158 ℉ -40 to 85 ℃, -40-176 ℉ (modules without housing)
Humidity	5-95 % non-condensing

PROFIBUS-specific technical highlights

Supports PROFIBUS DP-V0 and DP-V1 according to IEC61158 type 3

Supports up to 65535 ADIs

Automatically detected baud rate

Maximum data length of 488 bytes (244 input and 244 output)

Maximum parameter length is 244 bytes

Modular slave/device supported

Supports PROFIBUS failsafe functionality

Supports Sync/Freeze functionality

Generic and PROFIBUS specific diagnostic support

User Parametrization Data support

Set Slave Address support

ADI access via DP-V1 read/write services

Device identity customization

Configuration data (244 bytes)
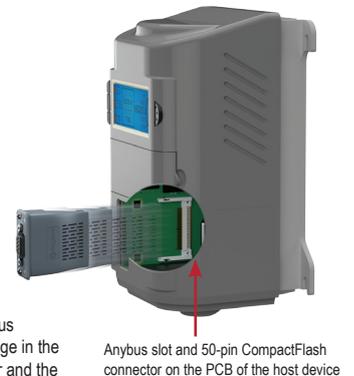
Diagnostic data (244 bytes)

Supports the following PROFIBUS DP-V0/DP-V1 functions:

SSA	Diagnostics	MSAC1_Read	MSAC2_Abort
Set_Prm	Global control	MSAC1_Write	MSAC2_Read
Chk_Cfg	Data exchange	MSAC1_	MSAC2_Write
Get_Cfg	Read_Input	Alarm_ack	
	Read_Output	MSAC2_Initiate	

50-pin CompactFlash connector

Robust plastic housing

Anybus NP40 network processor

On-board DC/DC converter, opto couplers and physical layer

Status LEDs x2

Tightening screws x2

Integrated shield connection (underside)

Network specific connector (this example shows 2-port Ethernet)

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.

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

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