

DartTag

User's Manual



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1 Introduction

DartTags are a wireless ultra-wideband (UWB) device from Zebra Technologies that are used for real-time tracking and identification of assets and personnel. DartTags transmit UWB pulses which are detected by a series of Dart UWB receivers. Dart receivers report detected tag events to the Dart RTLS location processing hub where tag location information is computed and reported.

The DartTag tag family consists of the UWT-1100/1101, the UWT-1200, the UWT-1300, the UWT-1301, UWT-1400, and UWT-1420. DartTags provide extended range and precision that is unmatched by conventional RFID solutions. These UWB tags uniquely provide reliability and accuracy in difficult electromagnetic and multipath environments, along with superb battery life for use in demanding industrial requirements.

2 Installation and Operation

DartTags are shipped with the transmitter off. With a proper Dart RTLS system in place, the installation of DartTags is complete when the tag is activated. Tag transmitters are turned on (activated) using a ZLS configuration tool. DartTags transmitting continuously at one blink per second are expected to last multiple years. Batteries are non-replaceable.

3 Orientation

UWT-1100 \ UWT-1101

The UWT-1100 and UWT-1101 DartTag (asset tag) is designed to provide optimal performance when used with either the top or bottom side of the tag pointing upwards. The picture below shows the top and back side of the tag and the proper orientation.



UWT-1200

The UWT-1200 DartTag Badge (badge tag) is designed to provide optimal performance when used in a specific orientation during use. The picture below shows the front and back side of the tag and the proper orientation.



UWT-1300

The UWT-1300 is designed to provide optimal performance when the top side of the tag is pointing upwards. The picture below shows the top side of the tag and the proper orientation.



UWT-1301

The UWT-1301 is designed to provide optimal performance when the top side of the tag is pointing upwards. The picture below shows the top side of the tag and the proper orientation.



UWT-1320

The UWT-1320 is designed to provide optimal performance when the top side of the tag is pointing upwards. The picture below shows the top side of the tag and the proper orientation.



UWT-1400

The UWT-1400 is designed for tracking of a football for all spatial orientations. The picture below shows the side of the tag and its orientation on the surface.



UWT-1420

The UWT-1420 is designed for tracking of a football for all spatial orientations. The picture below shows the top side of the tag and its orientation on the surface.



4 Adjustment

No adjustment is necessary once a DartTag is activated. The user may choose to program the tag transmit rate with a Zebra configuration tool.

5 Regulatory Information

US Regulatory Information

FCC ID: XWX-UWT1100, XWX-UWT1101, XWX-UWT1200, XWX-UWT1300, XWX-UWT1301, XWX-UWT1320, XWX-UWT1400, XWX-UWT1420.

This device complies with FCC Part 15.250 (c).

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference*
- (2) This device must accept any interference which may cause undesired operation*

Additionally,

- (1) Operation on board an aircraft or satellite is prohibited.*
- (2) Devices operating under this section may not be employed for the operation of toys.*
- (3) Except for operation onboard a ship or terrestrial transportation vehicle, the use of a fixed outdoor infrastructure is prohibited. A fixed infrastructure includes antennas mounted on outdoor structures, e.g., antennas mounted on the outside of a building or on a telephone pole.*

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or an experienced radio/TV technician for help.*

Canada Regulatory Information

IC ID: 8701A-UWT1100, 8701A-UWT1101, 8701A-UWT1200, 8701A-UWT1300, 8701A-UWT1301, 8701A-UWT1320, 8701A-UWT1400, 8701A-UWT1420.

This device complies with ICES-003, RS-220, and RSS-GEN for indoor use only.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference*
- (2) This device must accept any interference which may cause undesired operation*

Cet appareil est conforme à la norme NMB-003, RS-220 et RSS-GEN pour une utilisation en intérieur

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et*
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

EU Regulatory Information

The UWB transmitter equipment conforming to ETSI EN 302 500-1 shall not be:

- installed at a fixed outdoor location;
- installed or used in flying models, aircraft and other forms of aviation;
- installed or used in a road or rail vehicle.

The UWT-1100, UWT-1101, UWT-1200, UWT-1300, UWT-1301, UWT-1320, UWT-1400, and UWT-1420 DartTags are Class I transmitters approved for use in the following countries.

AT	BE	BG	CY	CZ	DK	EE
FI	FR	DE	GR	HU	IE	IT
LV	LT	LU	MT	NL	PL	PT
RO	SK	SI	ES	SE	GB	
IS	LI	NO	CH			

Other Regulatory Information

UWT-1100

China	CMIIT: 2010DJ5958
Singapore	Complies with iDA Standards, License: DA103846

UWT-1200

China	CMIIT: 2010DJ5957
Singapore	Complies with iDA Standards, License: DA103846

UWT-1301

Australia/New Zealand	RCM 5612/ABN 17159441004
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RF Notice

Any changes or modifications to Zebra equipment not expressly approved by Zebra Technologies Corporation could void the user's authority to operate the equipment.