

## X-gateway™

The Anybus X-gateway family consists of over 200 gateways which connect any two industrial networks.

The robust Anybus X-gateways allow 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



















## Master versions supporting:

AS-Interface DeviceNet EtherNet/IP PROFIBUS

## Slave versions supporting:

CANopen

CC-Link

CC-Link CC-Link IE Field

ControlNet

DeviceNet

EtherCAT

EtherNet/IP

FIPIO

Interbus RS485 + Fiber Optic

J1939\*

LonWorks

Modbus Plus

Modbus RTU

Modbus-TCP

**POWERLINK** 

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

## PLC EtherNet/IP X-gateway Int 1. EtherNet/IP Adapter Int 2. Profibus Master PROFIBUS

# PLC CC-Link IE Field X-gateway Int 1. CC-Link IE Field Slave Int 2. Profinet Device PROFINET

## Features and Benefits

- Any easy 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 is needed to set up the X-gateway.

The configuration is made using the Anybus Configuration Manager which is included in the product. You install this Windows tool 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.



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 EN 50022 Mounting DIN rail (35•7,5/15) Certifications File number: E203225 UL 508 Ind. Cont. Eq. UL (File number E214107 for PROFINET IRT Copper) Hazardous Locations CLASS 1, DIVISION 2, GROUPS A, B, C AND D, T4 ISA 12.12.01 ATEX Zone 2. Cat 2 FN 60079-(Excluding PROFINET IRT Copper) 0:2012+A11:2013 EN 60079-15:2010 EN61000-6-4 (2007) CE 2014/30/EU (EMC) EN61000-6-2 (2005) **Electrical Characteristics** 24 VDC +/- 20 % Power Current consumption | Max 400mA at 24VDC, Typical 200 mA at 24VDC Hardware Characteristics Reverse voltage protection Yes Short circuit protection **Environmental Characteristics** Operating temp -25 to 65 °C -13 to 149 °F (for all other networks) IFC 68-2-1 IFC -25 to 50 °C, -13 to 122 °F (only for Profinet IRT Fibre Optic) 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 10 V/m 80 MHz - 1 GHz 3 V/m 1,4 GHz - 2,0 GHz Electromagnetic RF fields EN 61000-4-3 1 V/m 2,0 GHz - 2,7 GHz Fast Transients +/- 1 kV FN 61000-4-4 Surge protection +/- 1 kV EN 61000-4-5 EN 61000-4-6 RF conducted interference 50 dB 30 MHz - 230 MHz 57 dB 30 MHz - 1 GHz Emission (at 3 m) EN 55016-2-3 **Single Pack Accessories** Configuration Cable (USB) • Installation sheet



## NETWORK SPECIFIC FEATURES

1 = Network connector, 2 = Baud rate,

<b>3</b> = I/O data, <b>4</b> = Other,	5 = Amount of slaves / adapters										
	MASTER										
ASI	<b>1</b> = 2*2p; 5,08 Phoenix Plug <b>2</b> = 167 kbit/s <b>3</b> = 248/186 (digital input/output) <b>4</b> = ASI version 3.0 <b>5</b> = 62										
DeviceNet	<b>1</b> = 5*5p; 5.08 Phoenix Plug <b>2</b> = 125-500 kbit/s <b>3</b> = 512 byte IN/OUT <b>4</b> = DeviceNet 2.0 scanner <b>5</b> = 63										
EtherNet/IP	<b>1</b> = RJ45 <b>2</b> = 10/100 Mbit/s <b>3</b> = 509/505 byte IN/OUT <b>4</b> = FTP Server, Web Server, SMTP Client <b>5</b> = 64										
PROFIBUS	<b>1</b> = DSUB9F <b>2</b> = Up to 12 Mb <b>3</b> = 512 byte IN/OUT <b>4</b> = Profibus DP (IEC 61158) <b>5</b> = 125										
	SLAVE										
CANopen	<b>1</b> = DSUB9M <b>2</b> = Up to 1 Mbit/s <b>3</b> = 512 byte IN/OUT <b>4</b> = Supports profile CIA DS301 V4.02										
CC-Link	<b>1</b> = 1*5p; 5.08 Phoenix Plug <b>2</b> = Up to 10 Mbit/s <b>3</b> = 896 IO points, 128 word IN/OUT <b>4</b> = 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	<b>1</b> = 1*5p; 5.08 Phoenix Plug <b>2</b> = 125-500 kbit/s <b>3</b> = 512 byte IN/OUT <b>4</b> = 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	<b>1</b> = 2*R,145 <b>2</b> = 10/100 Mbit/s <b>3</b> = 509/505 byte IN/OUT <b>4</b> = 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	<b>1</b> = DSUB9F <b>2</b> = 1,2-57,6 kbit/s <b>3</b> = 256 registers in each direction <b>4</b> = RS232 and RS485										
Modbus TCP	<b>1</b> = 2*RJ45 <b>2</b> = 10/100 Mbit/s <b>3</b> = 512 byte IN/OUT <b>4</b> = Supports EtherNet/IP										
POWERLINK	<b>1</b> = 2*RJ45 <b>2</b> = 100 Mbit/s <b>3</b> = 254 byte IN/OUT										
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 = 512 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										

