

# LoRaWAN Smart Distance Detector

## DS20L



IoT Toilet



IoT Rubbish Bin

## OVERVIEW:

The Dragino DS20L is a **smart distance detector** based on long-range wireless LoRaWAN technology. It uses **LiDAR sensor** to detect the distance between DS20L and object, then DS20L will send the distance data to the IoT Platform via LoRaWAN. DS20L can measure range between 3cm ~ 200cm.

DS20L allows users to send data and reach extremely long ranges via LoRaWAN. It provides ultra-long range spread spectrum communication and high interference immunity whilst minimizing current consumption. It targets professional wireless sensor network applications such as smart cities, building automation, and so on.

DS20L has a **built-in 2400mAh non-chargeable battery** for long-term use up to several years\*. Users can also power DS20L with an external power source for **continuous measuring and distance alarm / counting purposes**.

DS20L is fully compatible with **LoRaWAN v1.0.3 Class A protocol**, it can work with a standard LoRaWAN gateway.

## Features:

- LoRaWAN Class A protocol
- LiDAR distance detector, range 3 ~ 200cm
- Periodically detect or continuously detect mode
- AT Commands to change parameters
- Remotely configure parameters via LoRaWAN Downlink
- Alarm & Counting mode
- Firmware upgradable via program port or LoRa protocol
- Built-in 2400mAh battery or power by external power source

## Sensor Spec:

### LiDAR Sensor:

- Measure Range: 3cm ~ 200cm @ 90% reflectivity
- Accuracy:  $\pm 2\text{cm}$  @ (3cm ~ 100cm);  $\pm 5\%$  @ (100 ~ 200cm)
- ToF FoV:  $\pm 9^\circ$ . Total  $18^\circ$
- Light source: VCSEL

## Working Condition:

- Operation Temperature:  $-40 \sim 80^\circ\text{C}$
- Operation Humidity: 0~99.9%RH (no Dew)
- Storage Temperature:  $-10 \sim 45^\circ\text{C}$

## Part Number: DS20L-XXX

XXX: the default frequency band

- XXX: Frequency Bands, options: EU433, CN470, EU868, IN865, KR920, AS923, AU915, US915