

X-gateway™

The Anybus X-gateway family is a product line consisting 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 I/O data connectivity between almost any two industrial networks or PLC systems.

Master versions supporting:

AS-Interface
DeviceNet
EtherNet/IP
Profibus

Slave versions supporting:

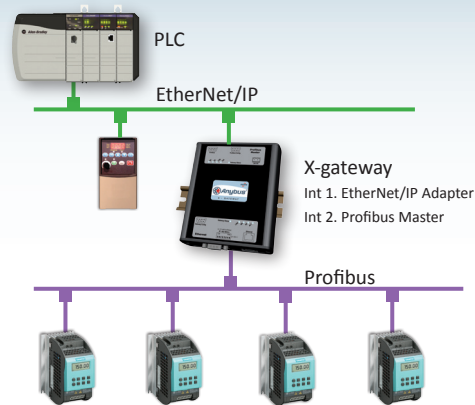
CANopen
CC-Link
ControlNet
DeviceNet
EtherCAT
EtherNet/IP
FIPIO
Interbus RS485 + Fiber Optic
J1939
Modbus Plus
Modbus RTU
Modbus-TCP
Profibus
Profinet IO
Profinet IRT

USB-RS232 configuration adapter
Part No: 019570

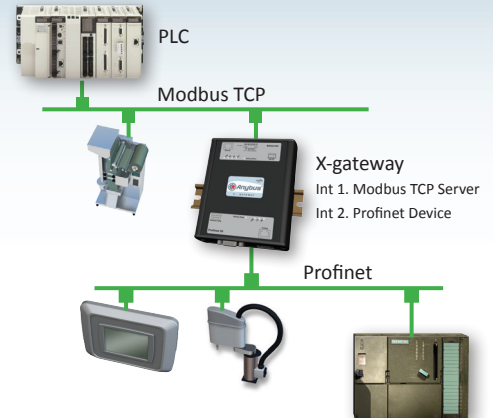


HMS provides a
full 3 year product
guarantee

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)
- Interconnects 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 metal housing with HazLoc, ATEX, CE and RoHS 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

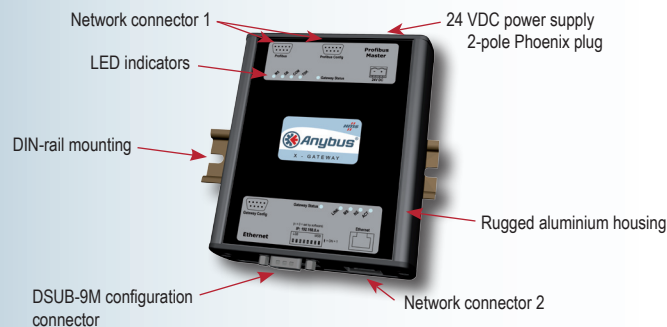
No programming skills are needed to set up the X-gateway.

The configuration of the X-gateway is made via the in-built configuration interface. For this purpose a PC with an installed terminal program (eg. Windows™ Hyper Terminal) can be connected via a serial RS-232 cable to the configuration port of the X-gateway. A terminal editor program is available for download at www.anybus.com

The easy-to-use configuration interface 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	500 g, 1,100 lb	
Dimensions (L-W-H)	126*110*42 mm, 4,96*4,33*1,65"	
Protection class	IP20, NEMA rating 1	
Enclosure material	Aluminium	
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	ANSI/ISA 12.12.01-2000
ATEX	Zone 2, Cat 2	EN60079-15 EN60079-11
CE	2004/108/EC	EN61000-6-4 EN61000-6-2
Electrical Characteristics		
Power	24 VDC +/- 10 %	
Current consumption	Max 300 mA, Typical 200 mA	
Hardware Characteristics		
Reverse voltage protection	Yes	
Short circuit protection	Yes	
Environmental Characteristics		
Operating temp	0 to 65 °C, 32 to 149 °F	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 10 m)	40 dB 30 MHz - 230 MHz 47 dB 30 MHz - 1 GHz	EN 55016-2-3
Single Pack Accessories		
• Resource CD • Configuration Cable (RS232) com Port • 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 = RJ45 2 = 10/100 Mbit/s 3 = 509/505 IN/OUT 4 = FTP Server, Web Server, SMTP Client 5 = 64
Profibus	1 = DSUB9F 2 = Up to 12 Mb 3 = 512 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
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 = 509/505 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,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 = 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 = 244 IN/OUT (416 total) 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

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Anybus X-gateway INTERFACE #1

