

X-gateway™

The Anybus X-gateway family consists of over 200 proven, robust and ready-to-use gateways aimed to connect almost every possible combination of two industrial networks.

Anybus X-gateway allows system integrators to easily transfer I/O data between devices on two different PLC systems and networks, enabling a consistent information flow throughout the entire plant.



Typical Industries



In-short

Anybus X-gateways enable connectivity between almost any two industrial networks or PLC systems.

Master versions supporting:

AS-Interface
DeviceNet
EtherNet/IP
PROFIBUS

Slave versions supporting:

CANopen
CC-Link
CC-Link IE Field
ControlNet
DeviceNet
EtherCAT
EtherNet/IP
FIPIO
Interbus RS485 + Fiber Optic
J1939*
LonWorks
Modbus Plus
Modbus RTU
Modbus-TCP
PROFIBUS
PROFINET IO
PROFINET IRT Copper + Fibre Optic

Accessories:

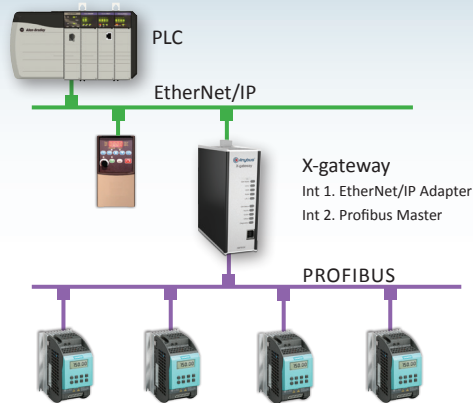
Extra Wide DIN-clip for flat mounting
- order number SP1784

*available in a different formfactor housing

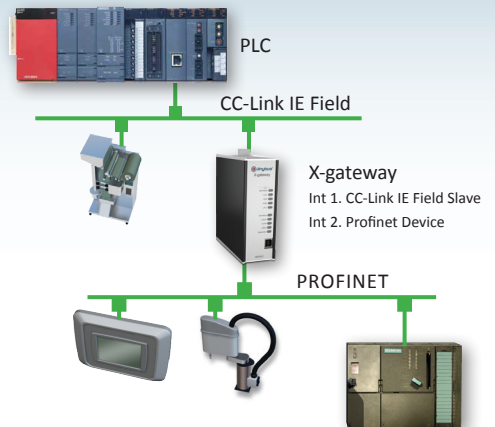


HMS provides a full 3 year product guarantee

EXAMPLE: FIELDBUS TO ETHERNET



EXAMPLE: ETHERNET TO ETHERNET



Features and Benefits

- Simple way to transmit I/O data between any two industrial networks
- Over 200 different network combinations (master, scanner, slave, adapter, I/O device, server)
- Connects different PLC systems (Siemens, Rockwell, Schneider, Mitsubishi, Omron, Beckhoff etc)
- I/O data transfer with average throughput between networks of 10 - 15 ms
- Additional parameter data supported (depending on network combination)
- Optional control and status information added to the I/O data for diagnostic purposes
- Included Anybus OPC server for extended functionality with Ethernet versions
- Anybus master configuration tool included free of charge with a Profibus, DeviceNet or EtherNet/IP Master/Scanner
- Robust stand-alone housing with CE and UL certifications
- Global free technical support and consultancy
- See www.anybus.com for application notes and instruction videos on how to configure the X-gateways

Easy Configuration

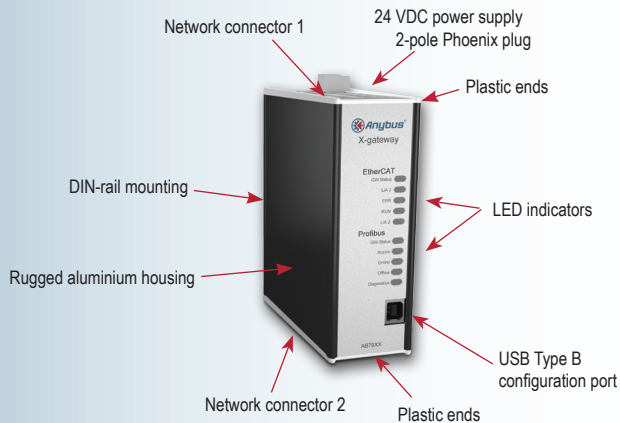
No programming skills are needed to set up the X-gateway.

