

Zebra Bluetooth® Bridges

Zebra Bluetooth IoT Bridges gather critical location data for actionable business insights

Edge-data and IoT technologies are transforming today's industrial networks. Zebra Bluetooth Low-Energy products are inexpensive relative to other active beacon solutions while providing all the capabilities of these technologies in an easy-to-manage solution. Zebra Bluetooth IoT bridges and transceivers leverage Bluetooth low-energy and Wi-Fi™ technologies and work in tandem with Zebra Bluetooth Beacons to provide near real-time location data to help companies maximize business efficiencies.



The Zebra SB5200 Fixed-Location IoT Bridge

Zebra's SB5200 is an enhanced, higher performance IoT bridge in the same physical package as the MB5000. This device more efficiently receives and processes BLE beacons. It has expanded memory and operates over an expanded temperature range. The SB5200 will process more BLE beacons faster and is ideal for capturing BLE beacons in environments where there are large numbers of beacons.

The Zebra MB5000 Fixed-Location IoT Bridge

Easy to Deploy and Manage

Zebra MB5000 Fixed-Location IoT Bridges are easy to configure, install and manage, and can be deployed on pre-existing Wi-Fi networks. They capture Bluetooth low-energy beacon signals then filter and backhaul over Wi-Fi.

Fully Configurable

Fully configurable to meet custom requirements, Zebra Bluetooth IoT bridges and transceivers deliver critical data to identify asset location, improve workflows and optimize productivity and profitability.

Secure and Convenient

Protected with the best-of-breed security protocols, Zebra IoT bridges are easy to manage securely using 2.5GHz and 5GHz Wi-Fi with WPA2 personal and enterprise encryption. This allows configuration changes and network updates to be pushed remotely over the air and en masse from a server securely without needing on-site support.

The Zebra MB6000 Mobile IoT Bridge

Mobile and Wearable to Extend Asset Visibility

Zebra MB6000 Mobile IoT Bridges work with fixed-location bridges to form a comprehensive location-data solution configurable to your unique requirements. They are secure, run automatically and extend your visibility.

The Zebra SB2000 Enhanced Indoor Beacon

The enhanced indoor beacon is a BLE bridge that can periodically listen for nearby BLE beacons and then broadcast BLE packets containing its own ID and the IDs for any nearby beacons. The enhanced indoor beacon is infrastructure installed in specific locations throughout a facility. The device self-locates nearby assets and enables improved location performance via data crowdsourcing using a minimum of fixed infrastructure which can be complimented with BLE-enabled mobile computers, printers or other bridges. The enhanced indoor beacon is compatible with the Bluetooth® low energy standard.

The Zebra SB2100 Dual-Stream Enhanced Indoor Beacon

The dual-stream enhanced indoor beacon is two beacons in one. It performs all the proximity and forwarding functions of the SB2000 Enhanced Indoor Beacon while at the same time performing like a regular, stand-alone MB2000 Indoor Beacon. The Dual-Stream SB2100 can be installed as fixed infrastructure for non real-time asset visibility while also serving as a waypoint beacon to assist locating mobile BLE bridges, mobile phones, or enabling wayfinding applications. Combining the functionality of the Enhanced Indoor Beacon with the functionality of a fixed indoor beacon provides a new level of value. Initial hardware infrastructure costs are reduced while the associated system capability is dramatically expanded. Solution providers can now leverage all of the benefits of a hybrid BLE architecture using fewer costly bridge devices and fewer fixed beacons while getting the performance and functionality of two beacons in one.

