

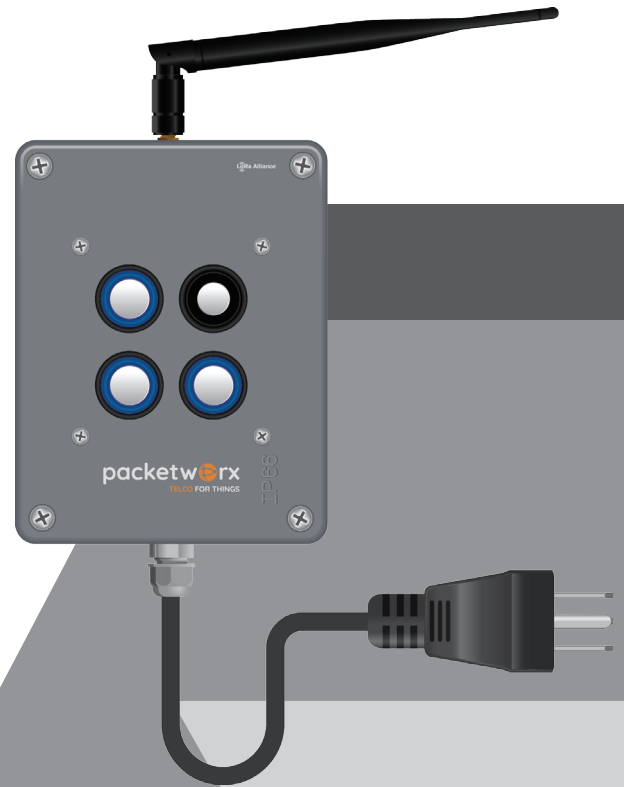
packetGAS

PacketGAS is a LoRaWAN® device for monitoring hazardous and environmental gases. The device can detect common industrial and environmental gases including CO (Carbon Monoxide), NH3 (Ammonia), H2S (Hydrogen Sulfide), HF (Hydrogen Fluoride), O2 (Oxygen), NO2 (Nitrogen Dioxide), SO2 (Sulfur Dioxide), O3 (Ozone) and Cl2 (Chlorine). It is battery backed and enclosed in die-cast Aluminum rate for dust protection.

It uses laboratory calibrated replaceable gas sensors for accuracy. It comes with calibration certificate from industry authorized agencies.

PacketGAS is configurable to take in from 1 to 4 distinct gas sensors and are field replaceable. The sensors have long duty cycle, typically lasting up to 2 years.

The device is commonly installed in industrial workplaces like manufacturing, petrochemical plants, geothermal power plants, among others where hazardous gasses are present. Sensor data are sent to the cloud/platform using LoRaWAN® at configurable intervals via either CLI or downlink commands, enabling remote configuration when necessary.



Features

- Replaceable Gas sensor
- Configurable gas sensors, max of 4 gas modules can be installed at a time
- Optimized as IOT end-node
- Battery backup with battery level on dashboard- LiFePO4
- Intrinsically safe die-cast enclosure
- Optional 150 DB alarm with lights & sounds

Applications

- Carbon Monoxide monitoring in basement parking and buildings
- Hydrogen Sulfide and Carbon Monoxide sensing in geothermal plants, refinery and petrochemical plants
- Gas Monitor and alarm system in manufacturing plants and other properties where hazardous gasses are present

Technical Specification

Detection Gas	CO (Carbon Monoxide)	NH3 (Ammonia)	H2S (Hydrogen Sulfide)	HF (Hydrogen Fluoride)	O2 (Oxygen)	NO2 (Nitrogen Dioxide)	SO2 (Sulfur Dioxide)	Cl2 (Chlorine)	O3 (Ozone)
Detection Range	0-1000 ppm	0-100 ppm	0-100 ppm	0-10 ppm	0-25% vol	0-20 ppm	0-20 ppm	0-10 ppm	0-20 ppm
Accuracy	16 bit								
Response Time	≤20s	≤15s	≤150s	≤30s	≤25s	≤60s	≤30s	≤60s	≤120s

LoRa

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

Electricals

Input Voltage Rating	5.0V, 24VDC for the 20m product
Operating Current	50mA (max)
Operating Voltage	3.3V - On-board Electronics
Power Source	5.0V DC input, USB Adapter and internal battery
Battery Type	LiFePo4
Battery Capacity	1500mAh/configurable

General Device Specifications

Operating Temperature Range	-20°C to +70°C
Operating Voltage	DC 3.0-5.5V
Operating Current	8mA
Accuracy	±1cm
Protection Grade	IP65
Optional Alarm	150 DB alarm with lights and sounds

Mechanical

Dimension	62.08mm x 111.00mm-(4m/10m product) and mounting bracket for 20m product
Mounting	Two mounting holes/ mounting bracket for 20m product
Outdoor Installation	Aluminum shroud attachment

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