thing**Z**kit® Nano

Your user friendly Shield to send and receive data, **reaching ultra-long ranges at low data-rates**

Overview

thing**Z**kit® Ultra is board is a long range transceiver on a Arduino shield form factor and based on Open source library. The Shield allows the user to send data and reach extremely long ranges at low data-rates. It provides ultra-long range spread spectrum communication and high interference immunity whilst minimising current consumption.

The Package Includes

➤ LoRa® Shield for Arduino
➤ 1dbi external LoRa Antenna for 865MHz

Programming Examples
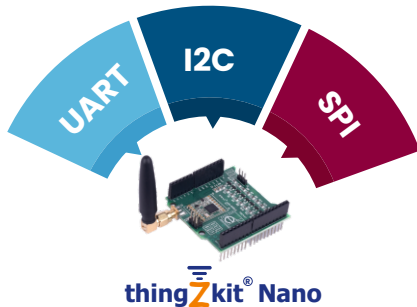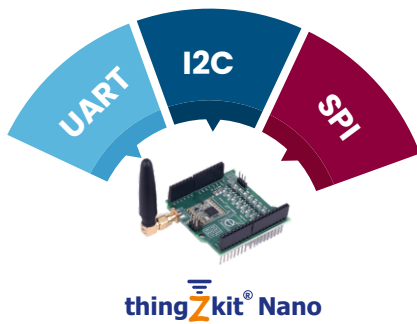
➤ Arduino C Programming

Tools Used

➤ Arduino IDE

Features

➤ Semtech SX1276 LoRa® IC
➤ LoRa® Expansion board direct Compatible with Arduino Uno
➤ Interface with Arduino Uno
➤ Suitable for LoRaWAN®or Peer to Peer LoRa®Protocol
➤ Compatible with 3.3V or 5V GPIO Pin Arduino Board
➤ Frequency Band: IN865
➤ Low power consumption
➤ External Antenna via SMA Female connector
➤ Open-Source LMIC Library
➤ LoRaWAN® Class A Support
➤ LoRaWAN® Activation Mode Support: ABP & OTAA

LoRa Module Specification

➤ 168 dB maximum link budget
➤ +20 dBm – 100 mW constant RF output at 3.3V Supply
➤ +14 dBm high efficiency
➤ Programmable bit rate up to 300 kbps
➤ High sensitivity: down to -148 dBm
➤ Bullet-proof front end: IIP3 = -12.5 dBm
➤ Excellent blocking immunity
➤ Low RX current of 10.3 mA, 200nA register retention
➤ Fully integrated synthesizer with a resolution of 61 Hz
➤ FSK, GFSK, MSK, GMSK, LoRa® and OOK modulation
➤ Built-in bit synchronizer for clock recovery
➤ Preamble detection
➤ 127 dB Dynamic Range RSSI
➤ Automatic RF Sense and CAD with ultra-fast AFC
➤ Packet engine up to 256 bytes with CRC

SYSTEM ARCHITECTURE

LoRaWAN®

Gateway

thingZkit® Nano

thingZmate®
(or)
any IoT application platform

LoRa®

thingZkit® Nano

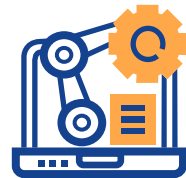**thingZkit® Nano**

BENEFITS

Project & POC's

Incorporate your Ideas

Develop Industrial
Standard Applications

Enhancing Student
Innovations

Meet Current Industry
Standards

Bridge the gap between
Industry & Academy

Dimension	144 * 75 * 53 mm (5.669 * 2.953 * 2.087 Inches)
Enclosure Material	Carton Box
Enclosure Color	Brown
Product Weight	1 Kg
Power Supply	5V USB Power

**Free access to
thingZmate® IoT
Platform for 2 years!**

#enthutech | www.enthutech.in | www.thingzmate.com

✉ eas@enthutech.in | iotsupport@enthutech.in

📞 +91 70944 70844, +91 99407 07197

📍 #88 & 89, SSN Square, Peelamedu Pudhur, Coimbatore - 04.

LoRaWAN® is a mark used under license from the LoRa Alliance®