Anybus®

Wireless Bridge II

Anybus Wireless Bridge enables you create a robust wireless connection between two points in an industrial Ethernet network. This second generation of the proven and trusted product can communicate via both Bluetooth and WLAN and is ideal for communication through hazardous areas or hard-to-reach locations where cables are not desirable.
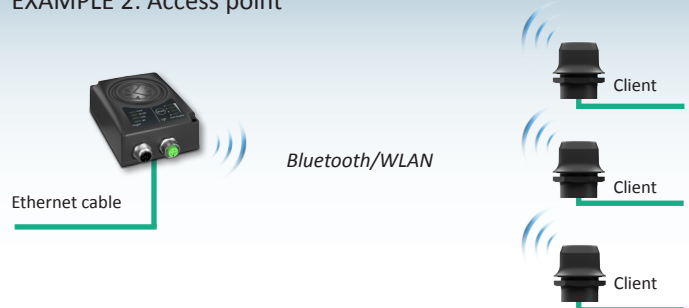
400m

WLAN Bluetooth

EXAMPLE 1: Point-to-point

Bluetooth/WLAN

Ethernet cable

Ethernet cable

BACnet®   EtherNet/IP   Modbus   PROFINET®   Any TCP/IP-based protocol

Replacing an industrial Ethernet cable.

EXAMPLE 2: Access point

Bluetooth/WLAN

Client

Client

Client

Ethernet cable

The Wireless Bridge can act as an access point connecting up to seven different slaves. This example shows connection to several Anybus Wireless Bolts. (The Anybus Wireless Bridge and Bolt work seamlessly together.)

Availability

AWB3000
Ethernet bridge via Bluetooth and WLAN. 2.4 GHz/5 GHz. Internal antenna.

AWB3010
Ethernet bridge via Bluetooth and WLAN. 2.4 GHz/5 GHz. External antenna.

Accessories

023040
Cable kit. 1.5m Ethernet cables M12/RJ45 and power supply (world).

024700
M12 Connector Kit with screw terminals.

024701
DIN Clip kit with screws.

024702
Extra external antenna. Foldable, dual band. RP-SMA connector.

1.04.0085.00000
Magnetic antenna foot with 1,5 m cable and RP-SMA connector, excl. antenna.

1.04.0085.00003
Screw-mount antenna base with 1,5 m cable and RP-SMA connector, excl. antenna)

3 YEAR GUARANTEE
HMS provides a full 3 year product guarantee

Wirelessly bridge industrial Ethernet networks

Use the Anybus Wireless Bridge to create a wireless connection in a PROFINET, EtherNet/IP, Modbus-TCP or BACnet/IP network. You can use the same hardware for both Bluetooth or WLAN communication.

Point-to-point or multipoint

Anybus Wireless Bridge is often used as an Ethernet cable replacement (point-to-point communication). But it can also be used as an access point for several WLAN/Bluetooth nodes within range.

Features and benefits

* Range up to 400 meters.
* Rugged design with IP65-classed housing.
* Unique method to handle interference disturbances.
* Easy configuration via push button or via web configuration pages.
* Full compatibility with Anybus Wireless Bolt — a wireless product for machine mounting.
* Compatible with PROFIsafe requirements.

WLAN or Bluetooth?

WLAN

* Allows higher data throughput.
* Wide market acceptance.
* Wireless LAN client adapter in an infrastructure setup

Bluetooth

* Even more robust and noise immune wireless link since Bluetooth switches between different frequencies. AFH (Adaptive Frequency Hopping) automatically avoids noisy channels.
* Preferred physical media for wireless PROFINET (PNO) and approved for PROFIsafe.

