

# 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

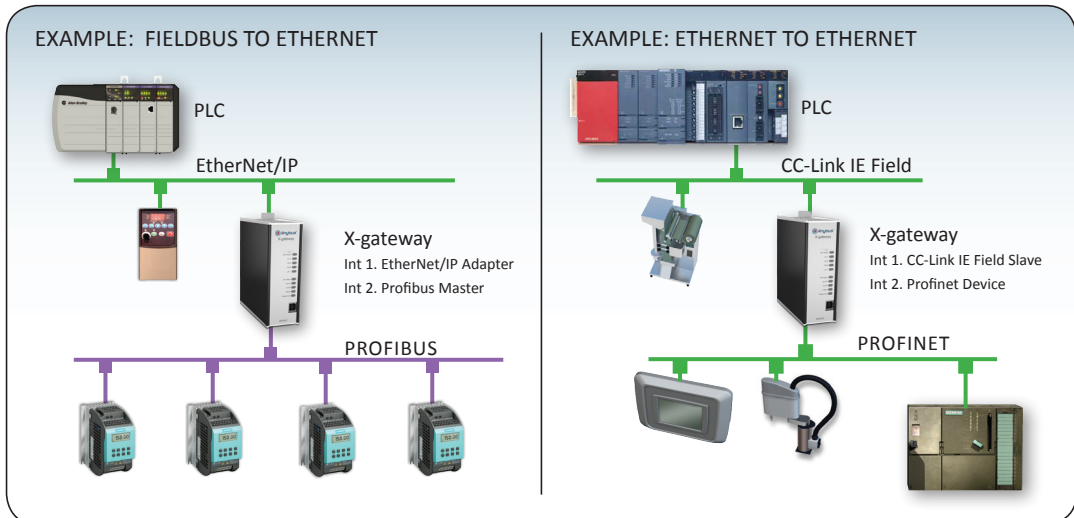
Anybus X-gateways enable connectivity between almost any two industrial networks or PLC systems.

## 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  
Modbus Plus  
Modbus RTU  
Modbus-TCP  
PROFIBUS  
PROFINET IO  
PROFINET IRT Copper + Fibre Optic



## 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](http://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](http://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.

