

MPACT LOCATION & ANALYTICS HARDWARE INSTALLATION GUIDE VERSION 1.0

Draft

Draft

TABLE OF CONTENTS

Chapter 1 MPact Bluetooth® Smart beacon Overview

Chapter 2 Beacon Hardware Installation

2.1 Beacon Part Number: MPACT-T1B20-000-WR	2-2
2.1.1 Installing the Tie-Wrap Style Beacon	2-2
2.2 Beacon Part Number: MPACT-T1B10-000-WR	2-3
2.2.1 Installing the Universal Style Beacon	2-3
2.3 Beacon Part Number: MPACT-MB2000-01-WR	2-5
2.3.1 Installing the Indoor Style Beacon	2-5
2.4 Beacon Part Number: MPACT-MB3000-01-WR	2-6
2.4.1 Installing the USB Style Beacon	2-6
2.5 Beacon Battery Replacement	2-7
2.5.1 Replacing Battery: MPACT-T1B20-000-WR and MPACT-T1B10-000-WR	2-7
2.5.2 Replacing Battery: MPACT-MB2000-01-WR	2-8
2.6 Beacon Hardware Regulatory Information	2-9

Appendix A Customer Support

Draft

ABOUT THIS GUIDE

This chapter is organized into the following sections:

- [*Using the Documentation*](#)
- [*Zebra Technologies Corporation \("Zebra"\) End-User Software License Agreement*](#)

Draft

Using the Documentation

The following sections provide information about the document and notational conventions used in the guides, and provides a list of related documentation.

Document Conventions

The following conventions are used in this manual to draw your attention to important information:



NOTE: Indicates tips or special requirements.



CAUTION: Indicates conditions that can cause equipment damage or data loss.



WARNING! Indicates a condition or procedure that could result in personal injury or equipment damage.

Revision History

This guide has the following release and revision milestone history:

<i>Release</i>	<i>Date</i>	<i>Change</i>
Revision A	June, 2015	Initial release of document with new MPact beacons added.

Notational Conventions

The following notational conventions are used in this document:

- Italics are used to highlight specific items in the general text, and to identify chapters and sections in this and related documents
- Bullets (•) indicate:
 - lists of alternatives
 - lists of required steps that are not necessarily sequential
 - action items
- Sequential lists (those describing step-by-step procedures) appear as numbered lists

Related Documentation

MPact Location and Analytics documentation includes the following:

- *MPact Location & Analytics Deployment Guide*
- *MPact Location & Analytics Server Reference Guide*
- *MPact Location & Analytics Server API Guide*
- *MPact Location & Analytics Toolbox Reference Guide*
- *MPact Location & Analytics Client Software Development Kit*

Draft

Zebra Technologies Corporation ("Zebra") End-User Software License Agreement

BY INSTALLING AND/OR USING THIS PRODUCT, YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT AND AGREE TO BE BOUND ITS TERMS. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, ZEBRA IS NOT WILLING TO LICENSE THE PRODUCT TO YOU, AND YOU MUST NOT INSTALL OR USE THIS PRODUCT.

Definitions

Grant of License

Zebra Technologies Corporation ("Zebra") grants you ("Licensee" or "you") a personal, nonexclusive, nontransferable, revocable, nonassignable, limited license to use the software and documentation ("Product(s)") subject to the terms and conditions of this Agreement. You shall use the Products only for your internal business purposes, exclusively to support Zebra devices. Any use of the Products outside of the conditions set forth herein is strictly prohibited and will be deemed a breach of this Agreement resulting in immediate termination of your License. In the event of a breach of this Agreement, Zebra will be entitled to all available remedies at law or in equity (including immediate termination of the license without notice, immediate injunctive relief and repossession of all Products unless Licensee is a Federal agency of the United States Government).

You shall not distribute, sublicense, rent, loan, lease, export, re-export, resell, ship or divert or cause to be exported, re-exported, resold, shipped or diverted, directly or indirectly, the Products under this Agreement. You shall not, and shall not permit others to: (i) modify, translate, decompile, bootleg, reverse engineer, disassemble, or extract the inner workings of the Products; (ii) copy the look-and-feel or functionality of the Products; (iii) remove any proprietary notices, marks, labels, or logos from the Products; (iv) rent or transfer all or some of the Products to any other party without Zebra's prior written consent; or (v) utilize any computer software or hardware which is designed to defeat any copy protection device, should the Products be equipped with such a protection device.

