Wireless Bolt™

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

Wireless transmission is made via Bluetooth or Wireless LAN technology. The wired connection is made using 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

Anybus Wireless Bolt Ethernet. Bluetooth access point or client. Wireless LAN 2.4 GHz/5 GHz access point or client. AWB2000 Black top, 18-pole push spring connector AWB2001 “Sunbolt” White top 18-pole push spring connector

AWB2030 Black top, RJ45 connector and PoE (Power over Ethernet) AWB2031 “Sunbolt” White top RJ45 connector and PoE (Power over Ethernet)

Accessories

024703 Bolt cable kit. Bolt connector with Ethernet cable (RJ45 male) and power supply (World) with cable. Both cables are 150cm. (for AWB2000 only) AWB4005 PoE injector, 100-240VAC AWB4006 PoE injector, 12-57VDC

Use your laptop, phone or tablet instead of an HMI

Connect a Wireless Bolt to your machine and get access to it 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 Wireless LAN/Bluetooth nodes, but it can also be used as an Ethernet cable replacement (point-to-point communication, or multi-point communication with up to 8 nodes).

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 Wireless LAN allowing for bridging between the two.
- PoE (Power over Ethernet) for RJ45-version.
- Available with white top “Sunbolt” enabling 30% higher surrounding temperature in °C compared to black in direct sunlight.
- Operation with Wireless LAN, Bluetooth classic and Bluetooth Low Energy.

Which wireless standard?

Use WLAN (aka Wifi) if:

- Interaction with other devices is needed, e.g. Bolt/AWB II to tablet/PC/phone or WLAN infrastructure.
- WLAN channel frequency planning is possible.
- Higher data throughput speed is necessary.
- Larger file transfers are expected.

Use Bluetooth if:

- The wireless link has Anybus products in both ends, e.g. Bolt to Bolt, AWB II to AWB II or Bolt to AWB II.
- A robust and reliable link without interruptions is important e.g. in an industrial environment with lots of disturbances, and maybe has been proven not to work well using WLAN.
- A Profinet or Ethernet/IP I/O cycle time of 64ms or higher is acceptable.
- The data throughput speed need is on the lower side.

HMS provides a full 3 year product guarantee

HMS guarantees a full 3 year product guarantee

Patent pending

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Patent pending.
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Type of wired interface</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order code</td>
<td>AWB2000</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Connector</td>
<td>Included plug connector (2x9p; 3.5mm, Phoenix DFMC 1.5/9-ST-3.5, push-in spring connection).</td>
</tr>
<tr>
<td>Range</td>
<td>100 meters</td>
</tr>
<tr>
<td>Power</td>
<td>9-30 VDC (-5% +20%), Cranking 12V (ISO 7637-2:2011 pulse 4). Reverse polarity protection. (Consumption: 0.7W idle, 1.7W max.)</td>
</tr>
<tr>
<td>Configuration</td>
<td>Three different methods: • Accessing the built-in web pages in the product • Sending AT-commands via Telnet/Raw TCP • Using Easy Config modes</td>
</tr>
<tr>
<td>Vibration compatibility</td>
<td>Sinusoidal vibration test according to IEC 60668-2-6:2007 and with extra severities; Number of axes: 3 mutually perpendicular (X,Y,Z). Duration: 10 sweep cycles in each axis, Velocity: 1 act/min, Mode: in operation, Frequency: 5-500 Hz, Displacement ±3.5 mm, Acceleration: 2g. Shock test according to IEC 60668-2-27:2008 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.</td>
</tr>
<tr>
<td>Humidity compatibility</td>
<td>EN 60068-2-7B: Damp heat, +40°C, 93% humidity for 4 days.</td>
</tr>
</tbody>
</table>

### SPECIFICATIONS

#### COMMUNICATION WITH HOST DEVICE

**Digital input**
- Usage: To control roaming between access points. (max 3 m signal cable).
- None

**Ethernet**
- 10/100/1000BASE-T with automatic MDI/MDIX auto cross-over detection. Supported Ethernet protocols: IP, TCP, UDP, HTTP, LLC, ARP, DHCP Client/Server, DNS support, PROFIBUS DP, Modbus-TCP (SNMP user management and access control in pending release.)

#### WIRELESS STANDARDS

**Wireless LAN**
- RoHS compliant, WPA-PSK and WPA2 TKIP and AES/CCMP, LEAP, PEAP including MS-CHAP.
- Secure: WEP 64/128, WPA, WPA-PSK and WPA2, WPA2, 18 dBm EIRP (including antenna gain 3dBi).
- Network throughput: ~200 kbps
- Power consumption: 36 mA@24VDC
- Max number of slaves for access point: 9
- Bluetooth version support: Classic Bluetooth v2.1
- Classic Bluetooth
- Support: Bluetooth Low Energy
- Security: AES-CCM cryptography

**Bluetooth Low Energy**
- Support: Bluetooth Low Energy
- Security: AES-CCM cryptography

### CERTIFICATIONS

- **Europe**
  - ATEX Category 3, zone 2 according to EN60079-15, product marking: EX II 3 G Ex nA IIC T4 Gc CE. 2014/35/EU (RoHS Directives (RED))

- **U.S.**

- **Canada**
  - ICES-003, ICES-003

- **Japan**
  - MIC

- **Other countries**
  - Argentina, Brazil, China, Colombia, Turkey, Malaysia
  - Pending: Chile, India
  - Turkey

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