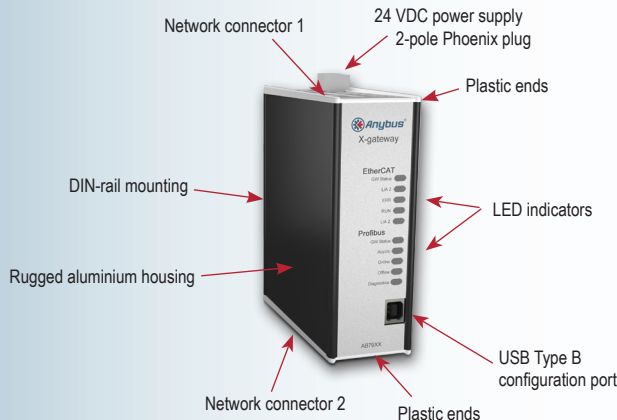


HMS provides a full 3 year product guarantee



## 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: E2214107 UL is pending	UL 508 Ind. Cont. Eq.
CE	2004/108/EC	EN61000-6-4 EN61000-6-2
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	Yes	
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 30 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	
<b>ASI</b>	1 = 2*2p; 5,08 Phoenix Plug 2 = 167 kbit/s 3 = 248/186 (digital input/output) 4 = ASI version 3.0 5 = 62
<b>DeviceNet</b>	1 = 5*5p; 5,08 Phoenix Plug 2 = 125-500 kbit/s 3 = 512 byte IN/OUT 4 = DeviceNet 2.0 scanner 5 = 63
<b>EtherNet/IP</b>	1 = RJ45 2 = 10/100 Mbit/s 3 = 509/505 byte IN/OUT 4 = FTP Server, Web Server, SMTP Client 5 = 64
<b>PROFIBUS</b>	1 = DSUB9F 2 = Up to 12 Mb 3 = 512 byte IN/OUT 4 = Profibus DP (IEC 61158) 5 = 125
SLAVE	
<b>CANopen</b>	1 = DSUB9M 2 = Up to 1 Mbit/s 3 = 512 byte IN/OUT 4 = Supports profile CIA DS301 V4.02
<b>CC-Link</b>	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
<b>CC-Link IE Field</b>	1 = 2*RJ45 2 = Up to 1 Gbp/s 3 = 512 byte IN/OUT 4 = CC-Link IE Field Network intelligent device station
<b>ControlNet</b>	1 = 2*BNC Coax + RJ45 (NAP) 2 = 5 Mbit/s 3 = 450 byte IN/OUT 4 = Communications adapter, profile n. 12
<b>DeviceNet</b>	1 = 1*5p; 5,08 Phoenix Plug 2 = 125-500 kbit/s 3 = 512 byte IN/OUT 4 = Communications adapter, profile n. 12
<b>EtherCAT</b>	1 = 2*RJ45 2 = 100 Mbit/s 3 = 512 byte IN/OUT 4 = DS301 V4.02 compliant, 4 FMMU Channels
<b>EtherNet/IP</b>	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
<b>FIPIO</b>	1 = DSUB9M 2 = 1 Mbit/s 3 = 32 words IN/OUT 4 = Data exchange according to FIPIO Extended Device Profile, Class 0
<b>Interbus RS485</b>	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)
<b>Interbus Fibre Optic</b>	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
<b>J1939</b>	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
<b>LONworks</b>	1 = 1*5p; 5,08 Phoenix Plug 2 = 78 kbit/s 3 = 256 network variables in/out 4 = Lonmark objects handling
<b>Modbus Plus</b>	1 = DSUB9F 2 = 1 Mbit/s 3 = 32 words IN/OUT (global data) 4 = Modbus Plus Host Firmware Rev. 77
<b>Modbus RTU</b>	1 = DSUB9F 2 = 1,2-57,6 kbit/s 3 = 256 registers in each direction 4 = RS232 and RS485
<b>Modbus TCP</b>	1 = 2*RJ45 2 = 10/100 Mbit/s 3 = 512 byte IN/OUT 4 = Supports EtherNet/IP
<b>PROFIBUS</b>	1 = DSUB9F 2 = Up to 12 Mbit/s 3 = 344 byte IN/OUT (416 total) 4 = Profibus DP (IEC 61158)
<b>PROFINET-IO</b>	1 = RJ45 2 = 10/100 Mbit/s 3 = 512 byte IN/OUT 4 = RT Communication and Cyclic data exchange
<b>PROFINET IRT</b>	1 = 2*RJ45 2 = 100 Mbit/s 3 = 220 byte IN/OUT 4 = RT Communication and integrated IRT switch functionality
<b>PROFINET IRT Fibre Optics</b>	1 = 2*SC-RJ FO connectors 2 = 100 Mbit/s 3 = 220 byte IN/OUT 4 = RT Communication and integrated IRT switch functionality

