Anybus Wireless Bolt product

Anybus Wireless Bolt - Ethernet 18-pin

Anybus Wireless Bolt enables you to connect industrial machines and devices to a wireless network. It is attached onto a cabinet or a machine to enable wireless access over Bluetooth®, Bluetooth Low Energy® or Wireless LAN (WiFi).

On the wired side, the Anybus Wireless Bolt communicates over Industrial Ethernet, supporting protocols such as BACnet/IP, PROFINET, EtherNet/IP, Modbus TCP as well as all TCP and UDP based protocols.

CONFIGURE MACHINES WIRELESSLY

Anybus Wireless Bolt gives you direct access to configure or troubleshoot your machinery. With a range of 100 meters you can 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. A machine operator or technician does not need to be physically located at the machine to gain access.

AN ALL-IN-ONE SOLUTION

With Anybus Wireless Bolt you get an All-in-one package featuring, connector, communication processor and integrated antenna in the same unit, with an exterior IP67 protection class. Regardlessof communication methodyou select, you have the same connector (2x9pPlug Connector) for both power and communication.

FEATURES & BENEFITS

- Configure or troubleshoot industrial machinery over a wireless network
- Increase flexibility and mobility. Eliminate expensive fixed HMI’s by using a laptop, tablet or smartphone
- Connect to moving field equipment such as an AGV’s (Automated Guided Vehicles)
- Fast Roaming (IEEE 802.11r), High link speed (IEEE 802.11n)
- Full compatibility with Anybus Wireless Bridge — a wireless product for cable replacement
- Connect to a Cloud Service of your choice or get live data and integrate it into a SCADA system
- Supports Ethernet and protocols such as: BACnet/IP, EtherNet/IP, Modbus-TCP, PROFINET, TCP/UDP
- All-in-one package: Connector, communication processor and integrated antenna in the same unit
- Includes a configurable Digital Input to control e.g. roaming behavior.
- Security features for a secure industrial operation
- Certified for outdoor usage (UL/Nema 4X).
- Available with white top Sunbolt enabling 30% higher surrounding temperature compared to black in direct sunlight.
- Operation with Wirelesss LAN, Bluetooth classic and Bluetooth Low Energy.
- CLI (Command Line Interface) for configuration and diagnostics
- **Starterkit available**

WIRELESS LAN INTERFACE

- Wireless standards: WLAN 802.11 a, b, g, n, d.
- Operation modes: Access point or Client
- Wireless LAN bands: 2.4 GHz and 5 GHz

- RF output power: 18 dBm EIRP (including antenna gain 3dBi)
- Max number of slaves for access point: 7
- Power consumption: 54mA@24VDC
- Net data throughput: 20 Mbps. Link speed: max 65 Mbps (802.11n SISO)
- Security: WEP 64/128, WPA, WPA-PSK and WPA2, TKIP and AES/CCMP, LEAP, PEAP including MS-CHAP.

BLUETOOTH INTERFACE

- Wireless standards (profiles): PANU & NAP
- Operation modes: Access point or Client
- RF output power: 14 dBm EIRP (including antenna gain 3dBi)
- 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: Classic Bluetooth v2.1
- Security: Authentication & Authorization, Encryption & Data Protection,
- Privacy & Confidentiality, NIST Compliant, FIPS Approved

BLUETOOTH LOW ENERGY INTERFACE

- Wireless standards (profiles): GATT
- Operation modes: Central or Peripheral (pending)
- RF output power: 10 dBm EIRP (including antenna gain 3dBi)
- Max number of simultaneous connections for Central: 7
- Power consumption: 36 mA@24VDC
- Net data throughput: ~200 kbps
- Bluetooth Low Energy version: 4.0 dual-mode
- Security: AES-CCM cryptography

Ethernet Interface

- Supports all Ethernet protocols using: IP, TCP, UDP, and more.
- Supports wireless bridging of Industrial Ethernet protocols: BACnet/IP, EtherNet/IP, Modbus-TCP, PROFINET, and more.
- Ethernet interface: 10/100BASE-T with automatic MDI/MDIX cross-over detection.
- Layer 2 bridging mode between Anybus Wireless Bolts or Bridges, Otherwise Layer 3 TCP/UDP bridging.

Technical specifications

Dimensions	Diameter: 68 mm. Height: 75 mm (95 mm including connector. Outside height: 41 mm)
Weight	81g
Temperature Bolt (black)	Shadow: -40 to +65 °C Direct sunlight: -40 to +45 °C Storage temperature: -40 to +85 °C
Temperature Sunbolt (white)	Shadow and direct sunlight: -40 to +65 °C Storage temperature: -40 to +85 °C
Output Power	Wireless LAN 18 dBm EIRP - Bluetooth 14 dBm EIRP - Bluetooth Low Energy 10 dBm EIRP All including antenna gain 3dBi
Power supply	9-30 VDC (-5% +20%), Cranking 12V (ISO 7637-2:2011 pulse 4). Reverse polarity protection.
Power consumption	0.7W idle, 1.7W max (54mA@24VDC with Wireless LAN and 36mA@24VDC with Bluetooth)
Enclosure 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.
Mechanical rating	IP66 and IP67 for top (outside the host), IP21 for bottom (inside the host)
Mounting	M50 screw and nut (50.5 mm hole needed)
Max Range	100 meters
Antenna	One built in antenna
Connector	Included plug connector (2x9p; 3.5mm, Phoenix DFMC 1.5/9-ST-3.5, push-in spring connection)
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/s2 , Duration: 11 ms.
CERTIFICATIONS	
Europe	ATEX: ATEX Category 3, zone 2 according to EN60079-15, product marking: EX II 3 G nA IIC T4. CE, 2014/53/EU Radio Equipment Directive (RED)
USA	FCC 47 CFR part 15, subpart B. UL: Ind. Cont. Eq. also Listed Ind. Cont. Eq. for Haz. Loc. CL1, DIV 2, GP A,B,C,D, T4. UL file: E203225
Canada	ICES-003
Japan	MIC
Other countries	Brazil, Australia, Colombia, Turkey, Malaysia, Argentina, India, China, Korea, United Kingdom

Content of delivery

AWB2000 Bolt Ethernet (black top) including 18-pin connector / AWB2001 Sunbolt Ethernet (white top) including 18-pin connector
Quick start documentation

Optional Accessories

024703 - Cable kit. Molded RJ45 Bolt connector wired with1.5m Ethernet cable and 24 VDC power supply (world)+ Extra Ethernet cable fastening to avoid cable strand breaks.
024704 - Bolt connector with Ethernet cable (RJ45 female). Total length 20 cm
024708 - Bolt base Protector and Mounting Bracket kit; Read more about the base protector here.
024709 - Bolt base Protector and Mounting Bracket kit; Read more about the base protector here.

AWB2300 (BOLT 18-PIN STARTERKIT)
2x Bolt Ethernet (black top), 2x Worldwide power adapter, 2x Pre-wired cable harness for Power/Ethernet (RJ45), 1x Installation guide
(Limitation: Max one Starterkit per customer)

Ordering Information

Order code	AWB2000 (Bolt Ethernet including 18-pin connector) AWB2001 (Sunbolt Ethernet including 18-pin connector)