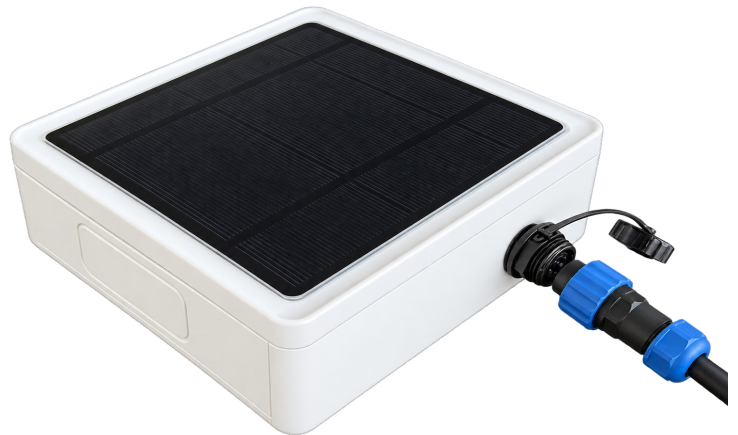


Solar Pump Remote Gateway

The Solar Pump Remote Gateway combines long-range wireless pump control with Bluetooth sensor connectivity for remote water supply, irrigation, and environmental monitoring.

A gateway connected to a tank water level sensor communicates with another gateway connected to the pump controller. When the tank is full, the pump stops; when the water level is low, the pump starts. This automatic control maintains the water supply and prevents overflow. The gateway also supports compatible Bluetooth sensors for air temperature and humidity, rainfall, wind speed, soil moisture, and other environmental measurements.

LoRa communication provides a range of over 3 km in clear line-of-sight conditions, with actual coverage depending on terrain and obstacles. Additional gateways can act as relays to extend the range. Support for both LoRa peer-to-peer and LoRaWAN enables direct communication between gateways or integration into a LoRaWAN network.



FEATURES

Automatic pump control

Start and stop the pump based on tank water levels.

Bluetooth sensor support

Collect air temperature, humidity, rainfall, wind speed, soil moisture, and other sensor data.

Long-range communication

Over 3 km in clear line-of-sight conditions.

LoRa peer-to-peer

Direct wireless communication between gateways.

LoRa relay

Extend coverage with intermediate gateways.

LoRaWAN support

Integrate into a LoRaWAN network.

Maintenance-free solar power

Suitable for remote installations.

Wide operating temperature

-20°C to +65°C.

IP66 protection

Dust-tight and protected against powerful water jets.

SCENARIO



SMART IRRIGATION

Automatically controls pump start and stop based on water levels, maintaining a stable water supply for agricultural operations.



ENVIRONMENTAL MONITORING

Collects environmental data such as temperature, humidity, rainfall, wind speed, and soil moisture for remote monitoring via LoRaWAN networks.

SPECIFICATIONS

CONNECTIVITY

Bluetooth Protocol	Bluetooth 5.0
LoRaWAN Protocol	LoRa Peer to Peer, LoRaWAN 1.0.2B
LoRa Frequency	US915, AU915, EU868, EU433, AS923, RU864, KR920, IN865, CN470
LoRa Maximum RF Power	30dBm (optional)
High TX Power Option	Max. 30dBm and -150dBm receiving sensitivity
LoRa Sensitivity	-139dBm @SF12, BW125kHz, 434MHz/470MHz -137dBm @SF12, BW125kHz, 868MHz/915MHz
Access Quantity	>500 in one LoRaWAN gateway
Distance	>3km sight distance
Data Rate (bps)	300~30K

MECHANICS

Dimension	160*160*54.5mm
Weight	460g
Ingress Protection	IP66
Switch	Mechanical
Operating Temperature	-20°C ~ +65°C
Operating Humidity	0% ~ 95% (non-condensing)
Charging Temperature	-20°C ~ +60°C
Storage Temperature	0°C ~ +55°C
Temperature Sensor Range	-45°C ~ +85°C

FUNCTIONS

Water Level Sensor	Support
Water Float Sensor	Support
LoRa Relay	Support, Maximum 10 replays
Pump Controller Control	0/1, or water level
Configurable Bluetooth data filter and payload report	Filter any data bytes in a Bluetooth payload and report any via LoRaWAN
Adjustable Data Report Interval	5s x n (0 to 65535)
Heartbeat Report Interval	30s x n (1 to 65535)
FOTA over Bluetooth	Support
Multiple Bluetooth gateway LoRaWAN report synchronization	Sync the clock and LoRaWAN report
TDMA	Support
Bluetooth Data Compression	Support
Encryption	AES128, X509

POWER

Battery	Li-ion Rechargeable Battery 5,300mAh (Optional: 10,600mAh)
Battery Life	7 day battery life in case of continuous rainy/cloudy days. The battery can be fully charged in 2 sunny days.
Solar Panel	3W

ORDERING INFORMATION

Product Description	Part Number
Bluetooth Gateway, built-in antenna, solar, Bluetooth 5.0, LoRaWAN, 160x160x54.5mm, IP66, 5300mAh	100-02049 (FCC)
	100-02046 (CE)
Certification	CE, FCC, RCM