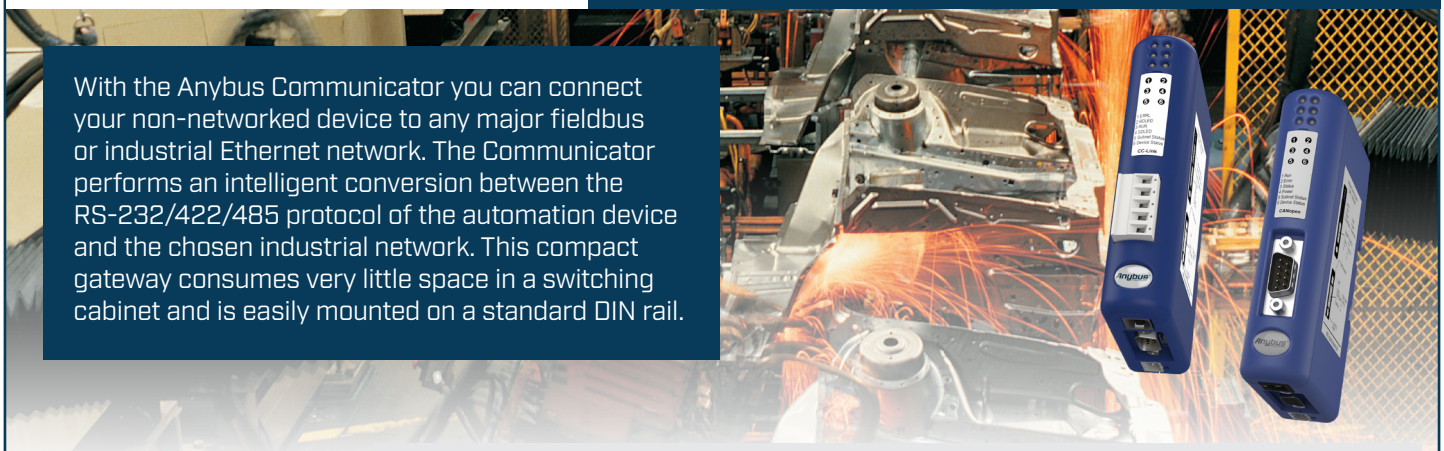
Anybus® BY HMS NETWORKS

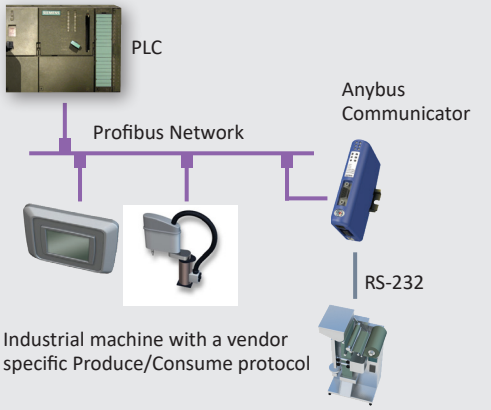
Communicator™



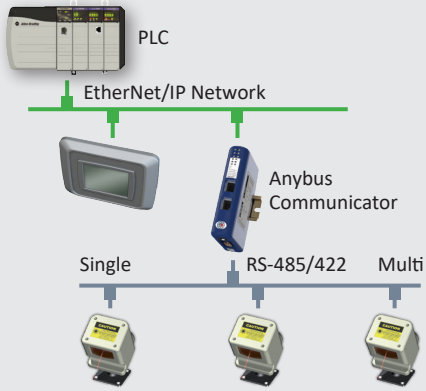
With the Anybus Communicator you can connect your non-networked device to any major fieldbus or industrial Ethernet network. The Communicator performs an intelligent conversion between the RS-232/422/485 protocol of the automation device and the chosen industrial network. This compact gateway consumes very little space in a switching cabinet and is easily mounted on a standard DIN rail.