Title to all copies of Products will not pass to Licensee at any time and remains vested exclusively in Zebra. All intellectual property developed, originated, or prepared by Zebra in connection with the Products remain vested exclusively in Zebra, and this Agreement does not grant to Licensee any intellectual property rights.

Portions of the Products are protected by United States patent and copyright laws, international treaty provisions, and other applicable laws. Therefore, you must treat the Products like any other copyrighted material (e.g., a book or musical recording) except that you may make one copy of the Product solely for back-up purposes. Unauthorized duplication of the Products constitutes copyright infringement, and in the United States is punishable in federal court by fine and imprisonment.

Limited Warranty

Zebra warrants for a period of ninety (90) days from your receipt of the Products to you that the Software, under normal use, will perform substantially in accordance with Zebra's published specifications for that release level of the Software. The written materials are provided "AS IS" and without warranty of any kind. Zebra's entire liability and your sole and exclusive remedy for any breach of the foregoing limited warranty will be, at Zebra's option, the provision of a downloadable patch or replacement code, or a refund of the unused portion of your bargained for contractual benefit up to the amount paid for the Products.

Disclaimer

THIS LIMITED WARRANTY IS THE ONLY WARRANTY PROVIDED BY ZEBRA, AND ZEBRA MAKES, AND YOU RECEIVE, NO OTHER WARRANTIES OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY, OR IN ANY COMMUNICATION WITH YOU. ZEBRA SPECIFICALLY DISCLAIMS ANY WARRANTY INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT, OR FITNESS FOR A PARTICULAR PURPOSE. ZEBRA DOES NOT WARRANT THAT THE PRODUCTS WILL MEET YOUR REQUIREMENTS, OR THAT THE OPERATION OF THE PRODUCTS WILL BE UNINTERRUPTED OR ERROR FREE, OR THAT DEFECTS IN THE PRODUCTS WILL BE CORRECTED. ZEBRA MAKES NO WARRANTY WITH RESPECT TO THE

CORRECTNESS, ACCURACY, OR RELIABILITY OF THE PRODUCTS. Some jurisdictions do not allow the exclusion of implied warranties, so the above exclusion may not apply to you.

Limitation of Liability

THE TOTAL LIABILITY OF ZEBRA UNDER THIS AGREEMENT FOR DAMAGES SHALL NOT EXCEED THE FAIR MARKET VALUE OF THE PRODUCTS LICENSED UNDER THIS AGREEMENT. IN NO EVENT WILL ZEBRA BE LIABLE IN ANY WAY FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST BUSINESS PROFITS, OR LIABILITY OR INJURY TO THIRD PERSONS, WHETHER FORESEEABLE OR NOT, REGARDLESS OF WHETHER ZEBRA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some jurisdictions do not permit limitations of liability for incidental or consequential damages, so the above exclusions may not apply to you. This Limitation of Liability provision survives the termination of this Agreement and applies notwithstanding any contrary provision in this Agreement. Licensee must bring any action under this Agreement within one (1) year after the cause of action arises.

Maintenance

Unless provided for in a separate agreement, Zebra shall not be responsible for maintenance or field service of the Products.

High Risk Activities

The Products are not fault-tolerant and are not designed, manufactured or intended for use or resale as on-line control software in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines, or weapons systems, in which the failure of the Products could lead directly to death, personal injury, or severe physical or environmental damage ("High Risk Activities"). Zebra and its suppliers specifically disclaim any express or implied warranty of fitness for High Risk Activities, and if you elect to use the Products in any High Risk Activities, you agree to indemnify, defend, and hold Zebra harmless from and against any and all costs, damages, and losses related to that use.

U.S. Government

If you are acquiring the Products on behalf of any unit or agency of the U.S. Government, the following shall apply. Use, duplication, or disclosure of the Products is subject to the restrictions set forth in subparagraphs (c) (1) and (2) of the Commercial Computer Software - Restricted Rights clause at FAR 52.227-19 (JUNE 1987), if applicable, unless being provided to the Department of Defense. If being provided to the Department of Defense, use, duplication, or disclosure of the Products is subject to the restricted rights set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 (OCT 1988), if applicable. Products may or may not include a Restricted Rights notice, or other notice referring specifically to the terms and conditions of this Agreement. The terms and conditions of this Agreement shall each continue to apply, but only to the extent that such terms and conditions are not inconsistent with the rights provided to you under the aforementioned provisions of the FAR and DFARS, as applicable to the particular procuring agency and procurement transaction.

