Ultra-Wideband (UWB) Unit Indoor Positioning module (DW1000)

Description

UWB is a Unit which integrates the UWB(Ultra Wide Band) communication protocol which uses nanosecond pulses to locate objects and define position and orientation. The design uses the Ai-ThinkerBU01 Transceiver module which is based on Decawave's DW1000 design. The internal STM32 chip with its integrated ranging algorithm, is capable of 10cm positioning accuracy and also supports AT command control. Applications include: Indoor wireless tracking/range finding of https://m5stack.oss-cn-shenzhen.aliyuncs.com/image/product_jpg/assets, which works by triangulating the position of the base station/s and tag (the base station resolves the position information and outputs it to the tag).

The firmware currently carried by this Unit only supports the transmission of ranging information, and does not currently support the transmission of custom information. When in use, it supports the configuration of 4 base station devices (using different IDs), and only a single tag device is allowed to operate at the same time.

Product Features

- Positioning Accuracy :10cm
- Internal STM32 Integrated ranging algorithm
- AT Command control
- Serial communication (baud rate: 115200)
- Simple Usage， No need for RF Calibration
- IEEE 802.15.4-2011 UWB Standard
- Support two-way ranging and TDOA
- Development Platform: Arduino, UIFlow(Blockly, Python)
- 2x LEGO™ Technic friction pin holes

Includes

- 1x UWB Unit
- 1x HY2.0-4P Port

Applications

- Indoor tracking
- Accurate range finding

Specification

Resources	Parameter
Net Weight	7g
Gross weight	19g
Product Size	48*24*8mm
Packaging Size	67*53*12mm