

LC4A Device Specification



Overview

This document provides technical details of the LC4A device. The LC4A device is a versatile hardware solution designed to function as either an Anchor Node (AN) or a Tag Node (TN) within a Real-Time Location System (RTLS). Its flexibility and adaptability make it ideal for various tracking and monitoring applications.



Figure 1: The Front view of the device

Key Features

- Based on Qorvo's [DWM1001C](#) module that integrates [DW1000](#) Ultra-Wideband (UWB) transceiver IC and Nordic Semiconductor MCU with Bluetooth nRF52832:
 - Ranging accuracy to within +/-20cm.
 - UWB Channel 5 printed PCB antenna (6.5 GHz)
 - 6.8 Mbps data rate IEEE 802.15.4-2011 UWB compliant
 - Integrates UWB and Bluetooth® antenna and all RF circuitry.
 - Integrated Motion sensor: 3-axis accelerometer.
 - Current consumption optimized for low-power sleep mode: <math><15\mu\text{A}</math>
- Contains a status LED and the UWB status LED.
- Supplies the power from USB cable (5 VDC), or external source (7~32 VDC).
- A complete software package free of charge that includes software infrastructure, configuration and

visualization tools (with support for various platforms from Android, Windows, macOS, and Linux platforms).

- An open [online documentation](#) and [community forum](#).

Software Compatibility

It is compatible with [PANS PRO](#) and [LEAPS RTLS](#). The default firmware is [PANS PRO](#), supplied by the production.

Electrical Parameters

Parameter	Value
VDC power supply	7 ~ 32 @3W max
USB (power and data)	5V @ 500mA max
Operating temperature	-40°C - +85°C
UWB supported channels	UWB-CH5 - 6240-6739.2 MHz
UWB transmit powers	ETSI, FCC: -41.3 dBm/MHz max

Mechanical Parameters

Parameter	Value
Size	100 x 70 x 25 mm
Weight	110g
Color	White
Mounting	Connect any clamp mount with 1/4" screwball head

Device Overview

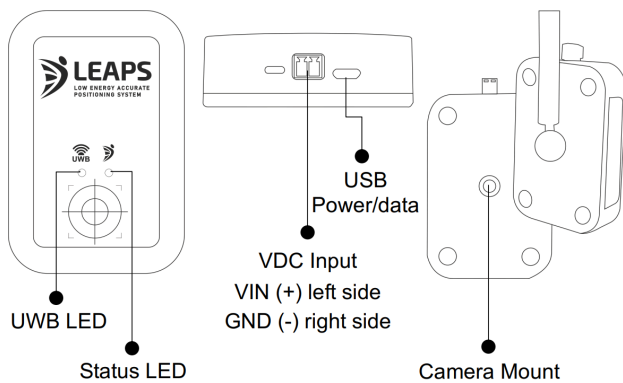


Figure 2: The Hardware Interfaces of the device

Safety Instructions

- Do not expose devices to water or moisture while in operation.
- Do not expose devices to heat from any source. The product is designed for reliable operation at industrial temperature.

Warnings

- This product shall only be connected to the external power supply rated at 7~32DC, USB power, and a minimum current supply of 0.5 A.
- Any external power supply used with this product shall comply with relevant regulations and standards applicable in the country of intended use.
- There are no user-serviceable parts inside the product, and opening the unit will likely damage the product and invalidate the warranty.
- The cables and connectors of all peripherals used with this product must have adequate insulation to meet the relevant safety requirements.

Order Information

- Part numbers: PP-LC4A/LR-LC4A
- HS Code: 8517.69.9000
- Packaging: paper box, 7 cm x 11 cm x 2.5 cm 0.09kg

About Us

LEAPS is the creator of the popular DWM1001C and PANS RTLS. LEAPS has been focusing on providing RTLS hardware and software, design services, and technology licensing.

Contact Us

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