Assignment

Except as otherwise provided in this section, neither party may assign this Agreement, or any of its rights or obligations under this Agreement, without the prior written approval of the other party, which will not be unreasonably withheld. Any attempted assignment, delegation, or transfer without the necessary approval will be void. Notwithstanding the foregoing, for any Zebra acquisition, merger, consolidation, reorganization, or similar transaction, or any spin-off, divestiture, or other separation of a Zebra business, Zebra may, without the prior written consent of the other party: (i) assign its rights and obligations under this Agreement, in whole or in part, or (ii) split and assign its rights and obligations under this Agreement so as to retain the benefits of this Agreement for both Zebra and the assignee entity(ies) (and their respective Affiliates) following the split.

Governing Law

This Agreement shall be governed by the laws of the United States of America to the extent that they apply and otherwise by the laws of the State of New York without regard to its conflict of laws provisions or by the internal substantive laws of the country to which the Products is shipped if end-user customer is a sovereign governmental entity. The terms of the U.N. Convention on Contracts for the International Sale of Goods do not apply. In the event that the Uniform Computer information Transaction Act, any version of this Act, or a substantially similar law (collectively "UCITA") becomes applicable to a Party's performance under this Agreement, UCITA does not govern any aspect of this End User License Agreement or any license granted under this End-User License Agreement, or any of the parties' rights or obligations under this End User License Agreement. The governing law will be that in effect prior to the applicability of UCITA.

Compliance with Laws

Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Zebra and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision will be a material breach of this Agreement, permitting immediate termination by Zebra.

Third Party Software

The Products may contain one or more items of Third-Party Software. The terms of this Agreement govern your use of any Third-Party Software UNLESS A SEPARATE THIRD-PARTY SOFTWARE LICENSE IS INCLUDED, IN WHICH CASE YOUR USE OF THE THIRD-PARTY SOFTWARE WILL THEN BE GOVERNED BY THE SEPARATE THIRD-PARTY LICENSE.

Open Source Software

The Products may contain one or more items of Open Source Software. Open Source Software is software covered by a publicly available license governed solely under Copyright law, whereas the complete terms and obligations of such license attach to a licensee solely through the act of copying, using and/or distribution of the licensed software, such obligations often include one or more of attribution obligations, distribution obligations, copyleft obligations, and intellectual property encumbrances. The use of any Open Source Software is subject to the terms and conditions of this Agreement as well as the terms and conditions of the corresponding license of each Open Source Software package. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the Open Source Software license, the applicable Open Source Software license will take precedence. Copies of the licenses for the included Open Source Software, if any, as well as their attributions, acknowledgements, and software information details, are provided in the electronic copy of this Agreement, which is available in the Legal Notices or README file associated with the Product. Zebra is required to reproduce the software licenses, acknowledgments and copyright notices as provided by the authors and owners, thus, all such information is provided in its native language form, without modification or translation. Depending on the license terms of the specific Open Source Software, source code may not be provided. Please reference and review the entire Open Source Software information to identify which Open Source Software packages have source code provided or available. For instructions on how to obtain a copy of any source code made publicly available by Zebra related to Open Source Software distributed by Zebra, you may send your request (including the Zebra Product name and version, along with the Open Source Software specifics) in writing to: Zebra Technologies Corporation, Open Source Software Director, Legal Department, 3 Overlook Point, Lincolnshire, IL 60069 USA.

©2015 ZIH Corp and/or its affiliates. All rights reserved. Zebra and the stylized Zebra head are trademarks of ZIH Corp., registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners.

CHAPTER 1 MPACT BLUETOOTH® SMART BEACON OVERVIEW

The MPact Platform employs Bluetooth® Smart beacons which can operate in various modes including Battery Save, iBeacon™ and MPact to provide the only indoor locationing platform to unify Wi-Fi and Bluetooth® Smart Technology to capture more analytics, accuracy and insight into consumers purchasing preferences. Use Bluetooth® Smart beacons to learn which aisles and products customers prefer, their shopping history, and what influences their buying decisions to create interactions that lead to transactions.