The configuration of the X-gateway is made using the "Anybus Configuration Manager X-gateway" which is included in the price (Windows™ Tool). You install this on your PC, and connect the included USB cable to the configuration port of the X-gateway. The Anybus Configuration Manager X-gateway is available at www.anybus.com

The easy-to-use Anybus Configuration Manager X-gateway allows you to define the I/O data sizes on each network side and to define the data mapping and separation between cyclic I/O data and parameter data.

TECHNICAL SPECIFICATIONS

Technical Details		Standard
Weight	400 g, 0,880 lb	
Dimensions (L-W-H)	114*44*127 mm, 4,49*1,73*5,00"	
Protection class	IP20, NEMA rating 1	
Enclosure material	Aluminium and plastic	
Installation position	Vertical position	
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 12.12.01-2015
ATEX	Zone 2, Cat 3	EN 60079-0:2012+A11:2013 EN 60079-15:2010
CE	2014/30/EU	EN61000-6-4 (2007) EN61000-6-2 (2005)
Electrical Characteristics		
Power	24 VDC +/- 20 %	
Current consumption	Max 400mA at 24VDC, Typical 200 mA at 24VDC	
Hardware Characteristics		
Reverse voltage protection	Yes	
Short circuit protection	No	
Environmental Characteristics		
Operating temp	-25 to 65 °C, -13 to 149 °F (for all other networks) -25 to 50 °C, -13 to 122 °F (only for Profinet IRT Fibre Optic)	IEC 68-2-1, IEC 68-2-2
Storage temp	-40 to 85 °C, -40 to 185 °F	IEC 68-2-1, IEC 68-2-2
Relative Humidity	5-95 % non condensing	IEC 68-2-30
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 3 m)	50 dB 30 MHz - 230 MHz 57 dB 230 MHz - 1 GHz	EN 55016-2-3
Single Pack Accessories		
• Configuration Cable (USB) • Installation sheet		



NETWORK SPECIFIC FEATURES

1 = Network connector, 2 = Baud rate,
3 = I/O data, 4 = Other, 5 = Amount of slaves / adapters