TECHNICAL SPECIFICATIONS

Type of wired interface	Ethernet
Order code	AWB3000 (with internal antenna) AWB3010 (with external antenna)
Range	400 meters (WLAN and Bluetooth)
Antenna	Internal: 2.4 GHz: max 2dBi. 5 GHz: 0.5 max dBi External: Max 3 dBi *(The external antenna does not provide better range, but allows connectivity if the Wireless Bridge needs to be placed inside a radio-secure environment such as a steel cabinet)*
Operating Temperature	-30 to +65 °C (Storage temp: -40 to +85 °C)
Weight	120 g
Housing	Plastic PC/ABS (Bayblend FR3010)
Protection class	IP65
Dimensions	91 x 66 x 36.2 mm
Mounting	With two screws (Ø 4 mm) on flat surface. DIN rail mount option available (optional accessory).
Connectors	M12 for Ethernet (4-pin, D-coded). M12 for Power (5-pin, A-coded)
Wireless communication	WLAN or Bluetooth (interchangeable with same hardware)
Power	9-30 VDC (-5% +20%), Cranking 12V (ISO 7637-2:2011 pulse 4). Reverse polarity protection. (Consumption: 0.7W idle, 1.7W max.)
Configuration	Three different methods: • Accessing the built-in web pages in the product • Using Easy Config modes (via push button or inside web interface) • Sending AT commands
Vibration compatibility:	Sinusoidal vibration test according to IEC 60068-2-6:2007 and with extra severities; Number of axes: 3 mutually perpendicular (X:Y:Z), Duration: 10 sweep cycles in each axis, Velocity: 1 oct/min, Mode: in operation, Frequency: 5-500 Hz. 5-8,4Hz=±3.5mm; 8,4-40,7Hz=1g; 40,7-57Hz=±0,15mm;57-500Hz=2g. Shock test according to IEC 60068-2-27:2008 and with extra severities; Wave shape: half sine, Number of shocks: ±3 in each axis, Mode: In operation, Axes ± X,Y,Z, Acceleration: 30 m/s2 , Duration: 11 ms.
Humidity compatibility:	EN 600068-2-78: Damp heat, +40°C, 93% humidity for 4 days.

WIRELESS STANDARDS

WLAN	**Wireless standards:** WLAN 802.11 a, b, g, e, i, h (n in pending release) **Operation modes:** Access point or Client **WiFi channels**: 2.4 GHz, channel 1-11. 5 GHz Access Point: 36-48 (U-NII-1), 5 GHz Client: 36-140 (U-NII-1, U-NII-2A, U-NII-2C). **RF output power**: 16 dBm **Max number of slaves for access point:** 7 **Power consumption:** 54mA@24VDC **Net data throughput**: ~20 Mbps **Security:** WEP 64/128, WPA, WPA-PSK and WPA2, TKIP and AES/CCMP, LEAP, PEAP.
Bluetooth	**Wireless standards (profiles):** PAN (PANU & NAP) **Operation modes:** Access point or Client **RF output power:** 10 dBm **Max number of slaves for access point:** 7 **Power consumption:** 36 mA@24VDC **Net data throughput:** ~1 Mbps **Bluetooth version support:** v4.0 **Security:** Authentication & Authorization, Encryption & Data Protection, Privacy & Confidentiality, NIST Compliant, FIPS Approved
Bluetooth Low Energy (Pending release)	**Wireless standards (profiles):** GATT **Operation modes:** Central or Peripheral **RF output power:** 7 dBm **Max number of slaves for Central**: 7 **Power consumption:** 36 mA@24VDC **Net data throughput:** ~200 kbps **Bluetooth version support:** v4.0 **Security:** AES-CCM cryptography

CERTIFICATIONS

Europe	1999/5/EC, Radio and Telecommunication Terminal Equipment (R&TTE), EN 300 328 V1.9.1 (2015-02), EN 301 893 V1.8.1 (2015-09). ATEX (Pending): ATEX/IECEX Category 3, zone 2 according to EN 60079-0 and EN 60079-7.
U.S.	FCC 47 CFR part 15, subpart B. UL OrdLoc: NRAQ-Programmable Controllers according to UL61010-2-201 and NRAQ7-Process control equipment according to CSA61010-2-201, UL file E214107. UL HazLoc: NRAQ-Programmable Controllers according to USL ANSI/ISA-12.12.01 (class 1 Div. 2) and CNL C22.2, Nos. 213-M1987, UL file E203225. (Pending)
Canada	ICES-003
Japan	MIC (pending, pre-certified radio module)
Taiwan	NCC (pending, pre-certified radio module)
South Korea (pending)	KCC (pending, pre-certified radio module)

Status LEDs

Link quality LEDs

M12 power connector

M12 Ethernet connector

Push-button for configuration

Configuration
You can configure the Anybus Wireless Bridge by accessing the built-in web pages in the product. You can also use the push-button. Pressing sequences will configure the product. Instructions included.

Order a Starter Kit!
Includes: Two Wireless Bridges, Two Power Supplies (world), cabling, Quick Start Guide.
Part number: AWB3300