Typical Industries

Application example single-drop



Application example multi-drop



The Communicator works as a serial Modbus RTU master to the connected slave devices, and as a slave towards the PLC

Network:	Part No:
CANopen	AB7003
CC-Link	AB7008
CC-Link IE Field	AB7077
ControlNet	AB7006
DeviceNet	AB7001
EtherCAT	AB7061
EtherNet/IP	AB7007
EtherNet/IP 2-port	AB7072
FIPIO	AB7011
Interbus	AB7012
Modbus Plus	AB7002
Modbus RTU	AB7010
Modbus TCP	AB7028
PROFIBUS	AB7000
PROFINET IO	AB7013
PROFINET IRT	AB7078

Optional accessories

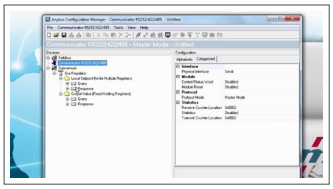
USB-RS232 configuration adapter
Part No: 019570

HMS provides a full 3 year product guarantee

Features and benefits

- Convert almost any RS-232/422/485 Request/Response or Produce/Consume protocol in just a few minutes — For example Modbus RTU, ASCII, DF1.
- Pre-defined for Modbus RTU. Avoid the hassle of scripting and serial Modbus frame building with the 6-step Modbus RTU wizard.
- No hardware or software changes are required for the connected automation device
- Compatible with PLCs from leading manufacturers such as Siemens, Rockwell, Schneider Electric etc.
- Complete protocol conversion performed by the Communicator, no PLC function blocks required
- Handy Save/Load function means a completed configuration can be re-used for many other installations
- Included “Anybus Configuration Manager” with flexible serial frame building capabilities
- Versions with Dual Port switched Ethernet allows for daisy chaining and eliminates the need for external switches
- Global free technical support and consultancy

Anybus Configuration Manager software



This Windows™ based software has an easy-to-use user interface and requires no programming.

You can convert almost any RS-232/422/485 Request/Response or Produce/Consume protocol — Modbus RTU, ASCII, DF1, or user-specific.

The Communicator requires no PLC function blocks or programming. Just connect, configure and you’re done.

TECHNICAL SPECIFICATIONS

Communicator RS-232/422/485	
Protocol	Configurable RS-232/422/485 based produce/consume, query/response ASCII
Max stations	31 (with RS485/422)
Baud rate	1,2-57,6 kbit/s
Physical standards	RS232/422/485
Modbus Commands	0x01 Read Coils, 0x02 Read Discrete Inputs, 0x03 Read Holding Registers, 0x04 Read Input Registers, 0x05 Write Single Coil, 0x06 Write Single Register, 0x07 Read Exception Status, 0x08 Diagnostics, 0x0B Get Comm Event Ctr, 0x0C Get Comm Event Log, 0x0F Write Multiple Coils, 0x10 Write Multiple Registers, 0x11 Report Slave ID, 0x14 Read File Record, 0x15 Write File Record, 0x16 Mask Write Register, 0x17 Read/Write Multiple Registers, 0x18 Read FIFO Queue Customized commands can be created (in the Anybus Configuration Manager)
DF1 Services	0x01 Integrity Check, 0x02 Read Diagnostics, 0x03 Read Data, 0x04 Write Data Customized services can be created (in the Anybus Configuration Manager) Technical Details Standard

Technical Details		Standard
Weight	150 g, 0,33 lb	
Dimensions (L•W•H)	120•75•27 mm, 4,72•2,95•1,06"	
Protection class	IP20, NEMA rating 1	
Enclosure material	PC ABS, UL 94	
Installation position	Any	
Mounting	DIN rail (35•7,5/15)	EN 50022
Certifications		
UL	File number: E203225	UL 508 Ind. Cont. Eq.
Hazardous Locations	CLASS 1, DIVISION 2, GROUPS A, B, C AND D, T4	ISA 12.12.01
CE	2004/108/EC	EN 61000-6-4 EN 61000-6-2
Electrical Characteristics		
Power	24 VDC +/- 10 %	
Current consumption	Max 300 mA, Typical 100 mA	
Hardware Characteristics		
Reverse voltage protection	Yes	
Short circuit protection	Yes	
Galvanic isolation on subnetwork	Yes	EN 60950-1
MTTF	>550 000 h	Telcordia Issue 2, Method 1 Case 3 at 30 °C
Environmental Characteristics		
Operating temp	0 to 55 °C, 32 to 131 °F	
Storage temp	-40 to 85 °C, -40 to 185 °F	
Relative Humidity	0-95% non condensing	
Installation altitude	up to 2 000 m	
Immunity and emission for industrial environment		
Electrostatic discharge	+/- 4 kV	EN 61000-4-2
Electro magnetic RF fields	10 V/m 80 MHz - 1 GHz 3 V/m 1,4 GHz - 2,0 GHz 1 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 V/rms	EN 61000-4-6
Emission (at 10 m)	40 dB 30 MHz - 230 MHz 47 dB 30 MHz - 1 GHz	CISPR 16-2-3
Single Pack Accessories		
• Configuration Cable (RS232) Port • Installation sheet • Dsub with screw terminals for sub network		

