

Clean Energy Link IoT Module 2.0 LTE-M datasheet

Clean Energy Link IoT Module 2.0 LTE-M transfers real-time battery CAN-data via cellular, WLAN, LAN or Blue-Tooth to control and manage batteries with sensors for GPS, heat, humidity, pressure & shock.



Size: 100 x 70 x 20 mm

Power: 5V DC

SIM Slot: Mini 25 x 15 x 0,76 mm

Sensors: GPS, heat, humidity, pressure, shock

MCU 1: ESP32 D0WD-V3:

- Xtensa dual-core 32-bit LX6 microprocessor, up to 240 MHz
- 4 MB Flash
- 520 KB SRAM

MCU 2: nRF9160 SICA B1:

- 64 MHz Arm® Cortex®-M33 CPU
- 1 MB Flash, 256 KB RAM
- Arm TrustZone® for trusted execution
- Arm CryptoCell 310 for application layer security

Ethernet / LAN:

- 10/100 Mbps
- Compliant with IEEE802.3/802.3u (Fast Ethernet)
- Compliant with ISO 802-3/IEEE 802.3 (10BASE-T)

Wi-Fi / WLAN:

- 802.11b/g/n
- Bit rate: 802.11n up to 150 Mbps
- A-MPDU and A-MSDU aggregation
- 0.4 μs guard interval support
- Center frequency range of operating channel 2412 ~ 2484 MHz

Bluetooth:

- Bluetooth V4.2 Bluetooth LE specification
- Class-1, class-2 and class-3 transmitter
- AFH
- CVSD and SBC

CAN:

- ISO 11898-1 protocol (CAN Specification 2.0)
- Standard Frame Format (11-Bit ID)

Multimode LTE-M/NB-IoT modem:

- 700-2200 MHz LTE band support
- +23 dBm output power
- GNSS (GPS, QZSS)
- eDRX and PSM power saving features
- Coverage enhancement modes
- Single pin 50 Ω antenna interface
- UICC interface
- Certified for global operation:
 - AT&T, Bell, China Telecom, Deutsche Telekom, KDDI, Telstra, Verizon, Vodafone, etc.
 - GCF, PTCRB
 - FCC (USA), CE (EUR), UKCA (UK), ISED (CAN), SRRC (CHN), ACMA RCM (AUS), NCC (TWN), MIC (JPN), MSIP (KOR), (IND) and more