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 2.4/5 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/ AWB2001 only)

024704
Adapter cable, Bolt 18-pin to female Ethernet RJ45, 20cm. (for AWB2000/ AWB2001 only)

AWB4005
PoE Injector, 100-240VAC

AWB4006
PoE Injector, 12-57VDC

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 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 interference, 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.

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></td>
<td>AWB2001</td>
</tr>
<tr>
<td></td>
<td>AWB2030</td>
</tr>
<tr>
<td></td>
<td>AWB2031</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>White top and black base</td>
</tr>
<tr>
<td></td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>White top and black base</td>
</tr>
<tr>
<td>Connector</td>
<td>Included plug connector (2x9p, 3.5mm, Phoenix DFMIC 1.5/9-37.5, push-in spring connection). RJ45 Ethernet/PoE, 3 Pole screw connector for power</td>
</tr>
<tr>
<td>Range</td>
<td>100 meters free line of sight</td>
</tr>
<tr>
<td>Antenna</td>
<td>One built-in antenna 2.4/5GHz</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>Shadow black and white: -40 to +65 °C, Direct sunlight: Black -40 to +45 °C, White -40 to +65 °C (Storage temperature: -40 to +85 °C)</td>
</tr>
<tr>
<td>Weight</td>
<td>81 g</td>
</tr>
<tr>
<td></td>
<td>84 g</td>
</tr>
<tr>
<td>Housing material</td>
<td>Top: Valox 357X(1) PBT/PC. Suitable for outdoor use with respect to exposure to ultraviolet light, water exposure and immersion in accordance with UL 746C. Bottom: Celanex XFR 6840 GF15. PBT glass reinforced plastic.</td>
</tr>
<tr>
<td>IP protection class</td>
<td>IP67 and UL NEMA 4X for top (outside the host), IP21 for bottom (inside the host).</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Diameter: 68 mm. Height: 75 mm (95 mm including connector). Outside height: 43 mm. Diameter: 68 mm. Height: 75 mm without PS-connector. 84 mm incl. PS-connector. Outside height: 41 mm.</td>
</tr>
<tr>
<td>Mounting</td>
<td>M50 screw and nut (50.5 mm hole needed)</td>
</tr>
<tr>
<td>Power</td>
<td>9-36 VDC 1.5-5W (20%), Cranking 12V (ISO 7637-2:2011 pulse 4). Reverse polarity protection. (Consumption: 0.7W idle, 1.7W max.)</td>
</tr>
<tr>
<td></td>
<td>19-36 VDC, PoE (Power over Ethernet) DTE Type 1 according to IEEE 802.3at. (Consumption: 0.7W idle, 1.7W max.)</td>
</tr>
<tr>
<td>Vibration compatibility</td>
<td>Sineoidal vibration test according to IEC 60068-2-6:2007 and with extra severities: Number of axes: 3 mutually perpendicular (X/Y/Z), Duration: 30 sweep cycles in each axes, Velocity: 1 oct/min, Mode: in operation, Frequency: 5-500 Hz, Displacement ±3.5 mm, Acceleration: 2g.</td>
</tr>
<tr>
<td></td>
<td>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, z7, Acceleration: 30g., 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>

### COMMUNICATION WITH HOST DEVICE

| Digital input          | Usage: To control roaming between Bluetooth access points. (max 3 signal cable). |
|                       | None |

### WIRELESS STANDARDS

**Wireless standards**: WLAN 802.11 a, b, g, n, r, t (Fast roaming).  
Operation modes: Access point or Client  
**WiFi channels**: 2.4 GHz, channel 1-13 + 14 depending on regulatory domain scan.  
5 GHz Access Point: 36-48 (U-NII-1), 51-56 (U-NII-2a), 141-148 (U-NII-3), 71-76 (U-NII-4)  
**RF output power**: 13.75 dBm  
**Max number of slaves for access point**: 7  
**Power consumption**: 54mA@24VDC  
**Net data throughput**: 20 Mbps. Link speed: max 65 Mbps (802.11n SSID)  
**Security**: WEP 64/128, WPA, WPA-PSK and WPA2, TKIP and AES/CCMP, LEAP, PEAP including MS-CHAP.

**Wireless LAN**

**Wireless standards (profiles)**: PANU & NAP  
**Operation modes**: Access point or Client  
**RF output power**: 9.75 dBm  
**Max number of slaves for access point**: 7  
**Power consumption**: 36 mA@24VDC  
**Net data throughput**: ~1 Mbit/s  
**Bluetooth version support**: Classic Bluetooth v2.1  

**Classic Bluetooth**

**Wireless standards (profiles)**: GATT  
**Operation modes**: Central or Peripheral (pending)  
**RF output power**: 5.75 dBm  
**Max number of simultaneous Peripheral connections**: 7  
**Max number of Peripherals is virtually unlimited by multiplexing**  
**Power consumption**: 36 mA@24VDC  
**Net data throughput**: ~200 kbps  
**Bluetooth version support**: Bluetooth 4.0 dual-mode  
**Security**: AES-CCM cryptography

**Bluetooth Low Energy**

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Europe</th>
<th>U.S.</th>
<th>Canada</th>
<th>Japan</th>
<th>Other countries</th>
</tr>
</thead>
</table>

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