PLT005 User Manual

Specifications, device installation, compliance and safety information

Updated: 2024-10-02

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Revision History

Name	Date	Description	Version
MARIA	2024/08/26	Create document	1.0
MARIA	2024/10/02	Compliance	1.1

Introduction

The PLT005 Descartes IoT ® BLE Beacon Tag is an active Bluetooth Low Energy (BLE) beacon that uses the Nordic nRF5833 module. This user manual provides detailed instructions for using the PLT005 in a production environment. The tag broadcasts an advertisement every 6 seconds on BLE channels 37 (2402 MHz), 38 (2426 MHz), and 39 (2480 MHz). Its estimated battery life is 3 years.

Specifications

FCC ID	2A4F8-PLT005
RF specification operating frequency	2402 MHz (low), 2426 MHz (medium), 2480 MHz (high)
Type of modulation	GFSK
RF transmit power	1.8 dBm EIRP
Number of channels	3 channels
Antenna type	Ceramic Patch
Antenna gain	1.3dBi
Specialty	Bluetooth Low Energy
Function	Bluetooth Low Energy
Power supply	N/A
Power cord	N/A
Battery	Three CR1632 lithium metal cell batteries rated at 140mAh each. Total 420mAh
Size:	3.7" x .76" x .35" (94.2mm x 19.2mm x 9mm)
Lifetime	3 years
Temperature Range:	-20˚C to +40˚C
IP Rating	IPX0
Weight	15 grams
Bluetooth Sensitivity:	-95dBm
Transportation:	Meets IATA Dangerous Goods Regulations 2015-2016 Edition (UN3091) Exemption Requirements PI 970 Section 2. Less than 4 lithium metal cells encased in equipment. No declaration required.
Power Consumption - Max:	<7.6mA
Power Consumption - Sleep:	3 uA

Compliance

FCC Compliance Statement

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.

CAUTION: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

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.

RF exposure statement

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Safety

Per FCC KDB 784748, Section A.8: To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 cm from all persons. Please maintain at least a 20 cm spacing from the antenna and device.
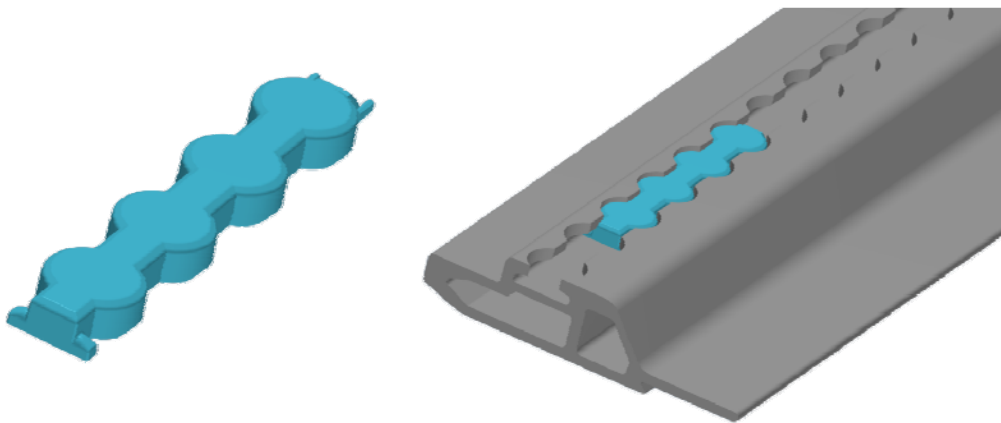
PLT005

Production versions of the tag come in a sealed case with the batteries installed. They are already powered on and ready for installation. The tags pass through a quality assurance phase to ensure they are fit for purpose. This includes a range test to ensure the tag performs well at a distance.

Operating Instructions

Please review safety information before installation to avoid injury to yourself or others.

The tag is already powered on and ready to install. Simply insert the tag into the rail on the pallet. Ensure that the tag is sitting flush with the pallet rail. It will make an audible click when installed correctly. Once it has been installed, assign the tag into the CORE system.

Images are indicative only, actual product may vary

Installation:

1. Insert the tag into the rail on the pallet.
2. Ensure it sits flush against the rail and clicks into place.

3. Once installed, assign the tag to the Descartes IoT system for tracking.

Usage

The PLT005 COREInsight BLE Beacon tag is an active BLE beacon. The PLT005 tag advertises every 6 seconds. COREInsight® Readers listen for special (custom) adverts from the Beacon Tag and when it is in range (approx. 60 meters), the Reader collects these detections.