Beacon placements can be adjusted within a deployment floor plan, and depending on the mode selected, their battery life can be tracked over time. Administrators can cursor over a beacon on a site's floor plan to assess the beacon's remaining battery life.

This guide includes the following sections that describe the MPact beacons, characteristics, installation, and battery replacement.

- *Beacon Hardware Specifications and Installation*
 - *Beacon Part Number: MPACT-T1B20-000-WR*
 - *Beacon Part Number: MPACT-T1B10-000-WR*
 - *Beacon Part Number: MPACT-MB2000-01-WR*
 - *Beacon Part Number: MPACT-MB3000-01-WR*
- *Beacon Battery Replacement*
 - *Replacing Battery: MPACT-T1B20-000-WR and MPACT-T1B10-000-WR*
 - *Replacing Battery: MPACT-MB2000-01-WR*

Draft

CHAPTER 4 BEACON HARDWARE SPECIFICATIONS AND INSTALLATION

The following setup processes must be complete as a prerequisite to installing beacon hardware:

- *MPact Server Installation and Setup* - see the *MPact Location & Analytics Deployment Guide*
- *MPact Toolbox and Beacon Installation* - see the *MPact Location & Analytics Deployment Guide*

Lozier® Shelves

Beacon brackets for the MPACT-T1B20-000-WR and MPACT-T1B10-000-WR can be used with the following Lozier products:

- TL Shelf
- DL Shelf
- HL Shelf
- Standard Base Deck

4.1 Beacon Part Number: MPACT-T1B20-000-WR

As a prerequisite, the following hardware items are required to mount the tie-wrap style beacon housing to a pole or similar structure:

- Beacon (tie-wrap style housing), part number - MPACT-T1B20-000-WR
 - When ordering, use the following part number: MPAC-T1B20-250-WR (Box of 25)
- Plastic tie wraps for attaching each beacon housing to the shelf

4.1.1 Installing the Tie-Wrap Style Beacon

Tie-wrap beacon housings are designed to attach to vertical or horizontal poles or similar mounting surfaces. In [Figure 4-1](#) below, there are openings located on the back of the beacon housing allowing a tie wrap to be inserted through the openings and wrapped around a pole or similar structure.

Notice the up arrow located on the middle of the beacon housing. This arrow indicates the optimal orientation for the beacon to function properly. Additionally, the smooth front of the beacon should face outward toward the aisle where client devices are expected to engage (dwell).

To activate a beacon part number - MPACT-T1B20-000-WR:

1. Activate one or more beacons by pulling the mylar strip off the beacon housing.

Figure 4-1 shows a beacon with the mylar strip attached to the left-hand side of the housing.

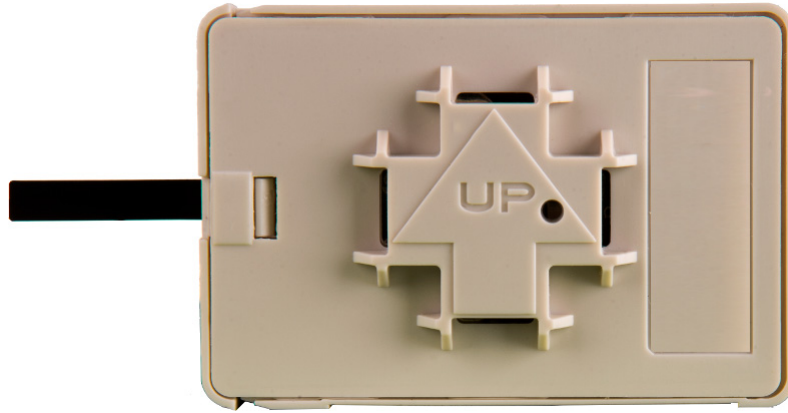


Figure 4-1 Tie Wrap Style Beacon - Part Number - MPACT-T1B20-000-WR

When installing numerous beacons, group beacons by category configurations and activate the beacons prior to scanning the barcodes and associating them with positions in the Toolbox.

2. After pulling off the last mylar strip for the group of deployment beacons, you have 20 seconds to associate the beacon in either offline or online mode in the Toolbox application.
3. From MPact Toolbox, select a site floor plan and an unassigned position for the beacon. Refer to the *MPact Location & Analytics Deployment Guide* for information on how to install and deploy the beacon from the Toolbox.

