Anybus Wireless Bolt product

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The Anybus Wireless Bolt LTE is an industrial router which provides high-speed transparent internet access to industrial machines via an LTE (4G) network with 3G fallback. Enabling high-speed internet access for industrial machines makes it possible to perform comprehensive remote system monitoring and analysis which can increase system uptime and reduce costly maintenance trips.

The Anybus Wireless Bolt LTE is compatible with any TCP/UDP based protocol, for example, MQTT and OPC UA. The Anybus Wireless Bolt LTE can also be used to bring 4G connectivity to applications that do not have internet access or currently can only use legacy standards such as 2G or 3G.

The robust IP66 and IP67-rated enclosure allows installation in the toughest operating environments and the wide temperature range (−40°C to 65°C) makes the Anybus Wireless Bolt LTE suitable in outdoor environments exposed to the elements. The product can be installed either by mounting it in a 50 mm hole in the machine or cabinet where it creates a tight-fitting connection on the exterior of the machine or it can be mounted on a post, wall, or similar with a simple mounting accessory (the Bolt Base Protector).

The Anybus Wireless Bolt LTE is packaged in an all-in-one solution including an Ethernet RJ45 connector, radio modem, GPS tracker, and integrated dual antennas. The product can be powered through an Ethernet cable (Power over Ethernet) or via separate power terminals. The Ethernet cable can be up to 100 meters long and as a result, the product can be placed in an optimal location up to 100 meters from the connected industrial equipment.

As the rugged all-in-one solution can be installed in an exposed location, there is no need for an external antenna or antenna cable. This has both financial and practical benefits as external antennas can be expensive, fragile, and sensitive to interference.

The Anybus Wireless Bolt LTE is packaged in an elegant and innovative form factor that blends in and looks like an integrated part of the installation. The product can be mounted on both stationary and mobile equipment.

High-speed cellular internet access

- Secure LTE Cat-4 connectivity for 4G networks with 3G fallback.
- Fast data transfer: Download up to 100 Mbit/s, Upload up to 50 Mbit/s.
- Nano SIM-card slot. The user can use any locally available SIM-card supporting LTE 4G (LTE Cat-4).
- Transparent transfer of any TCP/UDP based protocol, for example, MQTT and OPC UA.

All-in-one solution

- PoE (Power over Ethernet) option, use a single cable for both power and communication.

- Integrated dual antennas with MIMO support.
- GNSS satellite positioning function (GPS, GLONASS, Galileo and BeiDou).
- Built-in firewall, NAT, and DHCP server.
- Host interface RJ45 with Ethernet.

Designed for industrial use & harsh environments
- Industrial internet router ideal for applications within automation, transportation, telematics, public safety, and industrial IoT.
- Unique and industrial form-factor; M50 through-hole enables it to be mounted on any flat surface.
- Easy to use and configure - use the built-in web page or CLI with REST-commands for configurations and diagnostics.

- Provides internet access for any machine, device, or equipment that has an Ethernet port.
- Provides satellite positioning for mobile or stationary equipment.

Application example:

- A rural area pump station with PLC controller using the Anyway Wireless Bolt LTE for internet connectivity.
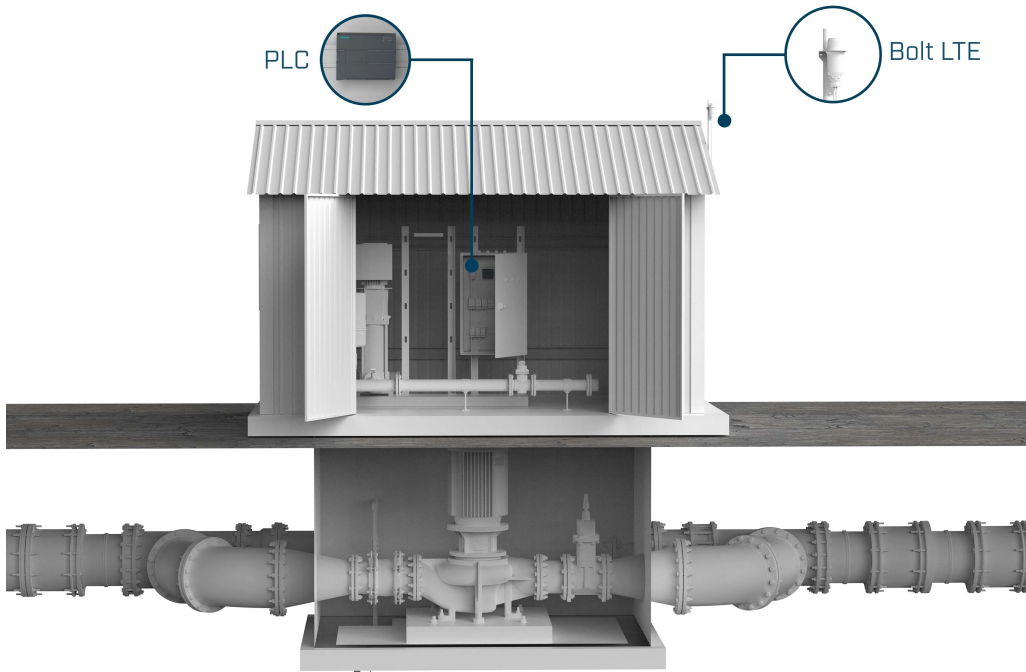

Figure 1: Pump station with PLC and Anybus Wireless Bolt LTE for remote monitoring and diagnostics.

Connectivity examples:

- Using PoE
The Anybus Wireless Bolt LTE supports PoE and as a result a single Ethernet cable can be used for both power and data.
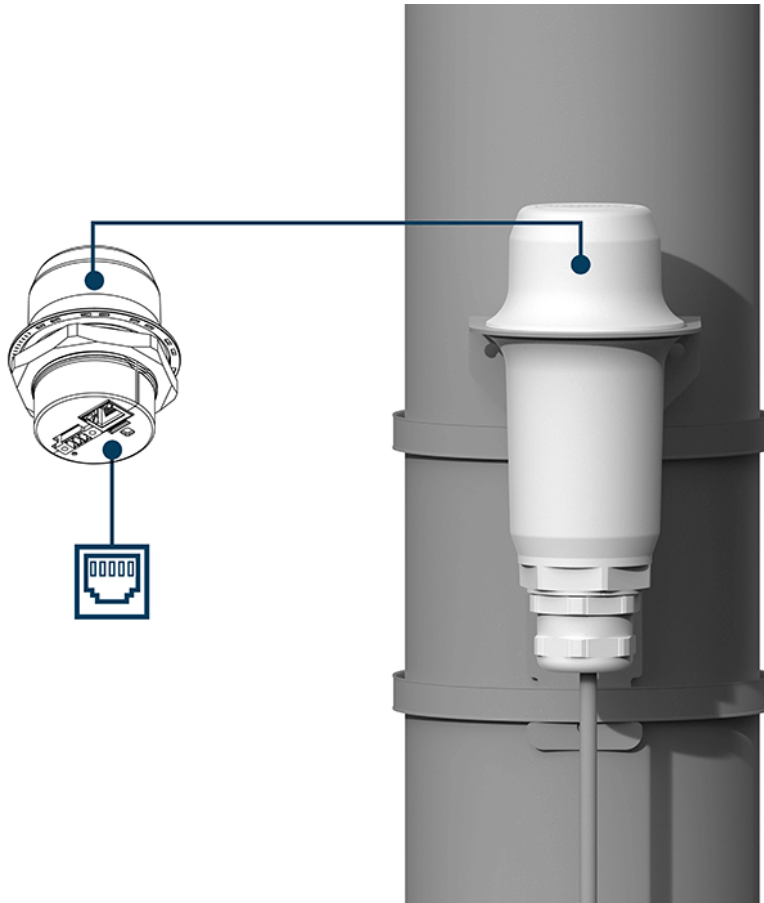
Figure 2: The Wireless Bolt LTE using PoE and mounted using the Bolt Base Protector mounting kit