MASTER	
ASI	1 = 2*2p; 5,08 Phoenix Plug 2 = 167 kbit/s 3 = 248/186 (digital input/output) 4 = ASI version 3.0 5 = 62
DeviceNet	1 = 5*5p; 5,08 Phoenix Plug 2 = 125-500 kbit/s 3 = 512 byte IN/OUT 4 = DeviceNet 2.0 scanner 5 = 63
EtherNet/IP	1 = R,J45 2 = 10/100 Mbit/s 3 = 509/505 byte IN/OUT 4 = FTP Server, Web Server, SMTP Client 5 = 64
PROFIBUS	1 = DSUB9F 2 = Up to 12 Mb 3 = 512 byte IN/OUT 4 = Profibus DP (IEC 61158) 5 = 125
SLAVE	
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
CC-Link IE Field	1 = 2*RJ45 2 = Up to 1 Gbp/s 3 = 512 byte 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 = 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
FIPIO	1 = DSUB9M 2 = 1 Mbit/s 3 = 32 words IN/OUT 4 = Data exchange according to FIPIO Extended Device Profile, Class 0
Interbus RS485	1 = DSUB9F + DSUB9M 2 = 500 kbit/s, 2 Mbit/s 3 = 20 byte IN/OUT (process data), 512 bytes IN/OUT (with PCP) 4 = PCP V.2.0 (0 or 1 word)
Interbus Fibre Optic	1 = HFBR-2505C, HFBR-1505C 2 = 500 kbit/s, 2 Mbit/s 3 = 20 byte IN/OUT (process data), 512 bytes IN/OUT (with PCP) 4 = IEC874-2 and DIN47258
J1939	1 = 1*5p; 5,08 Phoenix Plug (Profibus / EtherNet/IP / Modbus-TCP) DSUB15M (Modbus RTU) 2 = - 3 = 2048 bytes IN/OUT (Modbus RTU), 248-500 (EtherNet/IP), Modbus TCP 499/495 bytes Profibus 4 = SAEJ1939
LonWorks	1 = 1*5p; 5,08 Phoenix Plug 2 = 78 kbit/s 3 = 256 network variables in/out 4 = Lonmark objects handling
Modbus Plus	1 = DSUB9F 2 = 1 Mbit/s 3 = 32 words IN/OUT (global data) 4 = Modbus Plus Host Firmware Rev. 77
Modbus RTU	1 = DSUB9F 2 = 1,2-57,6 kbit/s 3 = 256 registers in each direction 4 = RS232 and RS485
Modbus TCP	1 = 2*RJ45 2 = 10/100 Mbit/s 3 = 512 byte IN/OUT 4 = Supports EtherNet/IP
PROFIBUS	1 = DSUB9F 2 = Up to 12 Mbit/s 3 = Up to 244 bytes data using DP / Up to 512 bytes using DPV1 (Max 344 bytes in+out) 4 = Profibus DP (IEC 61158)
PROFINET-IO	1 = RJ45 2 = 10/100 Mbit/s 3 = 512 byte IN/OUT 4 = RT Communication and Cyclic data exchange
PROFINET IRT	1 = 2*RJ45 2 = 100 Mbit/s 3 = 220 byte IN/OUT 4 = RT Communication and integrated IRT switch functionality
PROFINET IRT Fibre Optics	1 = 2*SC-RJ FO connectors 2 = 100 Mbit/s 3 = 220 byte IN/OUT 4 = RT Communication and integrated IRT switch functionality

HMS Industrial Networks – Worldwide

HMS - Sweden (HQ)

Tel : +46 35 17 29 00 (Halmstad HQ)
Tel: +46 35 17 29 24 (Västerås office)
E-mail: 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 - China

Tel : +86 010 8532 3183
E-mail: cn-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

HMS - France

Tel: +33 368 368 034 (Mulhouse office)
E-mail: fr-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

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Anybus X-gateway INTERFACE #1