To mount the tie wrap beacon to a pole or similar structure:

1. Mount the beacon to a pole or similar structure using the plastic tie wrap. Tie can be placed vertically or horizontally but the arrow should still point up.

4.2 Beacon Part Number: MPACT-T1B10-000-WR

As a prerequisite, the following hardware items are required to mount beacon brackets to a Lozier style shelf:

- [Lozier® Shelves](#)
- Beacon: Part number - MPACT-T1B10-000-WR
 - When ordering, use the following part number: MPACT-T1B10-250-WR (Box of 25)
- Bracket mount, one of the following:
 - MPACT Metal Lozier Bracket: Part number MPACT-A1010-004-WR
 - MPACT Plastic Lozier Bracket: Part number MPACT-A1010-001-WR
- Phillips head screw driver for mounting the bracket (metal brackets only) to the Lozier shelf

4.2.1 Installing the Universal Style Beacon

Figure 4-2 shows a *universal* style beacon. While there is no up arrow on this beacon's housing, the beacon should be oriented similar to the tie wrap style of beacon housing, see [Beacon Part Number: MPACT-T1B20-000-WR](#).

Notice the up arrow located on the middle of the beacon housing. This arrow indicates the optimal orientation for the beacon to function properly. Additionally, the smooth front of the beacon should face outward toward the aisle where client devices are expected to engage (dwell).

To activate a beacon part number - MPACT-T1B10-000-WR:

1. Activate one or more beacons by pulling the mylar strip off the beacon housing.

Figure 4-2 shows a beacon with the mylar strip attached to the left-hand side of the housing.



Figure 4-2 Universal Style Beacon - Part Number - MPACT-T1B10-000-WR

When installing numerous beacons, group beacons by category configurations and activate the beacons prior to scanning the barcodes and associating them with positions in the Toolbox.

2. After pulling off the last mylar strip for the group of deployment beacons, you have 20 seconds to associate the beacon in either offline or online mode in the Toolbox application.
3. From MPact Toolbox, select a site floor plan and an unassigned position for the beacon. Refer to the *MPact Location & Analytics Deployment Guide* for information on how to install and deploy the beacon from the Toolbox.

To mount the universal style beacon to [Lozier® Shelves](#):

1. Mount the universal beacon shelf-bracket on the shelf:
 - *Metal brackets*: Fit in place and tighten onto the shelving unit using a phillips-head screw driver.
 - *Plastic brackets*: Fit in place and snap onto the shelving unit.
3. Fit the beacon's universal style housing into the bracket (mylar tap pointing up) and turn the beacon housing clockwise 90 degrees.

The barcode label should face up toward the ceiling and the smooth front of the beacon should face out toward the aisle where the mobile client is expected to engage.

There are two styles of bracket mounts from which to choose, either metal or plastic for Beacon: Part number - MPACT-T1B10-000-WR.

