

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

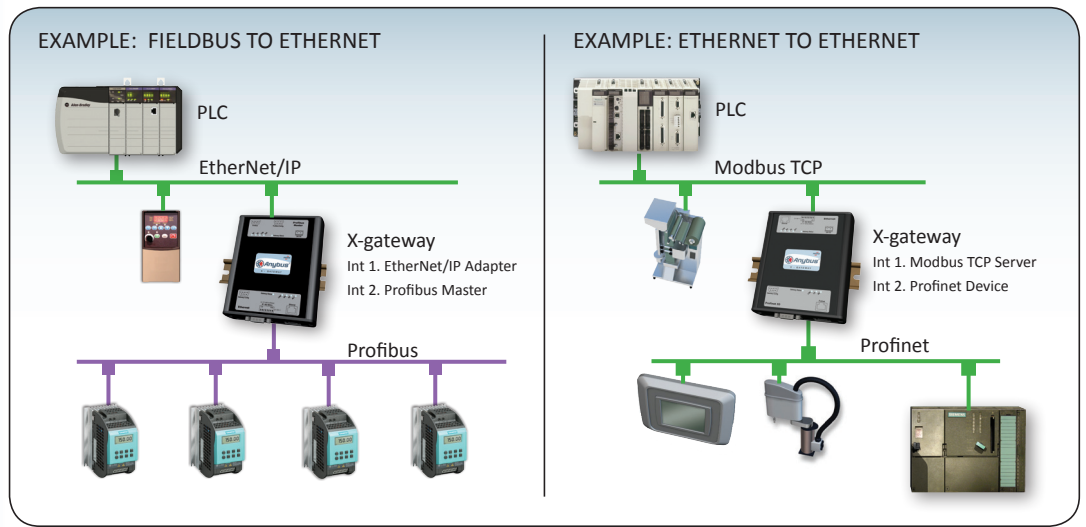
Slave versions supporting:

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



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.