Anybus X-gateway Part number and price group Selection Matrix	Ethernet/rtu slave	Ethernet MBTCP slave	PROFINET-IO slave	EtherCAT slave	CC-Link IE Field slave**	PROFIBUS Slave	Devicenet Slave	CANopen Slave	Modbus RTU slave	CC Link	J1939***	LonWorks	Controlnet Slave	FIP Slave	Intrabus Slave Cu	Intrabus Slave Fo	Modbus Plus Slave	PROFINET IRT slave Cu	PROFINET IRT Slave Fo																							
PROFIBUS Master	AB7900	B	AB7929	B	AB7946	B	AB7998	B	AB7953	B	AB7901	B	AB7902	B	AB7907	B	AB7908	B	AB7910	B	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-		
Devicenet Master	AB7915	B C	AB7930	B	AB7947	B	AB7997	B	AB7955	B	AB7963	B	AB7911	B	AB7916	B	AB7917	B	AB7919	B	n.a.	-	n.a.	-	n.a.	-	AB7903	C	AB7904	C	AB7905	C	AB7906	C	AB7909	C	n.a.	-	n.a.	-		
ASI Master	AB7920	B	AB7931	B	AB7948	B	AB7998	B	n.a.	-	AB7921	B	AB7922	B	AB7927	B	AB7928	B	AB7930	B	n.a.	-	n.a.	-	n.a.	-	AB7912	C	AB7923	C	AB7924	C	AB7925	C	AB7926	C	AB7929	C	n.a.	-	n.a.	-
Ethernet Master	AB7968	B	AB7969	B	AB7970	B	AB7999	B	AB7957	B	AB7971	B	AB7972	B	AB7977	B	AB7978	B	AB7980	B	n.a.	-	n.a.	-	n.a.	-	AB7973	C	AB7974	C	AB7975	C	AB7976	C	AB7979	C	n.a.	-	n.a.	-		
CANopen Master	AB7906	*	AB7908	*	AB7907	*	AB7900	*	n.a.	-	AB7901	*	AB7902	*	AB7904	*	AB7905	*	AB7906	*	n.a.	-	n.a.	-	n.a.	-	AB7903	*	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-		
Modbus MBTCP Master	AB9006	*	AB9008	*	AB9007	*	AB9000	*	n.a.	-	AB9001	*	AB9002	*	AB9004	*	AB9005	*	AB9006	*	n.a.	-	n.a.	-	n.a.	-	AB9003	*	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-		
Ethernet/rtu slave	AB7931	A	AB7932	A	AB7949	A	AB7982	A	AB7956	A	AB7932	A	AB7933	A	AB7939	A	AB7939	A	AB7941	A	AB7965	A	AB7965	A	AB7942	C	AB7934	C	AB7935	C	AB7936	C	AB7937	C	AB7939	C	AB7940	C	AB7942	C	n.a.	-
Ethernet MBTCP slave	AB7932	A	AB7933	A	AB7950	A	AB7901	A	AB7958	A	AB7934	A	AB7935	A	AB7940	A	AB7941	A	AB7943	A	AB7943	A	AB7965	A	AB7944	C	AB7936	C	AB7937	C	AB7938	C	AB7939	C	AB7942	C	n.a.	-	n.a.	-		
PROFINET IO slave	AB7948	A	AB7950	A	AB7951	A	AB7904	A	AB7954	A	AB7952	A	AB7953	A	AB7958	A	AB7959	A	AB7961	A	AB7961	A	n.a.	-	n.a.	-	AB7954	C	AB7955	C	AB7956	C	AB7957	C	AB7959	C	AB7960	C	n.a.	-		
EtherCAT slave	AB7982	A	AB7901	A	AB7984	A	AB7900	A	AB7900	A	AB7982	A	AB7982	A	AB7981	A	AB7982	A	AB7984	A	AB7984	A	n.a.	-	n.a.	-	AB7987	C	AB7988	C	AB7989	C	AB7988	C	AB7989	C	AB7990	C	AB7993	C	n.a.	-
CC-Link IE Field slave**	AB7936	A	AB7938	A	AB7954	A	AB7981	A	n.a.	-	AB7955	A	AB7959	A	AB7963	A	AB7964	A	AB7964	A	AB7964	A	AB7965	A	AB7962	C	AB7945	C	AB7946	C	AB7947	C	AB7948	C	AB7949	C	AB7951	C	AB7913	C	AB7914	C
PROFIBUS Slave	AB7932	A	AB7934	A	AB7952	A	AB7958	A	AB7959	A	AB7943	A	AB7944	A	AB7949	A	AB7950	A	AB7951	A	AB7952	A	n.a.	-	n.a.	-	AB7945	C	AB7946	C	AB7947	C	AB7948	C	AB7949	C	AB7951	C	AB7913	C	AB7914	C
Devicenet Slave	AB7933	A	AB7935	A	AB7953	A	AB7983	A	AB7980	A	AB7944	A	AB7954	A	AB7959	A	AB7960	A	AB7962	A	AB7962	A	n.a.	-	n.a.	-	AB7955	C	AB7956	C	AB7957	C	AB7958	C	AB7959	C	AB7961	C	AB7940	C	n.a.	-
