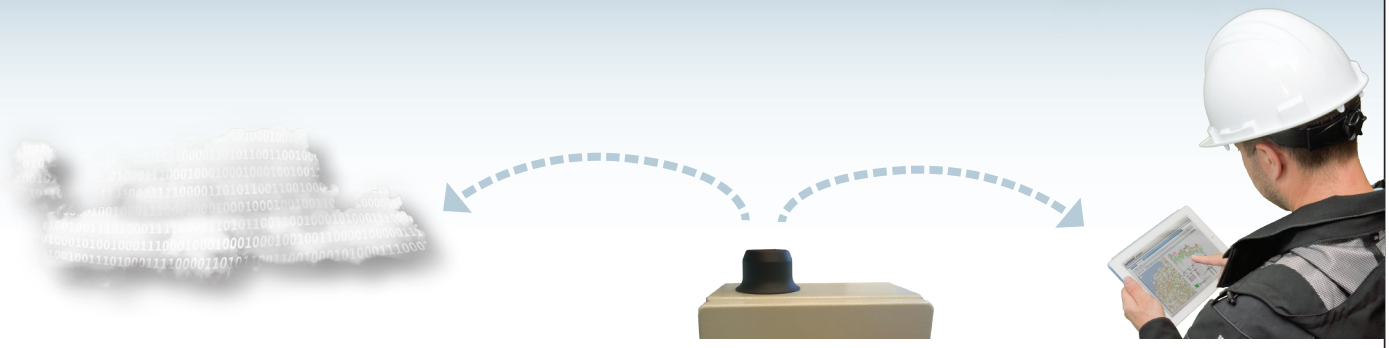
Wireless Bolt™

Anybus Wireless Bolt enables you to connect industrial machinery to a wireless network. It is attached onto a cabinet or a machine to enable wireless access.

Wireless transmission is made via Bluetooth or WLAN technology. The Wireless Bolt can connect devices using serial, CAN or Ethernet.

EXAMPLE USE CASE



The Wireless Bolt is typically used for configuration purposes. For example, you can bring your own device (BYOD) such as a tablet to a machine and use it as an HMI. Another typical use case is connecting a machine to a cloud service.

Availability

AWB2000
Anybus Wireless Bolt Ethernet
Bluetooth access point or client.
WLAN 2.4 GHz/5 GHz access point or client.

Accessories

024703
Bolt cable kit. Bolt connector with Ethernet cable (RJ45 male) and power supply (World) with cable.
Both cables are 150cm.

024704
Bolt RJ45 Adapter. Bolt connector with Ethernet cable (RJ45 female). Total length 20 cm.

3 YEAR GUARANTEE

HMS provides a full 3 year product guarantee

Use your laptop, phone or tablet instead of an HMI

Connect a Wireless Bolt to your machine and access the internal web pages via a laptop, tablet or smartphone. BYOD (Bring Your Own Device) means that you no longer need an expensive HMI.

Multipoint or point-to-point

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

Features and benefits

- Range up to 100 meters.
- Rugged design with IP67-classed housing.
- Easy configuration via built-in web configuration pages.
- Mounted by making an M50 hole (50.5 mm) in the host cabinet/machine. The bottom part of the Bolt goes inside the cabinet and the top part is located on the outside.
- All-in-one package: Connector, communication hardware and integrated antenna in the same unit.
- Connects to your machine via Ethernet.
- Simultaneous operation of Bluetooth and WLAN allowing for bridging between the two.

Which wireless standard?

Use WLAN (aka WiFi) if you need:

- High data throughput.
- Wireless access point.

Use Bluetooth if you need:

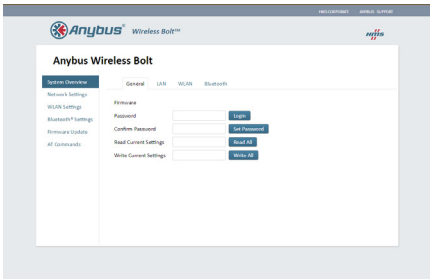
- Reliable and noise immune wireless link (Bluetooth switches between different frequencies).
- Low energy consumption (Bluetooth Low Energy).

Note that Bluetooth cannot be used with some Android devices.

