Ciholas PT301

Users Manual

FCC ID: 2ALIR-PT301
IC:26788-PT301

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Introduction

The Ciholas PT301 is part of a wireless system that relies on ultra-wideband (UWB) pulses and time-stamp information to determine real-time location tracking data. The PT301 transmits UWB beacons and co-exists with other devices on a UWB network. The PT301 devices are placed on any object of interest within the operational area in order to locate and track that object. The PT301 receives power from an internal battery that can be recharged via a standard USB-C connection. The PT301 devices are small and versatile, and can be attached to a variety of surfaces. This makes the PT301 device an ideal solution for fast and accurate real-time location tracking.

Regulatory Information

United States (FCC) Regulatory Information

FCC ID: 2ALIR-PT301

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.

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 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.

Changes or modifications not expressly approved by Ciholas, Inc. can void your authority to operate this equipment under Federal Communications Commission rules.

Operation on board an aircraft, ship, or a satellite is prohibited. Devices operating under this section may not be employed for the operation of toys (15.521(a)).

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.

UWB devices operating under the provisions of 15.519 may operate indoors or outdoors.

Applicable rules: FCC 15.519

Radiation Exposure Statement:

The device has been found to be exempt from SAR under KDB 447498 D01 v06 Section 4.3.1. This device may be used in an uncontrolled environment.

Canada (ISED) Regulatory Information

IC:26788-PT301
CAN ICES-3 (B)/NMB-3(B)

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

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;
2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Applicable rules: RSS-220

Radiation Exposure Statement:

The device has been found to be exempt from SAR under KDB 447498 D01 v06 Section 4.3.1 and Industry Canada RSS-102 Section 6. This device may be used in an uncontrolled environment.

Déclaration relative à l'exposition aux rayonnements :

L'appareil est exempté du DAS en vertu de la norme KDB 447498 D01 v06, section 4.3.1, et de la norme RSS-102 d'Industrie Canada. Cet appareil peut être utilisé dans un environnement non contrôlé.

Usage Instructions

Overview

The battery powered PT301s transmit UWB beacons allowing for real-time location calculation. Tag beacon rates can be programmed depending on the number of other active tags in a tracking area. The PT301 devices are placed on any object of interest within the operational area in order to locate and track that object.

The PT301 receives power from an internal battery that can be recharged via a standard USB C connection. PT301s remain in sleep mode when not in use and can be placed in a shipping mode for shipping or long term storage. The PT301 devices are small and versatile, and can be attached to a variety of surfaces and objects.

Placement

PT301s can be worn on the human body with the wrist strap or lanyard accessories. PT301s can also be attached to an object of interest.

Use

1. Upon receiving the PT301, apply 5V0 USB Power via USB-C
2. Configure the device into the RTLS system via the CUWB RTLS software
3. Attach device to tracking object and enter the tracking area
4. Recharge the device as necessary

Please contact Ciholas for additional guidance based on application and for the CUWB RTLS software. Additional information on how to use the CUWB Real Time Location System available at CUWB.IO.

PT301s are only available for use with Ciholas RTLS. Not compatible with other UWB devices or RTLS from other manufacturers.

Product Specifications

Main System Components
Micro-controller: STM32U575OG
RF Transceiver: Qorvo QM33110W Ultra Wideband (UWB) IEEE802.15.4-2011
Indicators: 1 Tri-Color LED (Red, Green, Blue)
Power: Battery (3.7V 140mAh)
Operating Voltage: 1.8V and 2V5 Nominal
USB Charging Voltage: 5.0V Nominal
Temperature Range: -40 - 85C

Mechanical
Width: 26.11 mm
Depth: 9.8 mm
Height: 39.25   mm
Weight: 9.56 g