- Using a separate power source

Alternatively, the Wireless Bolt LTE can be connected to a separate power source and only use the Ethernet cable for data.
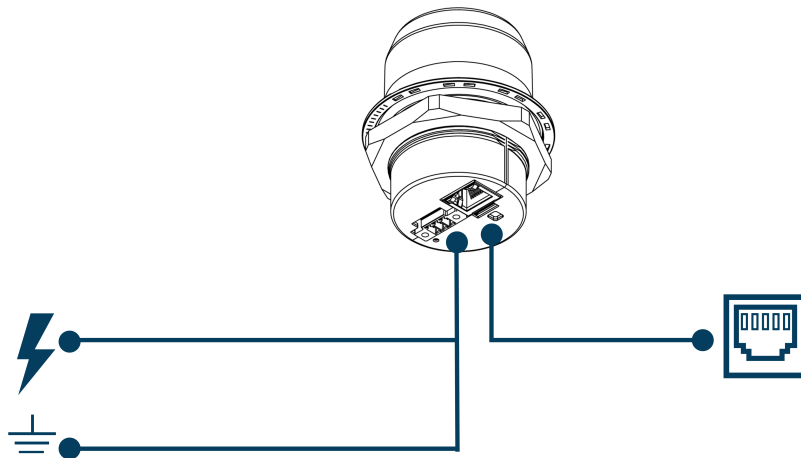

Figure 3: Connecting Bolt LTE with a separate power source and Ethernet cable

Technical Specifications

Operating temperature	Shadow Black and White version: -40 to 65°C Direct sunlight Black: -40 to 45 °C, White: -40 to 65°C
Storage temperature	-40 to 85 °C
Host interface.	RJ45 Ethernet 10/100 Mbit/s, PoE (Power over Ethernet)
Humidity compatibility	EN 600068-2-78: Damp heat, 40 °C, 90% (non-condensing).
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 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 Waveshape: half sine Number of shocks: ±3 in each axes Mode: In operation, Axes ± X,Y,Z Acceleration: 30 m/s^2 Duration: 11 ms.
Dimensions	Diameter: 68 mm. Height: 75 mm without Power connector, 84 mm incl. Power connector. Height above mounting surface: 41 mm.
Weight	100g
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 746C. Base: Celanex: XFR 6840 GF15. PBT glass reinforced plastic.
Protection class	Top (outside of host): IP66 and IP67 / UL Type 4X Base (inside of host): IP21
Mounting	M50 hole (50.5 mm hole diameter needed)
Power	3-pin screw connector and PoE (Power over Ethernet) 11-33 VDC through Power connector, PoE, IEEE 802.3at Type 1 (Class 0) Power Consumption: Sleep Mode: Power connector 0.1 W. PoE 0.3 W Idle Mode: Power connector 0.6 W. PoE 0.8 W Worst Case average power: Power connector 3.2 W. PoE 3.6 W. Worst case peak current: 1.2A@11VDC
Cellular standards, Bands	EMEA: LTE B1, B3, B7, B8, B20, B28. Fallback 3G. Americas: LTE B2, B4, B5, B12, B13, B14, B25, B26, B66. Fallback 3G.
Data speeds	Max download speed: 100 Mbit/s Max upload speed: 50 Mbit/s
Ethernet protocols	Transparent transfer of any TCP/UDP based protocol, Built-in firewall, NAT, and DHCP server.
Certifications	CE/RED, FCC, PTCRB, UL/cUL (E214107) Pending: Verizon, AT&T

Order Codes	Black EMEA: AWB1500 Americas: AWB1502	White top and black base EMEA: AWB1501 Americas: AWB1503
Included Components	Anybus Wireless Bolt LTE with 3-pin power screw connector. Quick start Guide, Safety & Compliance sheet. Global roaming SIM-card (optional activation with separate charge)	
Accessories	**024707** - Power Supply 90-264 VAC to 24VDC 19W world socket kit, 1.4-meter cable and 3-pole Bolt power connector. 024708 - Bolt base Protector; Read more about the base protector here. 024709 - Bolt base Protector and Mounting Bracket kit; Read more about the base protector here. **AWB4005** - Anybus PoE injector 100-240VAC. 35W incl. world power cable **AWB4006** - Anybus PoE injector 12-57VDC. 30W, dual PoE ports	
Warranty	3 years	