

Wireless Bolt and Sunbolt



- WLAN 2.4 GHz/5GHz access point or client
- Bluetooth 4.0 access point or client
- Range up to 100m
- Bluetooth Low Energy Central or Peripheral (GATT profile)
- Integrated antenna
- Digital input for controlling WLAN roaming, for example
- Configuration via web server, AT commands or EasyConfig mode
- IP66/67 top side (outside the control cabinet)

<https://www.wachendorff-prozesstechnik.de/en/WWBO>

Description

Attach a Wireless Bolt to your machine and use your laptop, smartphone or tablet to wirelessly access the Ethernet, serial and CAN interfaces of your devices. BYOD (Bring Your Own Device) makes expensive HMI's superfluous.

Thanks to its special design, the bolt is mounted in an M50 opening in the machine and seals off the control cabinet (IP66/67). The antenna is located outside the control cabinet and the connections for the Ethernet, RS232, RS485 and CAN interface are inside. Ranges of up to 100m can be realized. The unique method of handling interference makes Bluetooth the ideal wireless technology for industry. WLAN 2.4 GHz and 5 GHz, on the other hand, offer high bandwidths and very high connectivity and can be integrated into existing networks. Simultaneous operation of WLAN and Bluetooth is possible. Suitable for industrial Ethernet protocols such as Profinet, Ethernet/IP and ModbusTCP.

With the new Bluetooth Low Energy standard, applications can be realized in which Bluetooth Low Energy tags (e.g. sensors) are read out for access control or measurement data acquisition, for example. The Wireless Bolt is available in the normal, black version and as a Sunbolt for use in direct sunlight outdoors. Thanks to its UV-resistant white plastic, it develops significantly lower temperatures inside the housing.

Product details

WLAN:	IEEE 802.11a, b, g, n, d Operating modes: Access point or client 2.4 GHz channels: 1-11 5 GHz channels: 36-48 (U-NII band 1, 2, 2e and 3) Maximum number of clients for access point: 7 Net data throughput: >20 Mbit/s RF output power: 18dBm EIRP Max. Net data throughput: 20 Mbit/s, Link speed: max. 65 Mbit/s (802.11n SISO)
WLAN security:	WEP 64/128, WPA, WPA-PSK and WPA2, TKIP and AES/CCMP, LEAP, PEAP incl. MS-CHAP
Bluetooth:	Supported profiles: PANU & NAP Operating modes: Access point or client Maximum number of clients for access point: 7 Net data throughput: ~1Mbit/s RF output power: 14dBm EIRP

Bluetooth security:	Authentication & Authorization, Encryption & Data Protection, Privacy & Confidentiality, NIST Compliant, FIPS Approved
Bluetooth Low Energy (WWBO2030/WWBO2031):	Supported profiles: GATT Operating mode: Central or Peripheral (in preparation) RF output power: 10 dBm EIRP (including antenna gain 3dBi) With Central up to 7 connections simultaneously Max. Net data throughput: ~200 kbit/s Bluetooth Low Energy version: 4.0 dual mode Security: AES-CCM Cryptography
Bluetooth Low Energy security (WWBO2030/WWBO2031):	AES-CCM Cryptography
Antenna:	Integrated
Ethernet (WWBO2030/WWBO2031):	10/100BASE-T with automatic MDI/MDIX auto-crossover detection.
Supported protocols:	IP, TCP, UDP, HTTP, LLDP, ARP, DHCP client/server, DNS support. PROFINET IO, EtherNet/IP, Modbus TCP.
Serial (WWBO2010/WWBO2011):	Converts serial RS232/RS485 communication to wireless and TCP/IP communication Communication via WLAN or Bluetooth Cable replacement for serial cables: "serial to wireless to serial" Wide baud rate support 2400 to 921600 bit/s Special Modbus RTU mode Routing: Modbus TCP to Modbus RTU

CAN (WWBO2020/ WWBO2021):	Conversion of CAN 2.0A/B (11/29-bit identifier) to wireless and TCP/IP communication Supports e.g. J1939 and CANopen as well as the transparent transmission of CAN protocols Wireless communication via WLAN or Bluetooth Cable replacement for CAN cable when using 2 bolts: "CAN to wireless to CAN" Supports a wide baud rate range from 10 kbit/s up to 1000 kbit/s Up to 28 freely configurable CAN receive pass-through filters
Configuration:	via internal web server, AT commands, EasyConfig mode
Power supply:	Articles WWBO2000, WWBO2001, WWBO2010, WWBO2011, WWBO2020, WWBO2021: 9-30 VDC (-5% +20%), reverse polarity protection, power consumption: 0.7 W in idle state, 1.7 W max. Articles WWBO2030, WWBO2031: 19-36V DC, PoE (Power over Ethernet), DTE type 1 according to IEEE802.3af
Protection class:	IP66/67 top side (outside the control cabinet, IP21 underside (inside the control cabinet)
Ambient conditions:	Operating temperature: -40 °C to +65 °C Storage temperature: -40 °C to +85 °C Relative humidity according to EN 600068-2-78
Dimensions:	Diameter: 70mm, height: 70mm. Height outside switch cabinet 41mm
Assembly:	M50 screw incl. seal and nut (50.5mm opening required)
Weight:	81g
Certifications:	Radio Equipment Directive (RED) 2014/53/EU, FCC 47 CFR Part 15, Subpart B, ICES-003, MIC, NCC, UL
Manufacturer:	HMS Industrial Networks AB

WWBO2306	Wireless Bolt CAN starter kit (2x Bolt WWBO2020, power supply units, cable set) The promotion is limited to one starter kit per company
WWBO2330	Wireless Bolt Ethernet starter kit RJ45/PoE (2x Bolt WWBO2030, power supply units, Ethernet cable) The promotion is limited to one starter kit per company

Accessories Order no.

WWBO24704	Adapter cable with plug connector for the Wireless Bolt, 20 cm long cable and RJ45 socket
WWBO24703	Ethernet connection cable with RJ45 plug, 1.5 m long and 24V plug-in power supply unit
WWBO24708	Protective cover for underside of wireless bolt, protection class IP66/67
WWBO24709	Protective cover for underside and mounting bracket for wireless bolt, protection class IP66/67, mounting bracket for wall or pole mounting

Products Order no.

WWBO2000	Wireless Bolt Ethernet 18-pin connector
WWBO2001	Wireless Sunbolt Ethernet 18-pin connector
WWBO2010	Wireless Bolt Serial 18-pin connector
WWBO2011	Wireless Sunbolt serial 18-pin connector
WWBO2020	Wireless Bolt CAN 18-pin connection
WWBO2021	Wireless Sunbolt CAN 18-pin connector
WWBO2030	Wireless Bolt Ethernet RJ45/PoE
WWBO2031	Wireless Sunbolt Ethernet RJ45/PoE
WWBO2305	Wireless Bolt Serial Starter Kit (2x Bolt WWBO2010, power supply units, cable set) The promotion is limited to one starter kit per company



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