DOCUMENT TYPE

STD001 User Manual

Version Number 1.0

Specifications, device installation and compliance information

Date:01/10/2023

Table of Contents

Introduction

The DESCARTES IoT BLE tag is a standard beacon. The tag sends out a blue tooth low energy advertisement 10 times per minute. A DESCARTES IoT reader will detect and store this beacon advert when the tag comes within range. The COREInsight Standard Tag may be installed on ULD Structural Units, Pallet Netting or Ground Service Equipment (GSE).

Figure 1-STD001 Images are indicative only; actual product may vary.

Specifications

Name of the Product: DESCARTES IoT Standard Tag
Model: STD001

STD001 User Manual
Description: Bluetooth Low Energy (BLE) beacon tag used to monitor movement of goods and equipment. Each tag is made up of an Ublox NINA-B112 module encased in a housing. Also included is one lithium thionyl chloride metal batteries.
Battery: One ER14505 battery rated at 3.6V and 2700mAh.
Size: 4.9" x 2" x 1" (124mm x 51mm x 26mm)
Weight: < 3.5 oz (100 Grams)
Temperature Range: -20˚C to +60˚C
Bluetooth Module: Ublox NINA-B112
Bluetooth Type: Bluetooth Low Energy 4.2
Bluetooth Sensitivity: -95dBm
Bluetooth Max Power Output: +4dBm
Bluetooth Antenna: +2dBi SMD ProAnt Antenna, Omni Directional
Frequency Supported: 2.4GHz ISM, 40 BLE Channels & Adv. Ch. No. 37, 38, 39
Power Consumption - Max: <7.6mA
Power Consumption - Sleep: 3.5 uA
Operational Life Running: Theoretical life time of >5 years.
NFC: Used to read Tag ID
Transportation: Meets IATA Dangerous Goods Regulations 2015-2016 57th Edition (UN3091). Less than 4 lithium metal cells encased in equipment. No declaration required. Battery passed UN38.3 tests.
FAA: Meets turn on/turn off requirements similar to personal electronic devices (PED).

Compliance

If you have any queries regarding certification and compliance, feel free to contact us or go to:
https://www.descartes.com/iot-device-certifications#STD001

Manufacturer

Descartes Systems Group Inc.
Address: 105 Trafalgar Street, Floor 2, 7011, Nelson, New Zealand
Telephone number: +64 (3) 547-8205 (New Zealand)
E-Mail address: ServiceDesk@descartes.com
Website: www.descartes.com

Module: NINA-B112

FCC ID: XPYNINAB1
IC: 8595A-NINAB1
CE / RoHS *See NINA-B1 Declaration of Conformity*
Japan Radio EC: Complies
NCC Taiwan: CCAJ16LP6460T0
KCC South Korea: MSIP-CRM-ULX-NINA-B112
Anatel Brazil: MSIP-CRM-ULX-NINA-B112
AS/NZS: Complies with AS/NZS 4268:2012/AMDT 1:2013
ICASA: TA-2016/2760 APPROVED

STD001 User Manual
Bluetooth: D032220 (85618)

FCC

FCC Compliance Statement
Contains FCC ID: XPYNINAB1

CAUTION: The manufacturer 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.

Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information

Product Name: DESCARTES IoT BLE Standard Tag
Product Model: STD001
Manufacturer:

New Zealand Address:
Descartes System Group Inc
105 Trafalgar Street, Floor 2 Floor 2
Nelson, 7010 New Zealand
mvivas@descartes.com
www.descartes.com

US Address:
2571 Econ Landing Blvd,
Orlando
FL
32825
sgutschlag@descartes.com
www.descartes.com

Modular Components Used:
NAME: U-Blox Bluetooth Low Energy Module
MODEL: NINA-B112
FCC ID: XPYNINAB1

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.