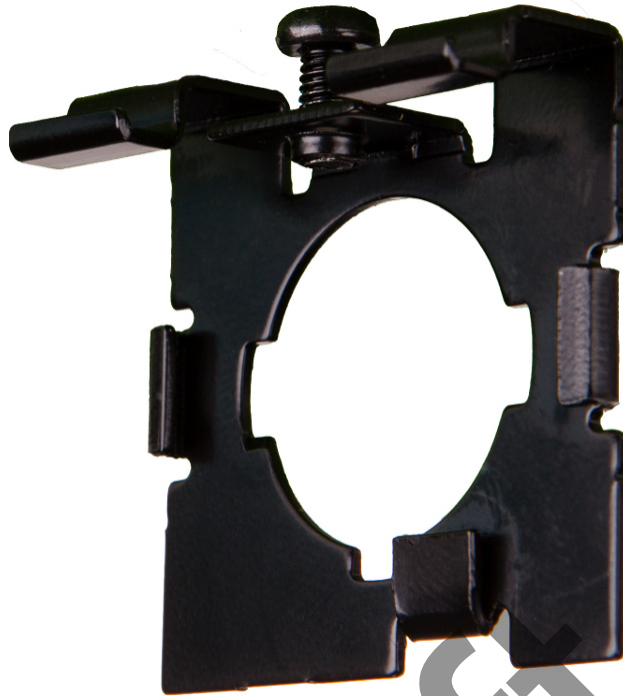


Figure 4-3 Universal Style Metal Bracket - Part Number MPACT-A1010-004-WR

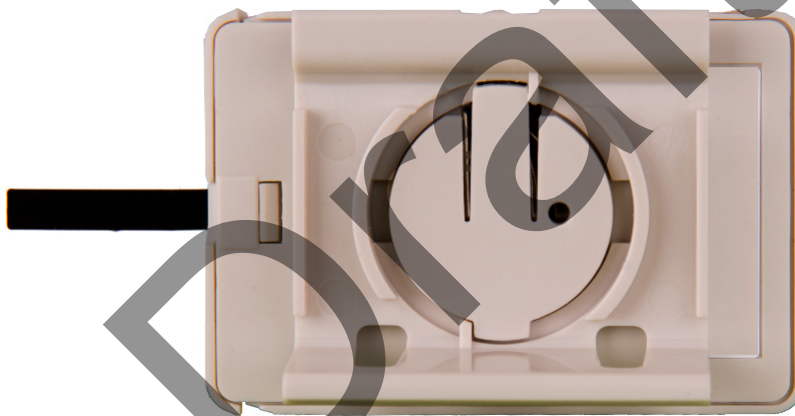


Figure 4-4 Universal Style Plastic Bracket with Beacon- Bracket Part Number MPACT-A1010-001-WR

4.3 Beacon Part Number: MPACT-MB2000-01-WR

As a prerequisite, the following hardware items are required to mount a beacon to a wall.

- [Lozier® Shelves](#)
- Beacon: Part number - MPACT-MB2000-01-WR
 - When ordering, use the following part number: MPACT-MB2000-01-WR (Box of 25)

- Bracket mount kit see [Figure 4-6](#) (included with part number MPACT-MB2000-01-WR):
 - Metal bracket
 - Two 1 inch Phillips head tap screw, and two 1 inch plastic wall inserts
 - Phillips head screw driver for mounting the bracket (metal brackets only) to a wall

4.3.1 Installing the Indoor Style Beacon

To activate a beacon part number - MPACT-MB2000-01-WR:

1. Activate one or more beacons by pulling the mylar strip out from inside the beacon housing.

[Figure 4-5](#) shows the back of a *Indoor style beacon*.



Figure 4-5 Indoor Style Beacon - MPACT-MB2000-01-WR

When installing numerous beacons, group beacons by category configurations and activate the beacons prior to scanning the barcodes and associating them with positions in the Toolbox.

2. After pulling off the last mylar strip for the group of deployment beacons, you have 20 seconds to associate the beacon in either offline or online mode in the Toolbox application.
3. From MPact Toolbox, select a site floor plan and an unassigned position for the beacon. Refer to the MPact Location & Analytics Deployment Guide for information on how to install and deploy the beacon from the Toolbox.

To mount the universal style beacon to a wall:

1. From MPact Toolbox, select a site floor plan and an unassigned position for the beacon.
2. Mount the Indoor Metal beacon wall bracket on the wall with the provided screws and plastic wall inserts:
 - *Bracket mount kit.*

There is one styles of bracket mount included with the Indoor Style Beacon: Part number - MPACT-MB2000-01-WR.

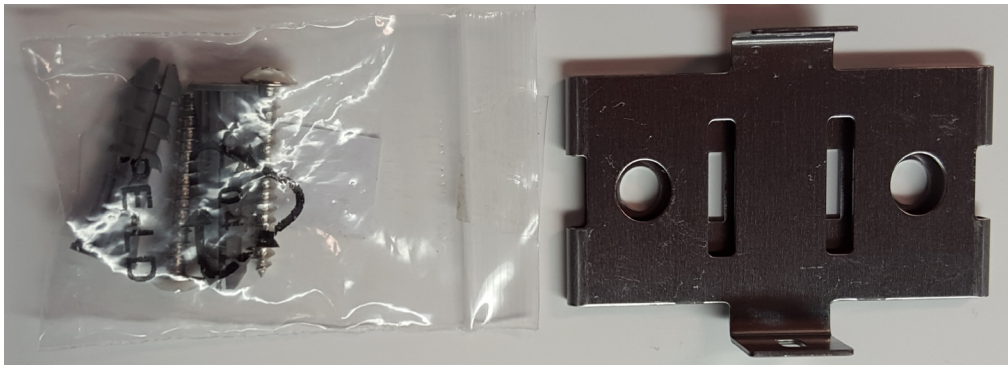


Figure 4-6 Metal Beacon Wall Mount Bracket: MPACT-MB2000-01-WR

3. Fit the beacon's housing into the bracket.

The barcode label should face up toward the ceiling and the smooth front of the beacon should face out toward the aisle where the mobile client is expected to engage.