TECHNICAL SPECIFICATIONS

Type of wired interface	Ethernet
Order code	AWB2000
Range	100 meters
Antenna	Built-in
Operating temperature	-40 to +65 °C (Storage temperature: -40 to +85 °C)
Weight	81 g
Housing material	Top: Valox 357X(f1) PBT/PC. Suitable for outdoor use with respect to exposure to ultraviolet light, water exposure and immersion in accordance with UL 476C. Bottom: Celanex: XFR 6840 GF15. PBT glass reinforced plastic.
IP protection class	IP67 and UL NEMA 4X for top (outside the host), IP21 for bottom (inside the host).
Dimensions	Diameter: 70 mm. Height: 70 mm (95 mm including connector). Outside height: 41 mm.
Mounting	M50 screw and nut (50.5 mm hole needed).
Connector	Included plug connector (2x9p; 3.5mm, Phoenix DFMC 1.5/9-ST-3.5, push-in spring connection).
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 • Sending AT-commands via Telnet/Raw TCP • Using Easy Config modes
Vibration compatibility:	Sinosodial 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 axes, Velocity: 1 oct/min, Mode: in operation, Frequency: 5-500 Hz, Displacement ±3.5 mm, Acceleration: 2g. Shock test according to IEC 60068-2-27:2008 and with extra severities; Wave shape: half sine, Number of shocks: ±3 in each axes, Mode: In operation, Axes ± X,Y,Z, Acceleration: 30 m/s^2, Duration: 11 ms.
Humidity compatibility:	EN 600068-2-78: Damp heat, +40°C, 93% humidity for 4 days.
COMMUNICATION WITH HOST DEVICE	
Digital input	Usage: To control roaming between access points. (max 3 m signal cable).
Ethernet	10/100BASE-T with automatic MDI/MDIX auto cross-over detection. Supported Ethernet protocols: IP, TCP, UDP, HTTP, LLDP, ARP, DHCP Client/Server, DNS support. PROFINET IO, EtherNet/IP, Modbus-TCP. (SNMP user management and access control in pending release.)
WIRELESS STANDARDS	
WLAN	**Wireless standards:** WLAN 802.11 a, b, g, n. (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 **WLAN conducted sensitivity:** 2.4 GHz: -95 dBm. 5 GHz: -90 dBm. **Max number of slaves for access point:** 7 **Power consumption:** 54mA@24VDC **Net data throughput**: 20 Mbps. Link speed: 54 Mbps (802.11 g) **Security:** WEP 64/128, WPA, WPA-PSK and WPA2, LEAP, PEAP (MS-CHAP pending).
Bluetooth	**Wireless standards (profiles):** PANU & NAP **Operation modes:** Access point or Client **RF output power:** 10 dBm **Bluetooth conducted sensitivity:** -90 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**: 10 **Power consumption:** 36 mA@24VDC **Net data throughput**: ~200 kbps **Bluetooth version support:** v4.0 **Security:** AES-CCM cryptography
CERTIFICATIONS	
Europe	ATEX: ATEX Category 3, zone 2 according to EN60079-15, product marking: EX II 3 G nA IIC T4. 2014/53/EU Radio Equipment Directive (RED)
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.
Canada	ICES-003
Japan	MIC
Taiwan	NCC (pending, pre-certified radio module)
South Korea (pending)	KCC (pending, pre-certified radio module)

Mounting
The Anybus Wireless Bolt is mounted into a 50.5 mm (M50) hole in the host device. The top ("helmet") goes on the outside and provides an IP67 exterior. The bottom is located inside the machine or cabinet (IP21).



Configuration
You can configure the Anybus Wireless Bolt by accessing the built-in web pages in the product. You can also send AT commands or use Easy Config modes.

Bolt Cable Kit
Bolt connector with Ethernet cable (RJ45 male) and power supply (World) with cable.
Both cables are 150cm.
Order code: 024703

Bolt RJ45 Adapter
Bolt connector with Ethernet cable (RJ45 female).
Total length 20 cm.
Order code: 024704

Order a Starter Kit!
Includes: Two Wireless Bolts, Power Supply (world), cabling, Quick Start Guide.
Order code: AWB2300