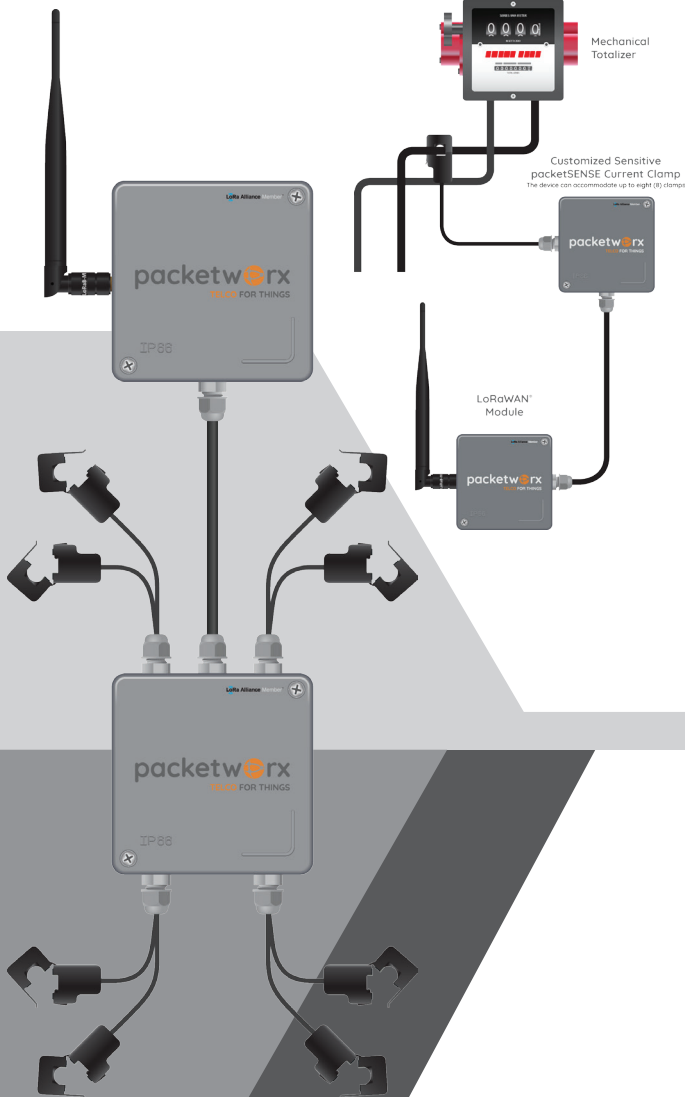


Digital Pulse Line

1 Low Current Pulse per Liter pumped



packetTOTALIZER

The **packetTotalizer** is a non-invasive IoT device that is used to count the amount of gasoline output (*in liters*) of every pump in a gasoline station, without interfering with pre-existing circuitries. It does this through the use of a custom, contactless, split core transformer.

The device is able to send the quantity of dispensed gasoline to a central location via LoRaWAN®. Each device is also able to monitor up to 8 pumps, for a duration of at least 3 years.

Technical Specification

LoRa

Device	S76S
Integrated MCU	STM32L073xZ
Integrated RF IC	SX1276
Frequency	868Mhz
Antenna	Internal
Range	Up to 15k
RF Power	+25dBm

Split Core Current Transformer

Core	Ferrite
Rating	1 A/ 1V

PULSE SHAPER

Electrical Characteristics

Power Source	Battery
Battery Voltage	3.6V
Battery Type	ER18505 Lithium-Thionyl Chloride A-type
Battery Capacity	4 Ah
Battery Discharge Voltage	2.0 V
Operating Current ⁽¹⁾	10µA

Physical

Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +105°C
Protection grade	IP68
Dimension	LoRa Device: 62 x 110 x 33 mm, Cable for clamp:

Setup	1 m, Cable to transmitter: 2 m Can be: Adhesive, Wall-mounted
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SIGNAL TRANSMITTER

Electrical Characteristics

Power Source ⁽²⁾	Battery
Battery Voltage	3.6V
Battery Type	ER18505 Lithium-Thionyl Chloride A-type
Battery Capacity	4 Ah
Battery Discharge Voltage	2.0 V
Idle-mode Current	7µA
Operating Current	12mA

Physical

Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +105°C
Protection grade	IP68
Dimension	LoRa Device: 62 x 110 x 33 mm
Setup	Can be: Adhesive, Wall-mounted

Features

- Non-contact sensing
- No circuit interference
- Can handle up to 8 pumps
- Each pump can be appropriately identified
- Long battery life
- LoRaWAN compatible
- Optimized as IOT end-node

Applications

- Gasoline Stations

packetw@rx
TELCO FOR THINGS

Packetworx IoT Technology Hub
G/F ISquare Building, 15 Meralco Avenue,
Ortigas, Pasig City, 1605, Philippines

(+632) 7971-9211 | (+63) 917-189-7613

⁽¹⁾Theoretical only, based on datasheets ⁽²⁾Separate battery from Pulse Shaper