Anybus® BY HMS NETWORKS

Anybus® Wireless Bolt™

Bring Your Own Device (BYOD) | Easy to Use via Bluetooth or Wireless LAN connection.

The Wireless Bolt is an All in one solution device that's both flexible and mobile. Plug it in and BYOD either via Bluetooth or Wireless LAN (WLAN). If you want to learn more about the Wireless Bolt, check out the video where we talk more about the Bolt and what it's capable of.

→ Bolt overview → Bolt products

Fits harsh environments

Anybus Wireless Bolt has a unique form factor with it’s through hole

BYOD

Bring Your Own Device phone/tablet/pc. Bolt is easy to Use via Bluetooth or

Bluetooth or Wi-Fi

Anybus Wireless Bolt Serial enables you to connect industrial

mounting method. This fits the harsh environment often found in Factory Automation.

Wireless LAN connection.

machines and devices to a wireless network with Bluetooth or Wi-Fi.

Low Power technologies

Need an Internet connection for your remote equipment? Bolt IoT provides a cheap industrial Low Power Wide Area connection using the LTE technologies CAT-M1 and NB-IoT with 2G fallback.

Low Power and Low Bandwidth

Bolt IoT gives Low Power consumption, Low Bandwidth (25-300 kbit/s), Good geographical coverage and Lower Cost.

M50

Intuitive and interesting form-factor; M50 through-hole mount on any flat surface

Select your Anybus Wireless Bolt product

Anybus Wireless Bolt Serial

Anybus Wireless Bolt Serial 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®, or WiFi (Wireless LAN). It converts serial RS232/RS485 data to TCP/IP communication over the wireless link. It also works as a router for Modbus-TCP to Modbus-RTU enabling transparent access to all your existing serial Modbus devices.

With Anybus Wireless Bolt you get an All-in-one package featuring, connector, communication processor and integrated antenna in the same unit, with an industrial IP66/IP67 protection class.

FEATURES & BENEFITS

- Serial RS232/RS485 to wireless and TCP/IP conversion
- Communication over WiFi or Bluetooth
- Serial cable replacement “serial to wireless to serial”
- Wide baudrate support 2400 to 921600 Bit/s
- Special Modbus-RTU mode
- Modbus-TCP to Modbus-RTU routing
- Web-configuration over wireless or ethernet
- Available with white top Sunbolt enabling 30% higher surrounding temperature compared to black in direct sunlight
- Full compatibility with Anybus Wireless Bridge and Anybus Wireless Bolt Ethernet

Key Use Cases

Cable Replacement

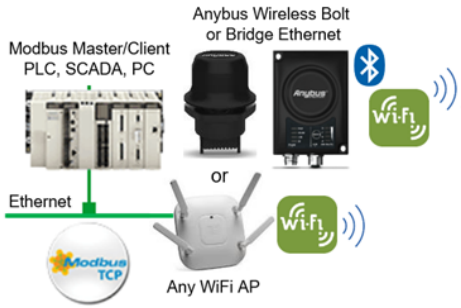
Point-to-point: Serial to Bolt to WLAN/BT to Bolt to Serial.

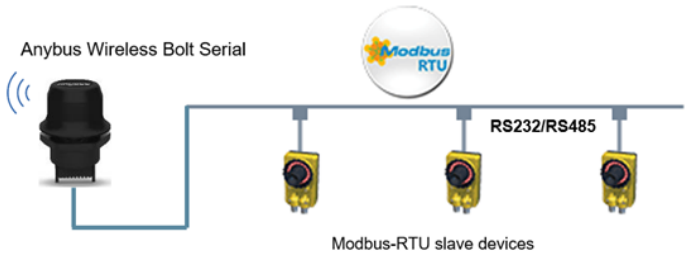
Common bus

Multi-point; Serial to Bolt to WLAN/BT to many Bolt to Serial Up to 8 participants (1 master and 7 slaves). Wireless multi-drop (master–slave). The Bolt is transparent. Message from host to Bolt is forwarded to all slaves. Every slave response forwarded to the host. Suitable for master/slave polled protocols with RS485, e.g. Modbus RTU.

