With the Anybus X-gateway CANopen, HMS makes it possible to integrate CANopen devices into almost any other PLC system and their supported networks. The X-gateway CANopen series provide CANopen Master (Manager) /Slave connectivity to all popular fieldbus and industrial Ethernet networks. The fact that Anybus X-gateways combine high reliability and flexibility make them indispensable connectivity tools for system integrators and plant operators within all industries.

**APPLICATION EXAMPLES**

**Control Network - e.g. Profinet**

- Network interface 1: Profibus slave
- Network interface 2: CANopen Master

**Control Network - e.g. EtherNet/IP**

- Network interface 1: EtherNet/IP Adapter
- Network interface 2: CANopen Master

**Device level with CANopen slaves**

The Anybus X-gateway CANopen family act as intelligent links between two industrial networks. X-gateway CANopen combines simplicity and usability with industrial robustness, making communication across different industrial network types easy and reliable. The X-gateways are easily integrated into any kind of industrial automation system, ensuring a seamless information flow between CANopen and 10 other fieldbus / Ethernet networks.

**Features and Benefits**

- Provides CANopen Master or Slave functionality on one side, and fieldbus/Ethernet slave functionality on the other side
- Allows transparent transfer of I/O data between CANopen and another network
- CANopen master functionality allows connection of up to 126 CANopen slaves
- Dual port Ethernet with switch functionality for EtherNet/IP, Modbus-TCP and Profinet IRT versions
- Ethernet versions with IT functions such as dynamic Web server, supporting downloadable customer specific web pages
- CANopen NMT Master and Configuration Manager functionality

**CANopen Configuration**

The X-gateway CANopen can be configured with the “CANopen Configuration Manager” which is included in the price of the X-gateway and can be downloaded from www.anybus.com.

The PC connect to the CANopen network via a USB-CAN adapter (ordered separately)

In addition, any standard CANopen configuration tool can be used to configure the CANopen interface.

The uplink fieldbus or Ethernet slave interface is configured with a standard device description file (GSD/EDS) and the standard engineering tool of the PLC. No programming required.

**Typical Industries**

- Manufacturing
- Automation
- Energy
- Robotics
- Transportation

**In-short**

Every product in of the Anybus X-gateway CANopen family is equipped with a CANopen Master (Manager) interface. The second network interface can be selected from the list below:

<table>
<thead>
<tr>
<th>Network</th>
<th>PartNo:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANopen</td>
<td>AB7304</td>
</tr>
<tr>
<td>ControlNet</td>
<td>AB7303</td>
</tr>
<tr>
<td>DeviceNet</td>
<td>AB7302</td>
</tr>
<tr>
<td>EtherCAT</td>
<td>AB7300</td>
</tr>
<tr>
<td>EtherNet/IP 2-port</td>
<td>AB7306</td>
</tr>
<tr>
<td>Modbus RTU</td>
<td>AB7305</td>
</tr>
<tr>
<td>Modbus TCP 2-port</td>
<td>AB7308</td>
</tr>
<tr>
<td>Profibus</td>
<td>AB7301</td>
</tr>
<tr>
<td>Profinet IO</td>
<td>AB7307</td>
</tr>
<tr>
<td>Profinet IRT 2-port</td>
<td>AB7309</td>
</tr>
</tbody>
</table>

**Accessories:**

A CANopen-to-USB configuration adapter including software and documentation on CD can be ordered separately.

CANopen Configuration Pack 021370

HMS provides a full 3 year product guarantee

Industrial networking made easy!

www.anybus.com
## TECHNICAL SPECIFICATIONS

### X-gateway CANopen
- **Amount of Master (manager):** 128
- **CANopen network connector:** DSUB9M
- **Baud rate:** Up to 1 Mbit/s
- **I/O data:** 128 PDOs Receive/128 PDOs Transmit, 510 bytes IN/OUT

### Technical Details

**Weight:** 150 g, 0.33 lb

**Dimensions (L/H/W):** 125 x 75 x 27 mm, 4.92 x 2.95 x 1.07"

**Protection class:** IP20, NEC rating 1

**Enclosure material:** PC ABS, UL 94

**Environment:**
- **Operating temp:** -25 to 55 °C, -13 to 131 °F
- **Storage temp:** -40 to 85 °C, -40 to 185 °F
- **Relative Humidity:** 5-95 % non condensing