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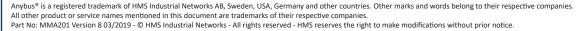
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	Slaves															N	la	st	ers								
J1939	Modbus RTU	Modbus Plus	Interbus Fiber	Interbus Copper	FP	ControlNet	LONWorks	CANopen	CC Link	CC-Link IE Field	EtherCAT	POWERLINK	PROFINET IRT (V2.3X) Copper	PROFINET IRT (V2.2X) Fiber	PROFINET-IO (V2.2X) Copper	PROFIBUS	Modbus TCP	DeviceNet	Ethernet/IP	Modbus TCP	CANopen	Ethernet/IP	ASI	DeviceNet	PROFIBUS	Anybus X-gateway Ordercode Matrix	
AB7665	AB7839	AB7840	AB7837	AB7836	AB7835	AB7834	AB7842	AB7838	AB7841	AB7956	AB7682	AB7525	AB7504	AB7980	AB7649	AB7832	AB7632	AB7833	AB7831	AB9006	AB7306	AB7668	AB7820	AB7916 AB7607	AB7800	Ethernet/IP	
n.a.	AB7860	AB7861	AB7858	AB7857	AB7856	AB7855	AB7863	AB7859	AB7862	AB7960	AB7686	AB7530	AB7509	n.a.	AB7653	AB7844	AB7635	AB7854	AB7833	AB9002 AB9008	AB7302	AB7672	AB7822	AB7811	AB7802	DeviceNet	
AB7665	AB7641	AB7642	AB7639	AB7638	AB7637	AB7636	AB7644	AB7640	AB7643	AB7958	AB7901	AB7526	AB7505	AB7979	AB7650	AB7634	AB7633	AB7635	AB7632	AB9008	AB7308	AB7669	AB7631	AB7630	AB7629	Modbus TCP	
AB7615	AB7850	AB7851	AB7848	AB7847	AB7846 AB7655	AB7845	AB7853	AB7849	AB7852	AB7959	AB7685	AB7529	AB7508	AB7944	AB7652	AB7843	AB7634	AB7844	AB7832	AB9001	AB7301	AB7671	AB7821	AB7663	AB7801	PROFIBUS	
n.a.	AB7659	AB7660	AB7657	AB7656	AB7655	AB7654	AB7662	AB7658	AB7661	AB7954	AB7684	n.a.	n.a.	n.a.	AB7651	AB7652	AB7650	AB7653	AB7649	AB9007	AB7307	AB7670	AB7648	AB7647	AB7646	PROFINET-IO (V2.2X) Copper	
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	AB7943	n.a.	n.a.	AB7970	n.a.	n.a.	AB7972	n.a.	AB7944	AB7979	n.a.	AB7980	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	PROFINET IRT (V2.2X) Fiber	
n.a.	AB7511	AB7518	AB7517	AB7516	AB7515	AB7514	AB7513	AB7510	AB7512	AB7507	AB7506	AB7540	AB7519	n.a.	n.a.	AB7508	AB7505	AB7509	AB7504	n.a.	AB7329	AB7503	AB7502	AB7501	AB7500	PROFINET IRT (V2.3X) Copper	
n.a.	AB7532	AB7539	n.a.	n.a.	n.a.	AB7535	n.a.	AB7531	AB7533	AB7528	AB7527	AB7544	AB7540	n.a.	n.a.	AB7529	AB7526	AB7530	AB7525	n.a.	n.a.	AB7524	n.a.	AB7522	AB7521	POWERLINK	