Modbus-TCP to Modbus-RTU router/gateway

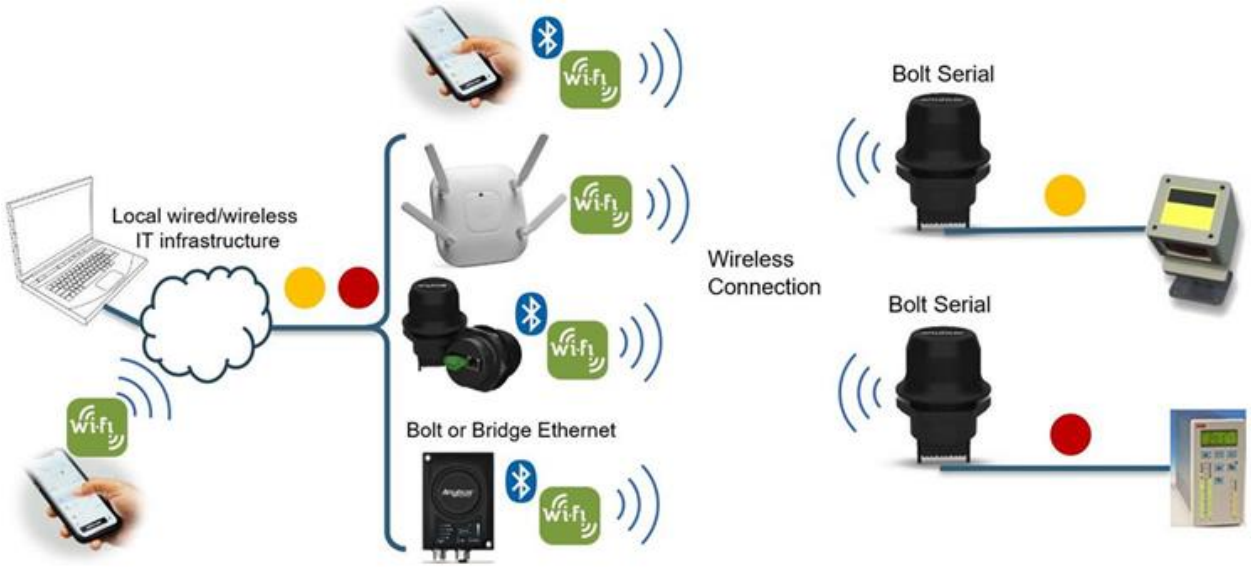
Converting serial RS232/RS485 data to TCP/IP over wireless and wired





TCP/IP Socket to RS232/RS485

WLAN/BT to one or several "Bolt Serial" to serial devices. Raw data to TCP port. Any serial protocol.



Technical Specifications

Serial interface	Serial: RS232/RS485 Baud rate: 2400 - 921600 bit/s Data bits 5-8, stop bits 1-2, parity None, Odd, Even. Transparent serial protocol transfer including support for Modbus-RTU and Modbus-TCP to Modbus-RTU transparent routing.
Ethernet interface	Ethernet: 10/100BASE-T with automatic MDI/MDIX auto cross-over detection. For configuration only.
WiFi interface	Wireless standards: IEEE 802.11 a, b, g, n, d. Operation modes: Access point or Client Wireless LAN bands: 2.4GHz and 5GHz RF output power: 18 dBm EIRP (including antenna gain 3dBi) Max number of stations 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
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	WiFi 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), UL NEMA 4X
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, Chile, Korea

Ordering Information

Included components

Anybus Wireless Bolt Serial

Including 18-pin connector, 1x Installation guide.

Order Code: AWB2010 (black)

Order Code: AWB2011 (Sunbolt white top, black base)

Starterkit

Anybus Wireless Bolt Serial Starterkit

Including: 2 x Bolt Serial, cables & 2 x power world supply

Order Code: AWB2305

Max 1 Pcs / Customer.

Accessories

Order Code: 024703; Cable kit. Molded RJ45 Bolt connector wired with 1.5m Ethernet cable and 24 VDC power supply (world) + Extra Ethernet cable fastening to avoid cable strand breaks.

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

Guarantee

3 years

For purchasing instructions and terms and conditions, see: How to buy

Anybus Wireless Bolt – Overview

Click to see more...

Next step – Contact us

Click to see contact options for this product area...

Case Study

Case Study 1080 Motion

Brochure

Wireless connectivity

1080 Motion: Anybus wireless technology used for athlete testing Swedish pioneers.

→ Read the full case study (PDF)

Read our wireless connectivity solutions brochure that will help you find what you are looking for.

→ Brochure