NETWORK SPECIFIC FEATURES

1 = Network connector, **2** = Baud rate,
3 = I/O data, **4** = Other

CANopen	**1** = DSUB9M **2** = Up to 1 Mbit/s **3** = 512 byte IN/OUT **4** = Supports profile CIA DS301 V4.02
CC-Link	**1** = 1*5p; 5.08 Phoenix Plug **2** = Up to 10 Mbit/s **3** = 896 IO points, 128 word IN/OUT **4** = Up to 4 occupied stations, 8 extension cycles
CC-Link IE Field	**1** = 2*RJ45 **2** = 1 Gbit/s Fixed **3** = 832 IO Points, 204 word IN/OUT **4** = CC-Link IE Field Network, Intelligent Device Station
ControlNet	**1** = 2*BNC Coax + RJ45 (NAP) **2** = 5 Mbit/s **3** = 450 byte IN/OUT **4** = Communications adapter, profile n. 12
DeviceNet	**1** = 1*5p; 5.08 Phoenix Plug **2** = 125-500 kbit/s **3** = 512 byte IN/OUT **4** = Communications adapter, profile n. 12
EtherCAT	**1** = 2*RJ45 **2** = 100 Mbit/s **3** = 512 byte IN/OUT **4** = DS301 V4.02 compliant, 4 FMMU Channels
EtherNet/IP	**1** = RJ45 **2** = 10/100 Mbit/s **3** = 504 IN/OUT **4** = EtherNet/IP group 2 and 3 server. Modbus/TCP slave functionality
EtherNet/IP 2-port	**1** = 2*RJ45 **2** = 10/100 Mbit/s **3** = 504 IN/OUT **4** = EtherNet/IP group 2 and 3 server. Modbus/TCP slave functionality
FIPIO	**1** = DSUB9M **2** = 1 Mbit/s **3** = 32 words IN/OUT (cyclic) **4** = Data exchange according to FIPIO Extended Device Profile, Class 0
Interbus	**1** = DSUB9F + DSUB9M **2** = 500 kbit/s, 2 Mbit/s **3** = 20 byte IN/OUT (process data), 512 bytes IN/OUT (with PCP) **4** = Interbus PCP V.2.0
Modbus Plus	**1** = DSUB9F **2** = 1,2-57,6 kbit/s **3** = 32 words IN/OUT (global data), 512 words IN/OUT (register data) **4** = -
Modbus RTU	**1** = DSUB9F **2** = 1,2-57,6 kbit/s **3** = 512 byte IN/OUT **4** = RS232 and RS485
Modbus TCP	**1** = RJ45 **2** = 10/100 Mbit/s **3** = 512 byte IN/OUT **4** = Class 0, 1 and partially class 2 slave functionality
PROFIBUS	**1** = DSUB9F **2** = Up to 12 Mb **3** = 244 IN/OUT (416 total) **4** = Profibus DP (IEC 61158)
PROFINET IO	**1** = RJ45 **2** = 100 Mbit/s **3** = 512 byte IN/OUT **4** = RT Communication and Cyclic data exchange
PROFINET IRT - 2 port	**1** = 2*RJ45 **2** = 100 Mbit/s **3** = 220 byte IN/OUT **4** = RT and IRT Communication

HMS Industrial Networks – Worldwide

HMS - Sweden (HQ)
Tel : +46 35 17 29 00 (Halmstad HQ)
E-mail: sales@hms-networks.com

HMS - Finland
Tel: +358 404 557 381
E-mail: sales@hms-networks.com

HMS - Italy
Tel : +39 039 59662 27
E-mail: it-sales@hms-networks.com

HMS - UK
Tel: +44 1926 405599
E-mail: uk-sales@hms-networks.com

HMS - China
Tel : +86 010 8532 3183
E-mail: cn-sales@hms-networks.com

HMS - Germany
Tel: +49 721 989777-000
E-mail: ge-sales@hms-networks.com

HMS - Japan
Tel: +81 45 478 5340
E-mail: jp-sales@hms-networks.com

HMS - United States
Tel: +1 312 829 0601
E-mail: us-sales@hms-networks.com

HMS - France
Tel: +33 368 368 034 (Mulhouse office)
E-mail: fr-sales@hms-networks.com