Regulatory contact:
Name: Adrian King
Role: Network Manager
Email: aking@descartes.com

CE: Radio Equipment Directive (RED)

Declaration of Conformity

Manufacturer:
Descartes Systems Group Inc.
105 Trafalgar Street, Floor 2
Nelson, Tasman 7011, New Zealand

Descartes Systems Group Inc. declares under our sole responsibility that:
Product Name: DESCARTES IoT BLE Standard Tag
Product Model(s): STD001

Complies with the following European Directives:
2014/53/EU Radio Equipment Directive (RED)
2011/65/EU on the Restriction of Hazardous Substance (RoHS)

The following standards have been applied:
Safety & Health (Article 3.1a):
EN 62368-1:2014+A11:2017
EN IEC 62311:2020 / EN 50665:2017

EMC & Immunity (Article 3.1b):
EN 301 489-1 V2.2.3 / EN 301 489-17 V3.2.4 / EN 301 489-52 V1.2.1

RF Spectrum Efficiency (Article 3.2):

STD001 User Manual
EN 300 328 V2.2.2

Additional Compliance:
EN IEC 63000:2018

The technical documentation required to demonstrate that the products meet the requirements of the aforementioned directives has been compiled and is available for inspection by the relevant enforcement authorities.

Signed: Simon Gutschlag
Title: VP, Product Management
Date:01/10/2024

Operating/Installation Instructions

1. Take an STD001 and install inside a ULD or attached to cargo netting as shown in Fig2.

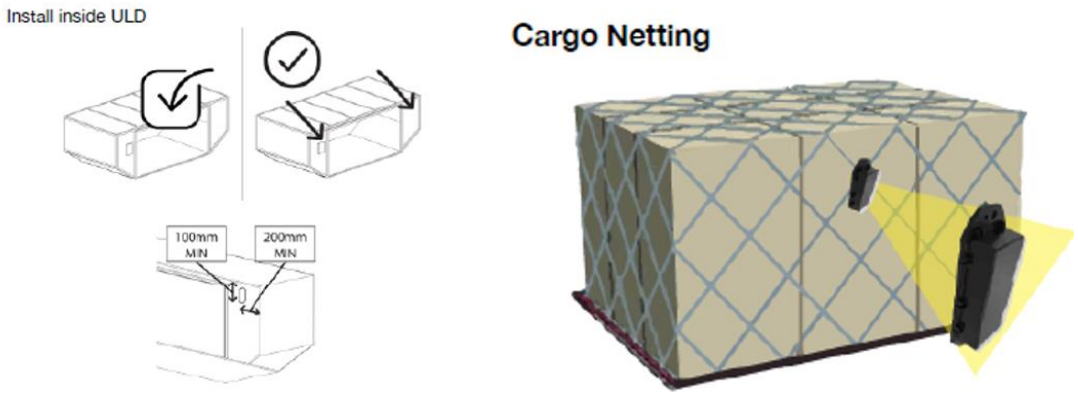

Figure 2- Installation of tags on ULD/Cargo Net

2. Tag placement In order to ensure that each STD001 BLE Tag can be read in all working conditions, follow the placement and orientation instructions below. The aerial on the standard tag is located at the top of the device. When standard tags are mounted, they should be mounted in the upright (vertical) position as shown in Fig 3.

Figure 3-Tag Mounting Placement

3. When mounting the device can be mounted using rivets, bolts, self-tapping screws, very high bond (VHB) tape or zip ties.

Please Note: BE SURE TO DOCUMENT THE SERIAL NUMBER
OF THE TAG AND EQUIPMENT NUMBER PRIOR TO INSTALLATION

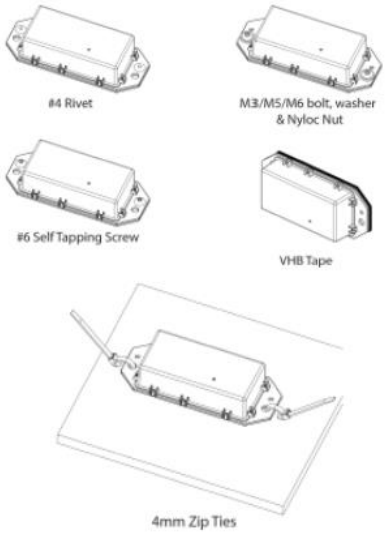

Figure 3-Mounting Options

4. Standard Tag Association/assignment: The STD001 tag now must be associated with the equipment on which it is installed. This is done through the assignment process Via the ULD Hub App which can be found on the Playstore or Via our Cargo website https://cargo.core-tt.com/ .