Specifications

MPACT-SB5200-01-WR	
Physical Characteristics	
Dimensions	5.2 in. (132.3 mm) x 3.67 in. (93.3 mm) x 1.19 in. (30.2 mm) including 3M® VHB tape
Performance Characteristics	
Wireless Compatibility	Wi-Fi 2.4GHz 802.11 b/g/n Wi-Fi 5GHz 802.11 a/n Bluetooth Low Energy (5.1)
Beacon Processing	Typically 2-3 times more than the MB5000
Wi-Fi Security Compatibility	WPA/WPA2 Personal (PSK: TKIP/AES) WPA/WPA2 Enterprise (TKIP and AES: PEAP-MSCHAPv2)
Antenna Type(s)	Wi-Fi omni-directional Bluetooth directional patch
Compatible Beacon Modes	iBeacon™, MPACT, Battery Save and SecureCast
Location Capability	Proximity or full x,y location with Zebra's Location Engine used depending on the location engine
Location Engine/ Solution	Zebra Location Engine/Zebra Motion Works Solutions or similar solutions
Availability	Available only as part of Zebra solutions and approved Zebra partner solutions
User Environment	
Operating Temp.	5°F to 131°F/-15°C to 55°C
Power	5V dc USB cable and power adapter connected to a standard A/C wall outlet (use only Zebra-qualified USB cable and adapters, sold separately)
MPACT-MB5000-01-WR	
Physical Characteristics	
Dimensions	5.2 in. (132.3 mm) x 3.67 in. (93.3 mm) x 1.19 in. (30.2 mm) including 3M VHB tape
Performance Characteristics	
Wireless Compatibility	Wi-Fi 2.4GHz 802.11 b/g/n Wi-Fi 5GHz 802.11 a/n Bluetooth Low Energy (4.0 and 4.1)
Wi-Fi Security Compatibility	WPA/WPA2 Personal (PSK: TKIP/AES) WPA/WPA2 Enterprise (TKIP and AES: PEAP-MSCHAPv2)
Antenna Type(s)	Wi-Fi omni-directional Bluetooth directional patch
Compatible Beacon Modes	iBeacon, MPACT, Battery Save and SecureCast
Location Capability	Proximity or full x,y location depending on the location engine used
Location Engine/ Solution	Zebra Location Engine/Zebra Motion Works Solutions or similar solutions
Availability	Available only as part of Zebra solutions and approved Zebra partner solutions
User Environment	
Operating Temp.	32°F to 104°F/0°C to 40°C
Power	5V dc USB cable and power adapter connected to a standard A/C wall outlet (use only Zebra-qualified USB cable and adapters, sold separately)
Regulatory	
Classification	EMI/EMC (FCC), safety (UL), and CE Contact Zebra for country certification details

MPACT-MB6000-01-WR	
Physical Characteristics	
Dimensions	2.52 in. (64 mm) x 1.73 in. (44 mm) x 0.91 in. (23.2 mm)
Performance Characteristics	
Wireless Compatibility	Wi-Fi 2.4GHz 802.11 b/g/n Wi-Fi 5GHz 802.11 a/n Bluetooth Low Energy (4.0 and 4.1)
Wi-Fi Security	WPA/WPA2 Personal (PSK: TKIP/AES) WPA/WPA2 Enterprise (TKIP and AES: PEAP-MSCHAPv2)
Compatible Beacon Modes	iBeacon, MPACT, Battery Save and SecureCast
Antenna Type(s)	Wi-Fi omni-directional Bluetooth directional patch
I/O (input/output)	Input: Two buttons for on/off and control Output: Two multi-color LEDs
Availability	Available only as part of Zebra solutions and approved Zebra partner solutions
User Environment	
Operating Temperature	32°F to 104°F/0°C to 40°C
Battery Life Estimate	18 hours on a full charge
Battery Charging	Requires the MB6000-CHRGR dock and A/C cable (sold separately, available from Zebra)
MPACT-SB2000-01-WR	
Physical Characteristics	
Dimensions	3.12 in. (79.2 mm) x 1.76 in. (44.7 mm) x 0.96 in. (24.4 mm)
Weight	86 g
Performance Characteristics	
Wireless	Bluetooth 5.1 (Bluetooth Low Energy)
Beacon Interval	Configurable in 100ms intervals
Battery	Two replaceable, standard AA batteries
Transmit Power	5dBm to -23dBm (EIRP) Configurable in 1dB steps
Estimated Operational Life	The approximate life is 2 yrs with the following settings: Receive period = 5 seconds once every 10 minutes Transmit/blink period = once every 2 seconds Actual battery life observed will depend on the actual configuration and transmit/receive periods used. The receive period is relatively large/slow to preserve battery life. This device is not intended for real-time asset visibility solutions
Bluetooth Security	128 bit AES