CANopen Slave	AB7938	A	AB7940	A	AB7958	A	AB7991	A	AB7983	A	AB7948	A	AB7959	A	AB7984	A	AB7985	A	AB7984	A	AB7984	A	n.a.	-	n.a.	-	AB7988	C	AB7976	C	AB7977	C	AB7978	C	AB7980	C	AB7986	C	AB7915	C	AB7916	C
Modbus RTU slave	AB7939	A	AB7941	A	AB7959	A	AB7992	A	AB7984	A	AB7950	A	AB7960	A	AB7985	A	AB7989	A	AB7990	A	AB7992	A	AB7912	A	See AB7909	C	AB7988	C	AB7976	C	AB7977	C	AB7984	C	AB7989	C	AB7990	C	AB7996	C	AB7916	C
CC Link slave	AB7941	A	AB7943	A	AB7961	A	AB7984	A	n.a.	-	AB7952	A	AB7962	A	AB7987	A	AB7988	A	AB7988	A	AB7988	A	n.a.	-	n.a.	-	AB7971	C	AB7979	C	AB7980	C	AB7982	C	AB7982	C	AB7984	C	n.a.	-	n.a.	-
LonWorks	AB7942	C	AB7944	C	AB7962	C	AB7956	C	n.a.	-	AB7953	C	AB7953	C	n.a.	-	n.a.	-	n.a.	-	AB7953	C	AB7953	C	AB7953	C	AB7953	C	AB7953	C	AB7953	C	AB7953	C	AB7953	C	AB7953	C	AB7953	C	n.a.	-
Controlnet Slave	AB7934	C	AB7936	C	AB7954	C	AB7987	C	n.a.	-	AB7945	C	AB7955	C	See AB7909	C	AB7988	C	AB7988	C	AB7988	C	n.a.	-	n.a.	-	AB7972	C	AB7972	C	AB7972	C	AB7972	C	AB7972	C	AB7972	C	AB7972	C	n.a.	-
FIP Slave	AB7935	C	AB7937	C	AB7955	C	AB7988	C	n.a.	-	AB7946	C	AB7956	C	AB7976	C	AB7977	C	AB7978	C	AB7978	C	n.a.	-	n.a.	-	AB7980	C	AB7980	C	AB7980	C	AB7980	C	AB7980	C	AB7980	C	AB7980	C	n.a.	-
Intrabus Slave Cu	AB7936	C	AB7938	C	AB7956	C	AB7989	C	n.a.	-	AB7947	C	AB7957	C	AB7983	C	AB7984	C	AB7984	C	AB7984	C	n.a.	-	n.a.	-	AB7986	C	AB7974	C	AB7975	C	AB7981	C	AB7982	C	AB7985	C	AB7914	C	n.a.	-
Intrabus Slave Fo	AB7937	C	AB7939	C	AB7957	C	AB7990	C	n.a.	-	AB7948	C	AB7958	C	AB7989	C	AB7989	C	AB7989	C	AB7989	C	n.a.	-	n.a.	-	AB7987	C	AB7975	C	AB7982	C	AB7988	C	AB7989	C	AB7991	C	n.a.	-	n.a.	-
Modbus plus	AB7940	C	AB7942	C	AB7960	C	AB7993	C	n.a.	-	AB7951	C	AB7961	C	AB7986	C	AB7990	C	AB7990	C	AB7990	C	n.a.	-	n.a.	-	AB7991	C	AB7978	C	AB7985	C	AB7991	C	AB7992	C	AB7993	C	n.a.	-	n.a.	-
PROFINET IRT slave Cu	AB7942	C	n.a.	-	n.a.	-	n.a.	-	n.a.	-	AB7913	C	AB7940	C	AB7915	C	AB7915	C	AB7915	C	AB7915	C	n.a.	-	n.a.	-	AB7941	C	n.a.	-	n.a.	-	AB7943	C	AB7943	C	n.a.	-	n.a.	-		
PROFINET IRT Slave Fo	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	AB7944	C	AB7940	C	AB7915	C	AB7915	C	AB7915	C	AB7915	C	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	AB7943	C	AB7943	C	n.a.	-	n.a.	-		

Anybus X-gateway INTERFACE #2

2014-04-07

Please note: There are three price groups for Anybus X-gateways. The correct price group is indicated on the right of each part number. (price group A, B and C). Go to the Networking Products Pricelist to get the prices A, B and C.

The abbreviation "n.a." indicates that the product is currently not available in the standard Anybus product offer from HMS.

* X-gateway CANopen and Modbus TCP have a different pricelist.

** X-gateway CC-Link IE Field and other new combinations are only available in the new X-gateway release with revision F from Q2-2014.

*** X-gateway J1939 and AB7967 are not included in the new X-gateway release and will remain unchanged.