Anybus X-gateway Part number and price group Selection Matrix	Ethernet/IP slave	Ethernet MBTCP slave	Profinet IO Slave	EtherCAT	Profibus Slave	DeviceNet Slave	CANopen Slave	Modbus RTU slave	CC Link	J1939	LonWorks	ControlNet Slave	FIP Slave	Interbus Slave Cu	Interbus Slave Fo	Modbus Plus Slave	Profinet IRT slave					
Profibus Master	AB7800	B	AB7829	B	AB7846	B	AB7896	B	AB7801	B	AB7802	B	AB7803	B	AB7804	C	AB7805	C	AB7806	C	n.a.	-
DeviceNet Master	AB7916	B	AB7930	B	AB7947	B	AB7967	B	AB7968	B	AB7911	B	AB7812	C	AB7813	C	AB7814	C	AB7815	C	n.a.	-
ASi Master	AB7820	B	AB7831	B	AB7848	B	AB7898	B	AB7821	B	AB7822	B	AB7823	C	AB7824	C	AB7825	C	AB7826	C	n.a.	-
Ethernet/IP Master	AB7668	B	AB7669	B	AB7670	B	AB7699	B	AB7671	B	AB7672	B	AB7673	C	AB7674	C	AB7675	C	AB7676	C	n.a.	-
CANopen Master	AB7306	*	AB7308	*	AB7307	*	AB7300	*	AB7301	*	AB7302	*	AB7303	*	n.a.	-	n.a.	-	n.a.	-	AB7309	*
Modbus MBTCP Master	AB9006	*	AB9008	*	AB9007	*	AB9000	*	AB9001	*	AB9002	*	AB9003	*	n.a.	-	n.a.	-	n.a.	-	n.a.	-
Ethernet/IP slave	AB7831	A	AB7832	A	AB7849	A	AB7862	A	AB7832	A	AB7833	A	AB7834	C	AB7834	C	AB7835	C	AB7836	C	n.a.	-
Ethernet MBTCP slave	AB7832	A	AB7833	A	AB7850	A	AB7901	A	AB7834	A	AB7835	A	AB7836	C	AB7836	C	AB7837	C	AB7838	C	n.a.	-
Profinet IO slave	AB7849	A	AB7850	A	AB7851	A	AB7864	A	AB7852	A	AB7853	A	AB7854	C	AB7854	C	AB7855	C	AB7856	C	n.a.	-
EtherCAT	AB7882	A	AB7901	A	AB7884	A	AB7900	A	AB7885	A	AB7886	A	AB7887	C	AB7888	C	AB7889	C	AB7890	C	n.a.	-
Profibus Slave	AB7832	A	AB7834	A	AB7852	A	AB7885	A	AB7843	A	AB7844	A	AB7845	C	AB7845	C	AB7846	C	AB7847	C	AB7848	C
DeviceNet Slave	AB7833	A	AB7835	A	AB7853	A	AB7866	A	AB7844	A	AB7854	A	AB7855	C	AB7855	C	AB7856	C	AB7857	C	AB7858	C
CANopen Slave	AB7838	A	AB7840	A	AB7858	A	AB7861	A	AB7849	A	AB7859	A	AB7860	C	AB7860	C	AB7861	C	AB7862	C	n.a.	-
Modbus RTU slave	AB7839	A	AB7841	A	AB7859	A	AB7862	A	AB7850	A	AB7860	A	AB7861	C	AB7861	C	AB7862	C	AB7863	C	n.a.	-
CC Link	AB7841	A	AB7843	A	AB7861	A	AB7894	A	AB7852	A	AB7862	A	AB7863	C	AB7863	C	AB7864	C	AB7865	C	n.a.	-
J1939	AB7865	A	AB7865	A	n.a.	-	n.a.	-	AB7615	A	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-
LonWorks	AB7842	C	AB7844	C	AB7862	C	AB7895	C	AB7853	C	AB7863	C	AB7872	C	AB7880	C	AB7887	C	AB7893	C	n.a.	-
ControlNet Slave	AB7834	C	AB7836	C	AB7854	C	AB7887	C	AB7845	C	AB7855	C	AB7864	C	AB7864	C	AB7865	C	AB7866	C	AB7867	C
FIP Slave	AB7835	C	AB7837	C	AB7855	C	AB7888	C	AB7846	C	AB7856	C	AB7865	C	AB7865	C	AB7866	C	AB7867	C	AB7868	C
Interbus Slave Cu	AB7836	C	AB7838	C	AB7856	C	AB7869	C	AB7847	C	AB7857	C	AB7866	C	AB7866	C	AB7867	C	AB7868	C	AB7869	C
Interbus Slave Fo	AB7837	C	AB7839	C	AB7857	C	AB7890	C	AB7848	C	AB7858	C	AB7867	C	AB7867	C	AB7868	C	AB7869	C	AB7870	C
Modbus Plus	AB7840	C	AB7842	C	AB7860	C	AB7893	C	AB7851	C	AB7861	C	AB7870	C	AB7870	C	AB7871	C	AB7872	C	n.a.	-
Profinet IRT slave	n.a.	-	n.a.	-	n.a.	-	n.a.	-	AB7913	C	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-	n.a.	-
Please note: There are three price groups for Anybus X-gateways. The correct price group is indicated to 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.																						

Anybus X-gateway INTERFACE #2

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