RE866A1-EU

LoRa®, BLE 4.2 and NFC Combo Module

LoRa® / Embedded
Bluetooth Low Energy
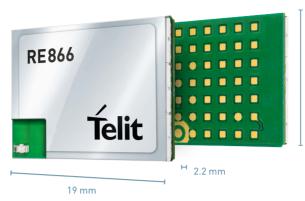
15mm

2.2 mm

19 mm

Product Description

Integrating unlicensed LPWAN to your IoT solution is simplified with the use of our pre-certified combo module, RE866A1-EU. The module's open protocol and unique combination of long range (LoRa) with Bluetooth Low Energy (BLE) make it perfect for sensor-heavy applications such as smart metering, industrial automation, alarm systems, agriculture, street lightning, asset tracking, and smart cities.

This RE866A1-EU provides a secure, powerful solution for customers looking for a simple approach to enable remote management and configuration via PC or mobile.

True to the Telit, "Design once, use anywhere," philosophy, device makers' benefit from future proof, cost effective solutions. The enormously long range and ultra-low power consumption make the RE866A1-EU an ideal choice for battery-operated devices, supporting battery life of up to 10 years in relevant applications. With the compact RE866A1-EU, customers can take advantage of its pin-to-pin compatibility with the Telit NE866 NarrowBand IoT module, allowing solutions to switch from licensed to unlicensed standards with ease.

Applications

- Smart metering
- Agriculture
- Street lightning and Smart cities
- Asset tracking

Key Features

- LoRa Alliance certified module:
- Bluetooth v4.2 qualified module
  - BLE 4.2 GATT Central
  - TIO (SPP like) central and peripheral with free source codes
  - Fully compatible over the air with Bluemod+S42 modules
  - 101dB budget link
- Integrated antenna for BLE, External antenna for SUB-GHZ
- Pin to Pin compatible with NE866 (Telit NB1module)
- **AES-128 security** and Embedded Secured Element for future uses
- **Ultra-low power usage schemes** – Allows years of use on a single battery.
- **Upgradable firmware** – Prepare for the future with access to feature and security updates.
- NFC handover simplifies device pairing and connection setup.
- UART eDMA/PPI (faster UART speed / lower power consumption)
- RED certification
- Temperature (operating) -40°C to +85°C

AVAILABLE FOR

EMEA

India

Combine your LoRa module with

GNSS modules

Wi-Fi modules

www.telit.com

Complete, Ready to Use Access to the Internet of Things

IoT MODULES

IoT CONNECTIVITY

IoT PLATFORMS

IoT KNOW-HOW

ENABLING END-TO-END
IOT SOLUTIONS

RE866A1-EU

Features

- Bluetooth® Low Energy Specification V4.2
    - Terminal I/O peripheral and central role
    - Generic GATT client handling for 4 concurrent links (3 in central role and 1 in peripheral role)
- LoRaWan compliant:
    - Chirp Spread Spectrum, FSK
    - Data Rate: DR0 to DR6
    - Adaptive Data Rate
    - Frequency plan: 863-870MHz (optional channels)

- Over the air update

Environmental

- 49 LGA pads
- Integrated BLE ceramic Antenna
- External Lora Antenna, PAD G2
- Length x Width x Height: 19x15x2.2 mm
- Temperature range: -40°C to +85°C

Interfaces

- UART: 9600 bps – 921600 bps (asynchronous)
- Other interfaces: I²C, SPI, PWM, ADC
- GPIOs: Up to 16

Approvals

- Bluetooth Qualification 4.2
- LoraWan certified
- RED
- RoHs compliant

Electrical & Sensitivity

Power supply: 1.8V to 3.6V
Bluetooth® Low Energy
- Transmit Power: Up to +5dBm
- Receiver Sensitivity: -96 dBm
- Max power consumption in transmission: 7.5 mA

LoRa®
- Max Tx Power: 14 dBm or up to 19dBm in PA boost mode
- Receiver Sensitivity: Up to -138 dBm (SF 12, 125KHz bandwidth)
  Power consumption:
    - Transmission mode: <41 mA@25mW
    - Receive mode:11 mA
    - Standby: <2µA
    - Sleep: <1µA

Join the Telit Technical Forum

For a quicker and more rewarding integration experience join the Telit Technical Forum. There you can browse the first open forum covering all IoT topics, get direct support by region (EMEA, North America, Latin America, APAC), take part in this quickly growing IoT community and exchange experiences.