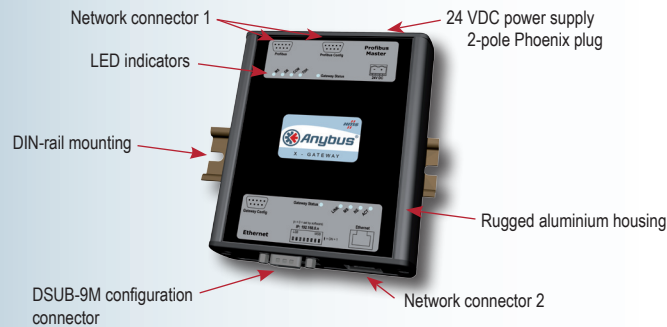
The configuration of the X-gateway is made via the in-built configuration interface. For this purpose a PC with an installed terminal program (eg. Windows™ Hyper Terminal) can be connected via a serial RS-232 cable to the configuration port of the X-gateway. A terminal editor program is available for 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	Anybus X-gateway INTERFACE #2																
	Ethernet slave	Ethernet MBTCP slave	ProfNetIO 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	ProfNet IFT slave
Profibus Master	AB7600	AB7629	AB7646	AB7666	AB7601	AB7602	AB7607	AB7608	AB7610	B	n.a.	AB7603	AB7604	AB7605	AB7606	AB7609	n.a.
Devicenet Master	AB7916	AB7630	AB7647	AB7667	AB7663	AB7811	AB7816	AB7817	AB7619	B	n.a.	AB7612	AB7813	AB7814	AB7815	AB7818	n.a.
ASi Master	AB7620	AB7631	AB7648	AB7668	AB7621	AB7622	AB7627	AB7623	AB7630	B	n.a.	AB7623	AB7624	AB7625	AB7626	AB7629	n.a.
Ethernet Master	AB7668	AB7669	AB7670	AB7689	AB7671	AB7672	AB7677	AB7678	AB7680	B	n.a.	AB7673	AB7674	AB7675	AB7676	AB7679	n.a.
CANopen Master	AB7306	AB7308	AB7307	AB7300	AB7301	AB7302	AB7304	AB7305	n.a.	n.a.	n.a.	AB7309	n.a.	n.a.	n.a.	n.a.	AB7309
Modbus MBTCP Master	AB9006	AB9008	AB9007	AB9000	AB9001	AB9002	AB9004	AB9005	n.a.	n.a.	n.a.	AB9003	n.a.	n.a.	n.a.	n.a.	n.a.
Ethernet slave	AB7631	AB7632	AB7649	AB7662	AB7632	AB7633	AB7638	AB7639	AB7641	A	n.a.	AB7634	AB7635	AB7636	AB7637	AB7640	n.a.
Ethernet MBTCP slave	AB7632	AB7633	AB7650	AB7650	AB7634	AB7635	AB7640	AB7641	AB7643	A	AB7644	AB7636	AB7637	AB7638	AB7639	AB7642	n.a.
ProfNet IO slave	AB7649	AB7650	AB7651	AB7651	AB7652	AB7653	AB7658	AB7659	AB7651	A	n.a.	AB7654	AB7655	AB7656	AB7657	AB7660	n.a.
EtherCAT	AB7682	AB7901	AB7684	AB7900	AB7685	AB7686	AB7691	AB7692	AB7694	A	n.a.	AB7687	AB7688	AB7689	AB7690	AB7693	n.a.
Profibus Slave	AB7632	AB7634	AB7634	AB7632	AB7633	AB7634	AB7649	AB7650	AB7652	A	AB7615	AB7645	AB7646	AB7647	AB7648	AB7651	AB7913
Devicenet Slave	AB7633	AB7635	AB7635	AB7633	AB7634	AB7634	AB7639	AB7660	AB7682	A	n.a.	AB7655	AB7656	AB7657	AB7658	AB7661	n.a.
CANopen Slave	AB7638	AB7640	AB7636	AB7631	AB7649	AB7639	AB7694	AB7695	AB7697	A	n.a.	AB7689	AB7676	AB7683	AB7689	AB7696	AB7915
Modbus RTU slave	AB7639	AB7641	AB7639	AB7632	AB7630	AB7680	AB7695	AB7699	AB7621	A	See AB700	AB7689	AB7677	AB7684	AB7690	AB7620	n.a.
CC Link	AB7641	AB7643	AB7661	AB7664	AB7652	AB7662	AB7697	AB7621	AB7626	A	n.a.	AB7627	AB7679	AB7666	AB7692	AB7624	n.a.
J1939	AB7665	AB7665	n.a.	n.a.	AB7615	n.a.	n.a.	AB7612	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LonWorks	AB7642	AB7644	AB7662	AB7635	AB7633	AB7683	AB7698	Pre AB700	AB7627	C	n.a.	AB7628	AB7680	AB7687	AB7693	AB7625	n.a.
ControlNet Slave	AB7634	AB7636	AB7654	AB7667	AB7645	AB7655	AB7668	AB7669	AB7671	C	n.a.	AB7664	AB7665	AB7666	AB7667	AB7670	n.a.
FIP Slave	AB7635	AB7637	AB7655	AB7668	AB7646	AB7656	AB7676	AB7677	AB7679	C	n.a.	AB7665	AB7673	AB7674	AB7675	AB7678	n.a.
Interbus Slave Cu	AB7638	AB7638	AB7656	AB7669	AB7647	AB7657	AB7683	AB7684	AB7686	C	n.a.	AB7666	AB7674	AB7681	AB7682	AB7685	AB7914
Interbus Slave Fo	AB7637	AB7639	AB7657	AB7690	AB7648	AB7658	AB7689	AB7690	AB7692	C	n.a.	AB7667	AB7675	AB7682	AB7688	AB7691	n.a.
Modbus plus	AB7640	AB7642	AB7680	AB7693	AB7653	AB7661	AB7686	AB7620	AB7624	C	n.a.	AB7670	AB7678	AB7685	AB7691	AB7623	n.a.
ProfNet IFT slave	n.a.	n.a.	n.a.	n.a.	AB7913	n.a.	AB7915	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	AB7914	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.