Multi-Protocol LoRaWAN Bridge

Powered by ARM Cortex-M4 Core integrated LoRa SoC, Sindcon's Neptune series Multi-Protocol LoRaWAN bridge is an affordable solution for converting data from both popular public protocols such as MODBUS, DLMS (IEC 62056) and some proprietary protocols such as EDMI Atlas 1 Energy Meter, to LoRaWAN. It enables reading and writing of any register of the connected device through the LoRaWAN network. The configuration of register mapping of the Multi-Protocol LoRaWAN bridge can be easily done remotely from the Sindcon LoRaWAN server via downlink channels. Moreover, users can use the Mobile App (BusyBox) which is available from Apple Store and Google Store, to configure the bridge device. Additionally, the Sindcon LoRaWAN bridge device comes with a built-in Bluetooth as optional for configuration on field.

LoRa Radio Parameters

Communication Protocol	LoRaWAN
LoRa MAC Version	1.0.3
Device Type	Class A/C
Network Registration Way	OTAA, ABP
LoRaWAN Uplink Confirmation	Confirm or Partially Confirm
LoRa Chip	STM32WLE5CCU6
MCU	Arm® 32-bit Cortex®-M4
Memory	256KB Flash; 64KB RAM
ISM Bands	AS923, AU915, EU868
TX Power	Up to 22dBm
Uplink Channels	8 settable channels with bandwidth of 125kHz
RX Sensitivity	Down to -125dBm@BW = 125 kHz, SF = 7
Spreading Factor	SF7 ~ SF10 (Adaptive)
LBT(Listen Before Talk)	Yes
Report Interval	Configurable via Downlink Commands
Data Cach when LoRa Network Interrupt	Yes
Data Logger in local device	Optional
Communication Distance	3km to 10km (Eyesight distance in open space)
Near Field Communication Way	Bluetooth (Only external power supply)

Electrical Parameters

Power Supply	120V ~ 240V (AC) / 9V ~ 36V (DC) / 3.6V (ER26500 8500mAh)
Active Current	≤4mA
TX Current	≤127mA@22dBm
Battery Life	Up to 10 years (Battery powered only)
Battery Usage Monitoring	Accurate Coulomb Measurement (Battery powered only)
Battery Undervoltage Warning	Yes (Battery powered only)
MCU Temperature Monitoring	Yes (Battery powered only)
CPU Working Temperature	-20°C ~ +85°C
Storage Temperature	-10°C to 60°C