NOTE: Ensure the beacon is positioned correctly, because once the beacon is mounted on the bracket it will be difficult to remove the beacon.

Mode	Sleep	Configuration	Broadcast	LED Behavior
0-2 seconds	No action	No action	No action	
2+ -5	Broadcast	Broadcast	Broadcast	Slow flash when button flashes 300 ms on / 300ms off.
5+ - 10	Move to configuration	Remain in configuration	Move to configuration	Fast flash – 100ms /on & off
+ 10	Sleep	Sleep	Sleep	Solid light

MPact AA Battery Beacons	Indoor Wall Beacons
Wireless	Bluetooth 4.0 (Bluetooth Smart)
Modes	Battery Save, iBeacon, MPact, SecureCast
Beacon Channel	Configurable
Beacon Interval	Configurable
Dimensions	3.12" x 1.76" x 0.96"
Battery	Replaceable, Standard 2 AA Batteries

Transmit Power	5 dBm to -23 dBm
	Configurable from 5 dBm to -23 dBm
Antenna Type	Directional Antenna with 120 Degree Beamwidth
Operating Temperature	32° F to 104° F/0° C to 40° C
Transmit Range	15 ft. to 120 ft./4.57 m to 36.58 m, line of sight
Power Change	1 dB increments
Battery Life*	MPact mode: ~2 year @ 100ms
	iBeacon mode: ~2 year @ 100ms
	SecuraCast mode: ~2 year @ 100ms

4.4 Beacon Part Number: MPACT-MB3000-01-WR

A USB powered interface is required to power the USB Beacon. No additional hardware is required.

4.4.1 Installing the USB Style Beacon

Figure 4-7 shows a USB style beacon.

To activate a beacon part number - MPACT-MB3000-01-WR:

1. Insert the beacon into any standard USB power source.

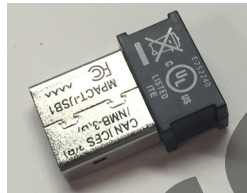


Figure 4-7 USB Style Beacon - MPACT-MB3000-01-WR

When installing numerous beacons, group beacons by category configurations and activate the beacons prior to scanning the barcodes and associating them with positions in the Toolbox.

2. After inserting the beacon(s) into any standard USB power source, associate the beacon in either offline or online mode in the Toolbox application.
3. From MPact Toolbox, select a site floor plan and an unassigned position for the beacon. Refer to the MPact Location & Analytics Deployment Guide for information on how to install and deploy the beacon from the Toolbox.

The barcode label should face up toward the ceiling and the smooth front of the beacon should face out toward the aisle where the mobile client is expected to engage.

<i>MPact USB Beacons</i>	<i>USB Powered Beacons</i>
Wireless	Bluetooth 4.0 (Bluetooth Smart)
Modes	iBeacon, MPact, SecureCast
Beacon Channel	Configurable
Beacon Interval	Configurable
Dimensions	0.57" X 0.27" X . 0.80"
Battery	Powered by any USB adaptor
Transmit Power	4 dBm to -23 dBm Configurable from 4 dBm to -23 dBm
Antenna Type	OmniDirectional Antenna
Operating Temperature	32° F to 104° F/0° C to 40° C
Transmit Range	15 ft. to 120 ft./4.57 m to 36.58 m, line of sight
Power Change	1 dB increments
Battery Life	N/A - Powered by USB

4.5 Beacon Battery Replacement

When a beacon's battery life is less than 20%, the beacon should be prioritized for immediate replacement. The beacon's battery is located within a battery tray in the beacon's housing.