n.a.	AB7692	AB7693	AB7690	AB7689	AB7688	AB7687	AB7695	AB7691	AB7694	AB7961	AB7900	AB7527	AB7506 AB7507	AB7970	AB7684	AB7685	AB7901 AB7958	AB7686	AB7682	AB9000	AB7300	AB7699	AB7698	AB7697	AB7696	EtherCAT	
n.a.	AB7964	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	AB7963	n.a.	n.a.	AB7961	AB7528		n.a.	AB7954	AB7959		AB7960	AB7956	n.a.	n.a.	AB7957	n.a.	AB7955 .	AB7953	CC-Link IE Field	Slaves
n.a.	AB7621	AB7624	AB7892	AB7886	AB7879	AB7871	AB7627	AB7897	AB7626	n.a.	AB7694	AB7533	AB7512	n.a.	AB7661	AB7852	AB7643	AB7862	AB7841	AB9009	n.a.	AB7680	AB7830	AB7819	AB7810	CC Link	es
n.a.	AB7895	AB7896	AB7889	AB7883	AB7876	AB7868	AB7898	AB7894	AB7897	AB7963	AB7691	AB7531	AB7510	AB7943	AB7658	AB7849	AB7640	AB7859	AB7838	AB9004	AB7304	AB7677	AB7827	AB7816	AB7807	CANopen	
n.a.	AB7009	AB7625	AB7893	AB7887	AB7880	AB7872	AB7628	AB7898	AB7627	n.a.	AB7695	n.a.	AB7513	n.a.	AB7662	AB7853	AB7644	AB7863	AB7842	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	LONWorks	
n.a.	AB7869	AB7870	AB7867	AB7866	AB7865	AB7864	AB7872	AB7868	AB7871	n.a.	AB7687	AB7535	AB7514	n.a.	AB7654	AB7845	AB7636	AB7855	AB7834	AB9003	AB7303	AB7673	AB7823	AB7812	AB7803	ControlNet	
n.a.	AB7877	AB7878	AB7875	AB7874	AB7873	AB7865	AB7880	AB7876	AB7879	n.a.	AB7688	n.a.	AB7515	n.a.	AB7655	AB7846	AB7637	AB7856	AB7835	n.a.	n.a.	AB7674	AB7824	AB7813	AB7804	FIP	
n.a.	AB7884	AB7885	AB7882	AB7881	AB7874	AB7866	AB7887	AB7883	AB7886	n.a.	AB7689	n.a.	AB7516	n.a.	AB7656	AB7847	AB7638	AB7857	AB7836	n.a.	n.a.	AB7675	AB7825	AB7814	AB7805	Interbus Copper	
n.a.	AB7890 /	AB7891 /	AB7888	AB7882 /	AB7875 AB7878	AB7867	AB7893 /	AB7889 AB7896	AB7892 /	n.a.	AB7690	n.a.	AB7517 /	n.a.	AB7657	AB7848 AB7851	AB7639 AB7642	AB7858 /	AB7837	n.a.	n.a.	AB7676	AB7826	AB7815	AB7806	Interbus Fiber	
n.a. /	AB7620 /	AB7623 /	AB7891 /	AB7885 /		AB7870 /	AB7625 /		AB7624 /	n.a. /	AB7693 /	AB7539 /	AB7518 /	n.a.	AB7660 /		1B7642 /	AB7861 /	AB7840 /	n.a. /	n.a. /	AB7679 /	AB7829 /	AB7818 /	AB7809 /	Modbus Plus	
AB7612	AB7899 /	AB7620	AB7890	AB7884	AB7877	AB7869	AB7009	AB7895	AB7621	AB7964	AB7692	AB7532	AB7511	n.a.	AB7659	AB7850 /	AB7641 /	AB7860	AB7839 /	AB9005	AB7305	AB7678	AB7828	AB7817	AB7808	Modbus RTU	
n.a.	AB7612	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	AB7615	AB7665	n.a.	AB7665	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	J1939	

