

# LinkElecs

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## IoT Motes

# LinkElecs LoRaWAN Ultra Low-Power Mote

Part Number: ULM-1010

LinkElecs LoRaWAN Ultra Low-Power Mote is a multi-purpose module that can be used to easily connect a device or sensor to a LoRaWAN (Long Range Wide Area Network) as a well-known LPWAN (Low Power Wide Area Network). This mote offers making an IoT-based ultra low-power device by integrating ultra low-power MCU and radio transceiver which is suitable for long life battery powered devices.



# LinkElecs LoRaWAN Ultra Low-Power Mote

Part Number: ULM-1010

## Main Features:

- Various Interfaces including UART, I2C, SPI, ADC and GPIOs
- Up to 10 years battery lifetime (with 2400 mAh battery and for 6 uplink message per day)
- IP67 enclosure, integrated battery holder, buzzer, onbox LED, different types of antenna connectors and using magnetic reed switch for controlling device operation mode remotely in ULM-1020 device (Optional)

MCU	STM32L072RBT (Ultra Low Power, 32-bit)
Transceiver	LoRaWAN Radio Module
TX power	Adjustable up to +14 dBm high Efficiency PA
Frequency Band	EU868MHz (Other frequency bands could be provided based on order)
Coverage	Up 2km in Urban and up to 8km in sub-urban areas
Sensitivity	Down to -146 dBm
Supply voltage range	3.7v (battery powered), 5~6VDC
Current consumption	Idle mode: 5mA TX mode: 40mA (MAX) RX mode: 15mA (MAX) Deep sleep mode: 20uA (MAX)
Dimension	30x40 mm

# LinkElecs LoRaWAN Mote Low-Power Mote

Part Number: LM-2011 and LM-2111

LinkElecs LoRaWAN Low-Power Mote is another multi-purpose “low power mote” that can be used to easily connect a device or sensor to a LoRaWAN infrastructure. The LinkElecs LoRaWAN low-power mote offers making an IoT-based low power device, easily and fast using Arduino-compatible software platform.



# LinkElecs LoRaWAN Mote Low-Power Mote

Part Number: LM-2011 and LM-2111

## Main Features:

- Various Interfaces including UART, I2C, SPI, ADC and GPIOs
- Firmware development using Arduino-compatible software platform
- Optional Industrial Interfaces (LM-2111): RS-232, RS-485 (Full/Half Duplex) and isolated Input/Output can be activated based on customer order.

MCU	Atmega328 (pico-Power series, 8-bit)
Transceiver	LoRaWAN Radio Module
TX power	Adjustable up to +14 dBm high Efficiency PA
Frequency Band	EU868MHz
Coverage	Up 2km in Urban and up to 8km in sub-urban areas
Sensitivity	Down to -148 dBm
Supply voltage range	5~6VDC
Current consumption	Idle mode: 10mA TX mode: 45mA (MAX) RX mode: 20mA (MAX) Deep sleep mode: 50uA (MAX)
Dimension	30x55 mm

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