This section includes procedures for replacing batteries for the following part numbers:

- *Replacing Battery: MPACT-T1B20-000-WR and MPACT-T1B10-000-WR*
- *Replacing Battery: MPACT-MB2000-01-WR*

4.5.1 Replacing Battery: MPACT-T1B20-000-WR and MPACT-T1B10-000-WR

To replace a beacon's battery in part number MPACT-T1B20-000-WR and MPACT-T1B10-000-WR:

1. Remove the beacon from the shelving unit (see information on the appropriate beacon part number).
2. With the bottom of the beacon facing up, gently lift each corner of the beacon's battery tray.

Figure 4-8 shows the beacon battery housing for part number MPACT-T1B20-000-WR and MPACT-T1B10-000-WR and MPACT-T1B10-000-WR. In this example, the battery tray is on the right and the corners of the battery tray are marked in red. When gently lifting each tray corner, slightly push the each corner out to dislodge corners of the tray.

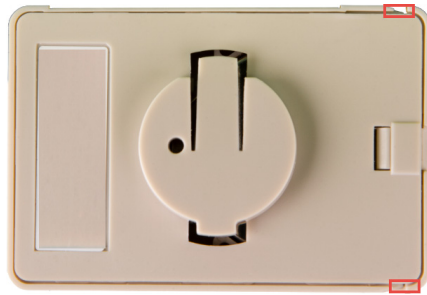


Figure 4-8 Beacon Battery Housing Example: MPACT-T1B20-000-WR and MPACT-T1B20-000-WR and MPACT-T1B10-000-WR

3. With both tray corners dislodged, gently slide the battery tray open, being careful not to drop the tray.

Figure 4-9 shows an open battery housing. In this example, the battery tray is a separate piece, along with the battery, on the right-hand side.

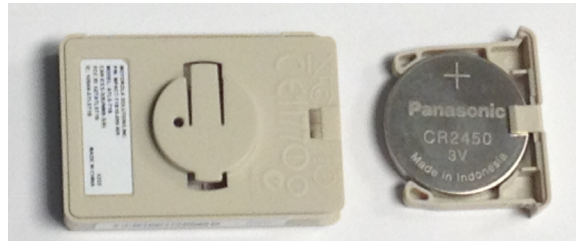


Figure 4-9 Battery Tray: MPACT-T1B20-000-WR and MPACT-T1B20-000-WR and MPACT-T1B10-000-WR

4. Remove the old battery and dispose of properly and replace it with a new battery (Panasonic CR2450)



NOTE: Pay attention to the position of the + on the battery. Installing the battery backwards may damage the Beacon

5. Close the tray, ensuring the latch is secure.

4.5.2 Replacing Battery: MPACT-MB2000-01-WR

To replace a beacon's battery in part number MPACT-MB2000-01-WR:

1. Remove the beacon from the shelving unit (see information on the appropriate beacon part number).
2. With the bottom of the beacon facing up, use your finger nail to gently lift the clip up to remove the back off the beacon's battery enclosure.
3. Remove the old batteries and dispose of properly and replace it with two new 2AA batteries.



NOTE: Pay attention to the polarity (+ and -) of the batteries. Installing the batteries incorrectly may damage the Beacon

Figure 4-10 shows an open battery enclosure of *Indoor Style Beacon*.



Figure 4-10 Open Battery Enclosure: MPACT-MB2000-01-WR

4. Close the battery enclosure, ensuring the clip is secure.

4.6 Beacon Hardware Regulatory Information

All devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Refer to the following Web site: www.zebra.com/support for specific regulatory information.

Any changes or modifications to this equipment, not expressly approved could void the user's authority to operate the equipment.

APPENDIX CUSTOMER SUPPORT

If you have a problem with your equipment, contact Support for your region. Support and issue resolution is provided for products under warranty or that are covered by a services agreement. Contact information and Web self-service is available by visiting www.zebra.com/support.

When contacting Support, please provide the following information:

- *MAC ID of the unit*
- *Model number or product name*
- *Software type and version number*

Support responds to calls by email or telephone within the time limits set forth in support agreements. If you purchased your product from a business partner, contact that business partner for support.

Customer Support Web Site

The support site, located at www.zebra.com/support provides information and online assistance including developer tools, software downloads, product manuals, support contact information and online repair requests.

Manuals

To see manuals, go to: www.zebra.com/support.

Draft

Draft

Draft

MN001100A01 Revision A

June 2015