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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	AB7929	AB7946	AB7998	AB7953	AB7901	AB7902	AB7907	AB7908	AB7910	n.a.	n.a.	AB7903	AB7904	AB7905	AB7906	AB7909	n.a.	n.a.
Devicenet Master	AB7915	AB7930	AB7947	AB7997	AB7955	AB7963	AB7911	AB7916	AB7917	AB7919	n.a.	n.a.	AB7912	AB7913	AB7914	AB7915	AB7918	n.a.	n.a.
ASI Master	AB7920	AB7931	AB7948	AB7998	n.a.	AB7921	AB7922	AB7927	AB7928	AB7930	n.a.	n.a.	AB7923	AB7924	AB7925	AB7926	AB7929	n.a.	n.a.
Ethernet Master	AB7968	AB7969	AB7970	AB7999	n.a.	AB7971	AB7972	AB7977	AB7978	AB7980	n.a.	n.a.	AB7973	AB7974	AB7975	AB7976	AB7979	n.a.	n.a.
CANopen Master	AB7906	AB7908	AB7907	AB7900	n.a.	AB7901	AB7902	AB7904	AB7905	n.a.	n.a.	n.a.	AB7903	n.a.	n.a.	n.a.	n.a.	AB7909	n.a.
Modbus MBTCP Master	AB9006	AB9008	AB9007	AB9000	n.a.	AB9001	AB9002	AB9004	AB9005	AB9009	n.a.	n.a.	AB9003	n.a.	n.a.	n.a.	n.a.	AB9009	n.a.
Ethernet/rtu slave	AB7931	AB7932	AB7949	AB7982	AB7956	AB7932	AB7933	AB7939	AB7939	AB7941	AB7965	AB7942	AB7934	AB7935	AB7936	AB7937	AB7940	AB7942	n.a.
Ethernet MBTCP slave	AB7932	AB7933	AB7950	AB7901	AB7956	AB7934	AB7935	AB7940	AB7941	AB7943	AB7965	AB7944	AB7936	AB7937	AB7938	AB7939	AB7942	n.a.	n.a.
PROFINET IO slave	AB7949	AB7950	AB7951	AB7904	AB7954	AB7952	AB7953	AB7958	AB7959	AB7961	n.a.	AB7944	AB7956	AB7957	AB7958	AB7959	AB7960	n.a.	n.a.
EtherCAT slave	AB7982	AB7901	AB7984	AB7900	AB7961	AB7982	AB7988	AB7991	AB7992	AB7984	n.a.	AB7983	AB7985	AB7988	AB7989	AB7990	AB7993	n.a.	n.a.
CC-Link IE Field slave**	AB7956	AB7958	AB7954	AB7961	n.a.	AB7959	AB7960	AB7963	AB7964	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
PROFIBUS Slave	AB7932	AB7934	AB7952	AB7958	AB7959	AB7943	AB7944	AB7949	AB7950	AB7952	AB7915	AB7953	AB7945	AB7946	AB7947	AB7948	AB7951	AB7913	AB7914
EtherCAT Slave	AB7982	AB7901	AB7984	AB7900	AB7961	AB7982	AB7988	AB7991	AB7992	AB7984	n.a.	AB7983	AB7985	AB7988	AB7989	AB7990	AB7993	n.a.	n.a.
CC-Link IE Field slave**	AB7956	AB7958	AB7954	AB7961	n.a.	AB7959	AB7960	AB7963	AB7964	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
PROFIBUS Slave	AB7932	AB7934	AB7952	AB7958	AB7959	AB7943	AB7944	AB7949	AB7950	AB7952	n.a.	AB7983	AB7945	AB7946	AB7947	AB7948	AB7951	AB7913	AB7914
EtherCAT Slave	AB7982	AB7901	AB7984	AB7900	AB7961	AB7982	AB7988	AB7991	AB7992	AB7984	n.a.	AB7983	AB7985	AB7988	AB7989	AB7990	AB7993	n.a.	n.a.
CC-Link IE Field slave**	AB7956	AB7958	AB7954	AB7961	n.a.	AB7959	AB7960	AB7963	AB7964	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Devicenet Slave	AB7933	AB7935	AB7953	AB7988	AB7960	AB7944	AB7944	AB7949	AB7950	AB7952	n.a.	AB7983	AB7945	AB7946	AB7947	AB7948	AB7951	AB7913	AB7914
CANopen Slave	AB7938	AB7940	AB7959	AB7991	AB7963	AB7949	AB7950	AB7959	AB7960	AB7962	n.a.	AB7988	AB7968	AB7969	AB7970	AB7971	AB7974	AB7915	AB7916
Modbus RTU slave	AB7939	AB7941	AB7959	AB7992	AB7964	AB7950	AB7950	AB7959	AB7960	AB7962	AB7912	See AB7909	AB7968	AB7977	AB7978	AB7979	AB7982	n.a.	n.a.
CC Link slave	AB7941	AB7943	AB7961	AB7964	n.a.	AB7952	AB7952	AB7957	AB7958	AB7960	n.a.	AB7927	AB7971	AB7979	AB7986	AB7982	AB7924	n.a.	n.a.
LonWorks	AB7942	AB7944	AB7962	AB7995	n.a.	AB7953	n.a.	n.a.	AB7912	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
J1939***	AB7965	AB7965	n.a.	n.a.	n.a.	AB7915	n.a.	n.a.	AB7912	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Controlnet Slave	AB7934	AB7936	AB7954	AB7997	n.a.	AB7955	AB7955	See AB7909	AB7912	AB7927	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FIP Slave	AB7935	AB7937	AB7955	AB7988	n.a.	AB7946	AB7946	AB7951	AB7952	AB7954	n.a.	AB7922	AB7972	AB7980	AB7985	AB7987	AB7990	n.a.	n.a.
Intrabus Slave Cu	AB7936	AB7938	AB7956	AB7989	n.a.	AB7947	AB7947	AB7952	AB7953	AB7955	n.a.	AB7922	AB7972	AB7980	AB7985	AB7987	AB7990	n.a.	n.a.
Intrabus Slave Fo	AB7937	AB7939	AB7957	AB7990	n.a.	AB7948	AB7948	AB7953	AB7954	AB7956	n.a.	AB7922	AB7972	AB7980	AB7985	AB7987	AB7990	n.a.	n.a.
Modbus Plus	AB7940	AB7942	AB7960	AB7993	n.a.	AB7951	AB7951	AB7956	AB7957	AB7959	n.a.	AB7922	AB7972	AB7980	AB7985	AB7987	AB7990	n.a.	n.a.
PROFINET IRT slave Fo	AB7942	n.a.	n.a.	n.a.	n.a.	AB7953	n.a.	n.a.	AB7950	n.a.	n.a.	n.a.	AB7941	n.a.	n.a.	n.a.	n.a.	AB7922**	n.a.

## Anybus X-gateway INTERFACE #2

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.