HMS - India
Tel: +91 83800 66578
E-mail: in-sales@hms-networks.com

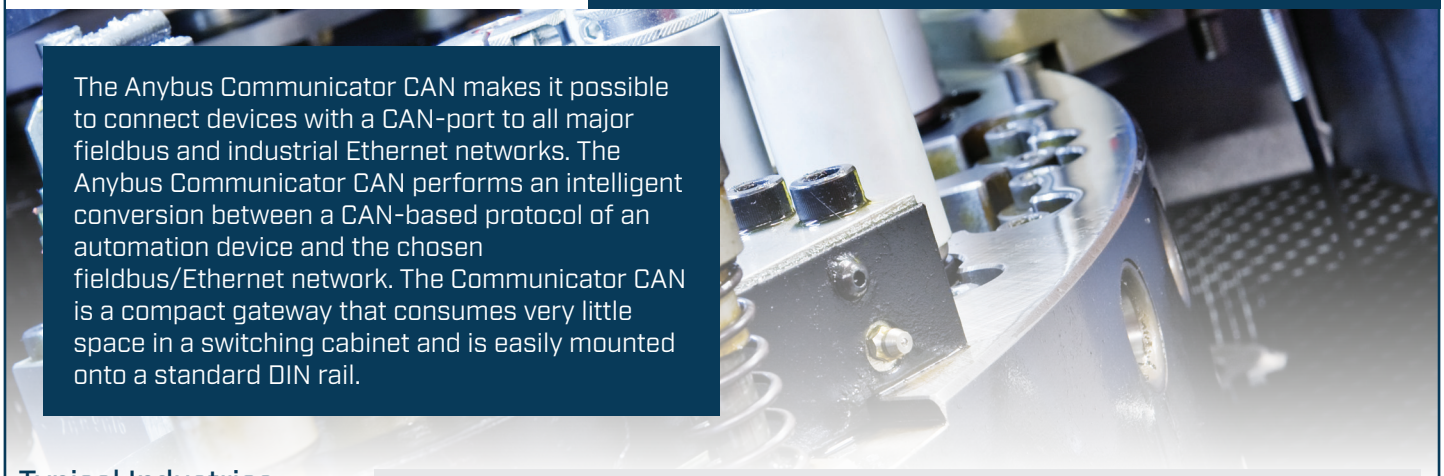
HMS - Switzerland
Tel: +41 61 511342-0
E-mail: sales@hms-networks.ch

Anybus® is a registered trademark of HMS Industrial Networks AB, Sweden, USA, Germany and other countries. Other marks and words belong to their respective companies.
All other product or service names mentioned in this document are trademarks of their respective companies.

Part No: MMA103 Version 6 03/2019 - © HMS Industrial Networks - All rights reserved - HMS reserves the right to make modifications without prior notice.

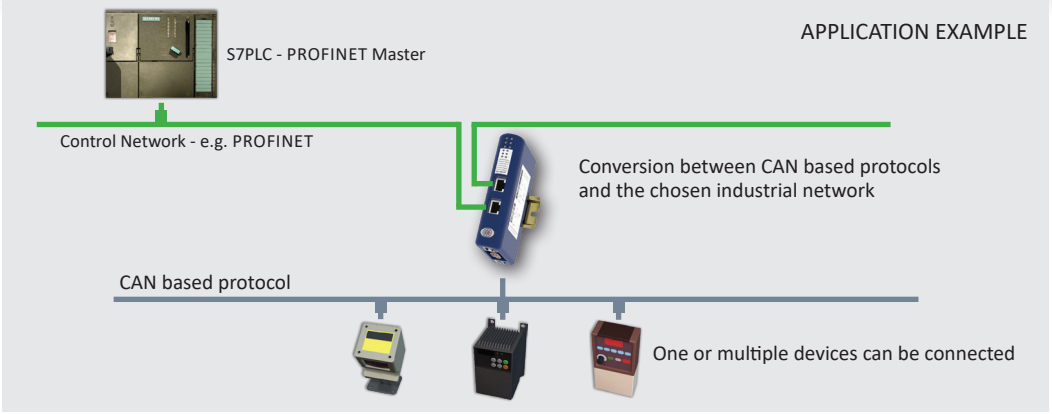
Anybus® BY HMS NETWORKS

Communicator™ CAN



The Anybus Communicator CAN makes it possible to connect devices with a CAN-port to all major fieldbus and industrial Ethernet networks. The Anybus Communicator CAN performs an intelligent conversion between a CAN-based protocol of an automation device and the chosen fieldbus/Ethernet network. The Communicator CAN is a compact gateway that consumes very little space in a switching cabinet and is easily mounted onto a standard DIN rail.