Markets and Applications

Manufacturing

- Inventory management
- Asset and tool management
- Automated receipt and invoicing
- Locate raw-in-process and work-in-process

Transportation and Logistics

- Parcel tracking
- Workflow management
- Resource optimization
- Load-in and load-out management
- Equipment and asset management

Retail

- Customer engagement
- Mobile marketing campaigning
- Inventory/equipment management
- Workforce optimization
- Maintenance management

Healthcare

- Asset visibility and tracking
- Physical inventory control
- Cleaning and disposal tracking
- Rental management
- Compliance control
- Equipment maintenance

PRODUCT SPEC SHEET

ZEBRA BLUETOOTH® BRIDGES

User Environment	
Operating Temp.	32°F to 104°F/0°C to 40°C
On/Off Switch	Yes
LED	Yes, with blink patterns representing various modes of operation
Antenna Type	Directional antenna with 120°
Modes	iBeacon, MPACT, Battery Save and SecureCast
Installation Options	Sticky Tape, Secure Mounting brackets, Tie Wrap
Product Compatibility	For use only with the MB5000 Bridge running firmware 2.7.6.0-038D or later and Zebra BLE beacons and SB5200
Captured Beacon Quantity	Up to approximately 50 nearby beacons

MPACT-SB2100-01-WR

Physical Characteristics

Dimensions	3.12 in. (79.2 mm) x 1.76 in. (44.7 mm) x 0.96 in. (24.4 mm)
Weight	86 g

Captured Beacon Stream (CBS)

Wireless	Bluetooth 5.1 (Bluetooth Low Energy)
Beacon Interval	Configurable in 100ms intervals
Transmit Power	5dBm to -23dBm (EIRP) Configurable in 1dB steps
Estimated Operational Life	The approximate life is 2 yrs with the following settings: Receive period = 5 seconds once every 10 minutes Transmit/blink period = once every 2 seconds Actual battery life observed will depend on the actual configuration and transmit/receive periods used. The receive period is relatively large/slow to preserve battery life. This device is not intended for real-time asset visibility solutions
Bluetooth Frequency	2.4 GHz, custom BLE packet

Waypoint Beacon Stream (WBS)

Wireless	Bluetooth 5.1 (Bluetooth Low Energy Technology)
Modes	iBeacon
Beacon Interval	Configurable in 100 ms intervals
Transmit Power	+5 dBm to -23 dBm (EIRP) configurable
Estimated Operational Life	2 years with 2 second blink period but dominated by CBS configuration

User Environment

Operating Temp.	32°F to 104°F/0°C to 40°C
On/Off Switch	Yes
LED	Yes, with blink patterns representing various modes of operation
Installation Options	Sticky Tape, Secure Mounting brackets, Tie Wrap

Product Compatibility	The custom BLE of the captured beacon stream only works with Zebra's BLE bridges. The iBeacon Waypoint Beacon Stream is compatible with iBeacon compatible products
Captured Beacon Quantity	Up to 15 nearby beacons depending on environment

Warranty

Subject to the terms of Zebra's hardware warranty statement, the SB5200, SB2000 and SB2100 are warranted against defects in workmanship and materials for a period of 90 days from the date of shipment. The MB6000 and MB5000 are warranted against defects in workmanship and materials for a period of 12 months from the date of shipment. For the complete Zebra hardware product warranty statement, go to: www.zebra.com/warranty

The specifications herein are subject to change without notice and actual performance will in some cases depend on product configuration, environment and actual usage



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