Descartes IoT BLE Pallet Tag

Hardware Specification

Descartes IoT BLE tag is not a standard active BLE beacon. The Descartes IoT tag is passive until in range (80 meters) of a reader. Descartes IoT tag is a Bluetooth Low Energy tag that listens for the presence of a reader before transmitting its payload. In the absence of a reader (i.e., in an aircraft) it does not transmit. The tag and reader do not establish a “pairing” as is the case with an active beacon. Once a tag has communicated with a reader it goes into sleep mode (neither listens nor transmits) for a period defined by the reader’s instruction. When the tag is away from a reader and not in a sleep mode it will revert to passive mode (constantly listening but not transmitting).

In order to conserve battery life until active deployment, the tag can be turned off by instruction from a reader. It can be turned on again by touching an active NFC device against the top of the tag.

Images are indicative only, actual product may vary

Name of the Product:	Descartes IoT Pallet Tag
Model:	PLT001
Description:	Bluetooth Low Energy (BLE) 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 two lithium metal cell batteries.
Battery:	Two CR2450 Rated At 620mAh each. Total 1240mAh
Size:	4.4” x 1.7” x .7” (112mm x 44mm x 19mm)
Weight:	2.9 oz (85 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 >2 years Managing sleep time and lower polling rates used by COREInsight network can extend the life significantly
NFC:	Used to toggle Tag on and read Tag ID
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
Transport:	BLE Tags do not transmit until “pinged” by a Core Reader. Since a reader is not present during air or sea shipments, the tag is in a dormant state.
FAA:	Meets turn on/turn off requirements similar to personal electronic devices (PED).

Certifications:

Core Pallet Tag (PLT001)	Bluetooth	D037239 (PLT001)
	FCC	TBA
	IC	TBA
	CE	TBA
NINI-B112	FCC	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
	Bluetooth	D032220 (85618)