Typical Industries



Availability

Downlink: CAN protocol

Uplink Slave/Adapter: See below

Network:	Part No:
CANopen	AB7315
CC-Link	AB7321
ControlNet	AB7314
DeviceNet	AB7313
EtherCAT 2-port	AB7311
EtherNet/IP 2-port	AB7318
Modbus RTU	AB7316
Modbus-TCP 2-port	AB7319
PROFIBUS	AB7312
PROFINET-IO 1-port	AB7317
PROFINET-IRT 2-port	AB7328

Features and benefits

- CAN protocol converter gateways connecting CAN devices to fieldbus/Ethernet networks
- Support for custom CAN 1.0, 2.0A and 2.0B protocols
- Handles mixed Produce/Consume and Request/Response protocols and transactions
- No hardware or software changes needed to your devices
- No PLC code or function blocks required
- Compatible with PLCs from all leading manufacturers
- Versions with Dual Port switched Ethernet allows for daisy chaining and eliminates the need for external switches
- High performance, fast throughput, max 5 ms
- Anybus Configuration Manager included for easy visual CAN frame building
- Dynamic transaction controlled by network master
- Global free technical support and consultancy
- See www.anybus.com for application notes and instruction videos on how to configure the gateway

Flexible CAN configuration

The included Anybus Configuration Manager is an easy-to-use, visual CAN frame building tool that requires no programming or scripting skills. FDT/DTM based version of the Anybus Configuration Manager are available.

The flexible CAN frame building method makes it possible to configure almost any CAN-based Produce/Consume and Request/Response protocol used in the industry.

The uplink fieldbus or Ethernet slave interface is configured using a standard device description file (GSD/EDS) in the PLC engineering tool.

User prerequisites

Knowledge of the CAN protocol to be converted/configured.

HMS provides a full 3 year product guarantee

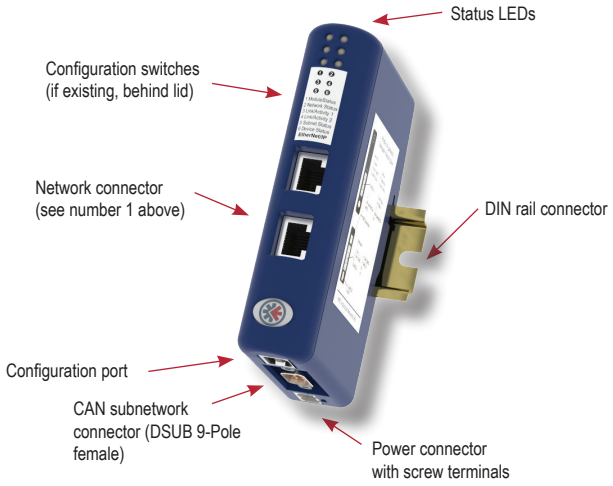
TECHNICAL SPECIFICATIONS

Communicator CAN		
Protocol	Configurable CAN 1.0, 2.0A and 2.0B based protocols	
Baud rate	20 kbit/s - 1 Mbit/s	
Physical standards	CAN	
Technical Details		**Standard**
Weight	150 g, 0,33 lb	
Dimensions (L•W•H)	120•75•27 mm, 4,72•2,95•1,06"	
Protection class	IP20, NEMA rating 1	
Enclosure material	PC ABS, UL 94	
Installation position	Any	
Mounting	DIN rail (35•7,5/15)	EN 50022
Certifications		
UL	File number: E 203225	UL 508 Ind. Cont. Eq.
Hazardous Locations	CLASS 1, DIVISION 2, GROUPS A, B, C AND D, T4	ANSI/ISA-12.12.01-2000
ATEX	Zone 2, Cat 3 (except Modbus RTU)	EN 60079-15 EN 60079-11
CE	2004/108/EC	EN 61000-6-4 EN 61000-6-2
Electrical Characteristics		
Power	24 VDC +/- 10 %	
Current consumption	Max 300 mA, Typical 100 mA	
Hardware Characteristics		
Reverse voltage protection	Yes	
Short circuit protection	Yes	
Galvanic isolation on subnetwork	Yes	
Environmental Characteristics		
Operating temp	-25 to 55 °C, -13 to 131 °F	IEC 60068-2-1 IEC 60068-2-2
Storage temp	-40 to 85 °C, -40 to 185 °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 1 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 V/rms	EN 61000-4-6
Emission (at 10 m)	40 dB 30 MHz - 230 MHz 47 dB 30 MHz - 1 GHz	CISPR 16-2-3
Single Pack Accessories		
• Configuration Cable (USB) Port • Installation sheet • Dsub with screw terminals for subnetwork		

