



# DWM1000 Node

SKU 114990656

The Loco Positioning Node is a versatile positioning device that can run either as an Anchor or Tag in a Loco Positioning system. The system measures the distance between Nodes and Tags, and from those distances, the absolute position of objects carrying Tags can be calculated.

For more information on the Loco Positioning System please see this [Loco Positioning System page](#).

Specifications are based on the standard 2-way ranging mode.

## Features

- Supports Anchor, Tag or Sniffer mode
- Can be used as a standalone system with some Nodes acting as Anchors and one or more nodes acting as Tags
- Multiple powering options
- Onboard MCU

## Electrical specification

- Based on the Decawave DWM1000 module
- Implements IEEE 802.15.4 UWB
- STM32F072 MCU (Cortex-M0, 48MHz, 16kb SRAM, 128kb flash)
- High precision pressure sensor (LPS25H)

- uUSB connector
- Full speed USB device interface
- Powered by USB, 6 mm barrel jack (5 - 12V) or screw terminal (5 - 12V)
- FTDI debug port (not populated)
- Serial connector compatible with ESP8266 module (not populated)
- Power consumption 180 mA max

### Ranging specification

- Ranging accuracy  $\pm 10$  cm according to DWM1000 spec. See [the wiki](#) for measurements.
- Maximum tested range 10 m
- Nr of anchors required: theoretical minimum of 4 for 3D positioning. More anchors add redundancy and accuracy, up to 8 supported.

### Radio specification

- Operates at 3.2 - 7 GHz
- Channel bandwidth 500 MHz

### Mechanical specification

- Weight: 13.3 g
- Size (WxHxD): 65x40x13 mm
- 4 mounting holes for M3 screws

## Compatibility

- Works with the Loco Positioning Deck

## Part List

1 x Loco Positioning Node

### ECCN/HTS

ECCN	EAR99
HSCODE	8543709990
USHSCODE	8526910020
UPC	

