



Answering the Question "Where?"™



## Talon Tag User's Guide

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## **Radio Frequency Compliance Statement**

RFind Systems, Inc. is the responsible party for the compliance of the following device:

MODEL: T100A

FCC ID: UL3T100A

CANADA: 6721A-T100A

The user(s) of this product is cautioned to only use accessories and peripherals approved, in advance, by RFind Systems, Inc. The use of accessories and peripherals, other than those approved by RFind Systems, Inc., or unauthorized changes to approved products, may void the compliance of these products and may result in the loss of the user(s) authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## **FCC Compliance**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **Industry Canada Compliance**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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## Introduction

RFind Systems, Inc. is an Active RTLS RFID Technology Company. With TAQNav, tag to tag communications technology, RFind produces Real Time Locating System (RTLS) solutions for industry clients who have the need to locate and track important assets.

This guide describes how to use the RFind Talon active RFID tag. The RFind Talon RFID tag is primarily used for locating assets in a warehouse, yard, or finished goods area. By attaching the tag to an item of interest known as an asset, when used in conjunction with one or more RFind Gateways and the RFind Expedito2D™ software package, the asset can be located. RFind Systems has changed the game of affordable RTLS (Real-Time Locating Systems).

The Talon Mode Asset Tag is the 1st key component of the 3-element Active 915MHz RFID Technology hardware architecture comprising our Expedito 2D™ Asset Location System Solution.

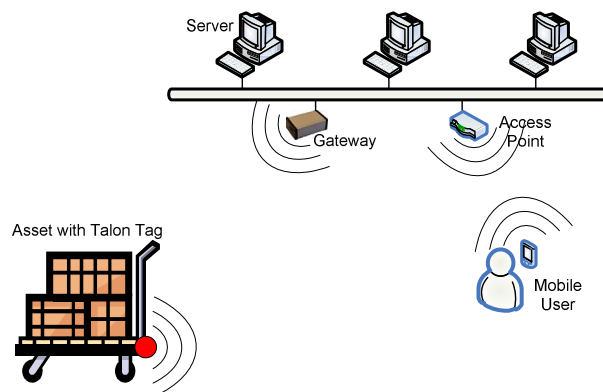
Long range and robust communications ability, as well as power saving features afford application flexibility and extended operational lifetime and performance.

## Tag Overview

The Talon tag can be utilized in one of two different operational modes: Reference and Asset. Reference tags are placed at known locations in your facility while asset tags are then attached to items which you wish to locate. Using a proprietary algorithm asset tags will automatically perform a locating sequence so that the system can report on the tags' location.

## System Overview

When attached to an asset, the Talon tag transmits a broadcast message while it is moving. When the asset enters an area and comes to a stop, it initiates a series of communication events with reference location tags. The Talon tag then transmits the results of this communication up to the server via the Gateway.



Once this communication is complete the Talon tag goes to a stationary power saving state and begins transmitting its heartbeat if turned on.

Finally, the Talon tag is may also operate in an idle state. This user-initiated state forces the tag to stop all transmitting and go into an RF quiet mode until a user sends a command to the tag to exit the idle state. This is desirable for applications requiring assets to travel in RF quiet zones.

## Installation

The tag's back surface is suitable for applying adhesives, magnets, hook and loop fasteners, or double-sided tape to facilitate other methods of mounting the Tags to Assets. For additional mounting information, please refer to RFind's Installation Guidebook.

## Deployment

Before tags can be used by the RFind Expeditor2D™ system, they must be commissioned as either an Asset or a Reference tag. Depending on what tag type is selected, the system will automatically send messages to the tags to configure them as the appropriate type.

There are several configuration options which can be established for the tag. These are:

- *Transmit Power*: Configurable from -30dBm to +10dBm.
- *Stationary Heartbeat*: Configurable from 0 to 4 minutes.
- *In-Motion Heartbeat*: Configurable from 0 to 18 hours.
- *Blink Duration*: Configurable from 0 to 255 seconds.

Presented here are some tips for different deployment types which can be used as a guide when preparing for a deployment at your site.

### **I want to:**

***Know roughly where an asset is in my facility. Then you should place your Reference tags:***

- Up high to get as much coverage as possible
- In a rectangular pattern where the Asset tag can reasonably be expected to be inside the boundary of a group of Reference tags

- Out of the way of objects which could interfere with transmissions from the Asset tags to the Reference tags. Objects such as metal shelving units or metal sheeting can have unexpected effects on radio transmissions.

*You should configure your Reference tags to use a relatively high transmit power.*

**I want to:**

***Know exactly what area (paint station or carpentry station) my assets are in.  
You should place your Reference tags:***

- As close to the center of your stations as possible
- As far apart from one another as possible
- Fairly close to the ground to restrict transmission range

*You should configure your Reference tags to use a relatively low transmit power.*

## **Support**

For support on any RFind Systems hardware, please contact us at:

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