**Mounting:** DIN rail (35 x 7.5/15)

**Enclosure material:**
- **IP20, NEMA rating 1**
- **CLASS 1, DIVISION 2, GROUPS A, B, C AND D, T4**

**Certifications:**
- **ATEX:**
  - **Zones:** 2, Cat 2
  - **Protection class:** IEC 60079-15
- **CE:** EN 60079-11
- **UL:** 508 Industrial
- **CUL:** 125-500 kbit/s
- **CE:** 218 byte IN/OUT
- **ISO:** 125-500 kbit/s
- **ATEX:**
  - **Zones:** 2, Cat 2
  - **Protection class:** IEC 60079-15
- **CE:** EN 60079-11
- **UL:** 508 Industrial
- **CUL:** 125-500 kbit/s
- **ISO:** 125-500 kbit/s

**Electrical Characteristics**

**Power:** 24 VDC +/- 10 %

**Current consumption:** 150 mA

**Protection:**
- **Electrostatic discharge:** +/− 1 kV
- **Fast Transients:** +/− 1 kV
- **Surge protection:** +/− 1 kV
- **RF conducted interference:** 10 V/m
- **EMI/RFI:** 10 V/m, 20 MHz - 230 MHz

**Environmental Characteristics**

**Installation position:**
- **Todos:**
  - **Bauhöhe:** 1,2-57,6 kbit/s
  - **Baubreite:** 1,2-57,6 kbit/s

**Environmental Emission for Industrial Environment**

**Electrostatic discharge:** +/− 30 V

**Electromagnetic RF fields:**
- 3 V/m 1,4 GHz - 2,0 GHz
- 4 V/m 2,0 GHz - 2,7 GHz

**Fast Transients:** +/− 1 kV

**Surge protection:** +/− 1 kV

**RF conducted interference:** 10 V/m

**Emission (at 10 m):**
- 40 dB 30 MHz - 230 MHz
- 47 dB 30 MHz - 1 GHz

**Network MTBF:**
- 2000 m

**Mounting:** DIN rail (35 x 7.5/15)

**Enclosure material:**
- **IP20, NEMA rating 1**
- **CLASS 1, DIVISION 2, GROUPS A, B, C AND D, T4**

**Certifications:**
- **ATEX:**
  - **Zones:** 2, Cat 2
  - **Protection class:** IEC 60079-15
- **CE:** EN 60079-11
- **UL:** 508 Industrial
- **CUL:** 125-500 kbit/s
- **ISO:** 125-500 kbit/s

**Electrical Characteristics**

**Power:** 24 VDC +/- 10 %

**Current consumption:** 150 mA

**Protection:**
- **Electrostatic discharge:** +/− 1 kV
- **Fast Transients:** +/− 1 kV
- **Surge protection:** +/− 1 kV
- **RF conducted interference:** 10 V/m

## NETWORK SPECIFIC FEATURES

1. **Network connector**
2. **Baud rate**
3. **I/O data**
4. **Other**

### SLAVE / ADAPTER / SERVER / DEVICE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANopen</td>
<td>+/− 1 kV</td>
</tr>
<tr>
<td>DeviceNet</td>
<td>+/− 4 kV</td>
</tr>
<tr>
<td>Modbus RTU - 2 port</td>
<td>+/− 2 kV</td>
</tr>
<tr>
<td>Modbus TCP - 2 port</td>
<td>+/− 2 kV</td>
</tr>
<tr>
<td>Profinet IO</td>
<td>+/− 2 kV</td>
</tr>
<tr>
<td>Profinet IRT - 2 port</td>
<td>+/− 2 kV</td>
</tr>
</tbody>
</table>

### Hardware Characteristics

- **Reverse voltage protection:** Yes
- **Short circuit protection:** Yes
- **Galvanic isolation on subnetwork:** Yes

### Environmental Characteristics

- **Operating temp:** -25 to 55 °C, -13 to 131 °F
- **Storage temp:** -40 to 85 °C, -40 to 185 °F
- **Relative Humidity:** 5-95 % non condensing
- **Installation altitude:** Up to 2 000 m

### Electrical Characteristics

- **Power:** 24 VDC +/- 10 %
- **Current consumption:** Typical 150 mA

### Environmental Emission for Industrial Environment

- **Electrostatic discharge:** +/− 30 V
- **Electromagnetic RF fields:**
  - 3 V/m 1,4 GHz - 2,0 GHz
  - 4 V/m 2,0 GHz - 2,7 GHz
- **Fast Transients:** +/− 1 kV
- **Surge protection:** +/− 1 kV
- **RF conducted interference:** 10 V/m
- **Emission (at 10 m):**
  - 40 dB 30 MHz - 230 MHz
  - 47 dB 30 MHz - 1 GHz

### Environmental Characteristics

- **Installation position:**
  - **Todos:**
    - **Bauhöhe:** 1,2-57,6 kbit/s
    - **Baubreite:** 1,2-57,6 kbit/s

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