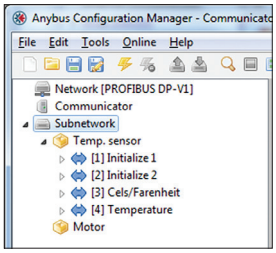
NETWORK SPECIFIC FEATURES

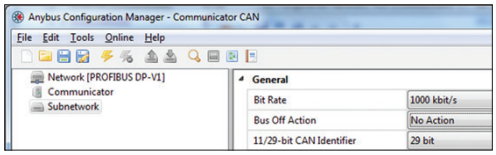
1 = Network connector, **2** = Baud rate,
3 = I/O data, **4** = Other

CANopen	**1** = DSUB9M **2** = Up to 1 Mbit/s **3** = 512 byte IN/OUT **4** = Supports profile CIA DS301 V4.02
CC-Link	**1** = 1*5p; 5.08 Phoenix Plug **2** = Up to 10 Mbit/s **3** = 896 IO points, 128 word IN/OUT **4** = Up to 4 occupied stations, 8 extension cycles
ControlNet	**1** = 2*BNC Coax + RJ45 (NAP) **2** = 5 Mbit/s **3** = 450 byte IN/OUT **4** = Communications adapter, profile n. 12
DeviceNet	**1** = 1*5p; 5.08 Phoenix Plug **2** = 125-500 kbit/s **3** = 512 byte IN/OUT **4** = Communications adapter, profile n. 12
EtherCAT - 2 port	**1** = 2*RJ45 **2** = 100 Mbit/s **3** = 512 byte IN/OUT **4** = DS301 V4.02 compliant, 4 FMMU Channels
EtherNet/IP - 2 port	**1** = 2*RJ45 **2** = 10/100 Mbit/s **3** = 509/505 byte IN/OUT **4** = EtherNet/IP group 2 and 3 server. Modbus TCP slave functionality
Modbus RTU	**1** = DSUB9F **2** = 1,2-57,6 kbit/s **3** = 512 byte IN/OUT **4** = RS232 and RS485
Modbus TCP - 2 port	**1** = 2*RJ45 **2** = 10/100 Mbit/s **3** = 512 byte IN/OUT **4** = Security framework
PROFIBUS	**1** = DSUB9F **2** = Up to 12 Mb **3** = 244 IN/OUT (344 total) **4** = Profibus DP (IEC 61158)
PROFINET IO - 1 port	**1** = RJ45 **2** = 100 Mbit/s **3** = 512 byte IN/OUT **4** = RT Communication and Cyclic data exchange
PROFINET IRT - 2 port	**1** = 2*RJ45 **2** = 100 Mbit/s **3** = 220 byte IN/OUT **4** = RT Communication and Support for I&M



The easy to use, visual based Anybus Configuration Manager contains pre-prepared functionality for CAN frame building that gets your devices up and running in no time.





HMS Industrial Networks – Worldwide

HMS - Sweden (HQ)
Tel : +46 35 17 29 00 (Halmstad HQ)
E-mail: sales@hms-networks.com

HMS - Finland
Tel: +358 404 557 381
E-mail: sales@hms-networks.com

HMS - Italy
Tel : +39 039 59662 27
E-mail: it-sales@hms-networks.com

HMS - UK
Tel: +44 1926 405599
E-mail: uk-sales@hms-networks.com

HMS - China
Tel : +86 010 8532 3183
E-mail: cn-sales@hms-networks.com

HMS - Germany
Tel: +49 721 989777-000
E-mail: ge-sales@hms-networks.com

HMS - Japan
Tel: +81 45 478 5340
E-mail: jp-sales@hms-networks.com

HMS - United States
Tel: +1 312 829 0601
E-mail: us-sales@hms-networks.com

HMS - France
Tel: +33 368 368 034 (Mulhouse office)
E-mail: fr-sales@hms-networks.com

HMS - India
Tel: +91 83800 66578
E-mail: in-sales@hms-networks.com

HMS - Switzerland
Tel: +41 61 511342-0
E-mail: sales@hms-networks.ch

Anybus® is a registered trademark of HMS Industrial Networks AB, Sweden, USA, Germany and other countries. Other marks and words belong to their respective companies.
All other product or service names mentioned in this document are trademarks of their respective companies.

Part No: MMA104 Version 8 07/2019 - © HMS Industrial Networks - All rights reserved - HMS reserves the right to make modifications without prior notice.