

LiDAR ToF Distance Sensor

OVERVIEW:

The Dragino LDS12 series is a **LiDAR ToF (Time of Flight) Distance Sensor** for Internet of Things solution. It is capable to measure the distance to an object as close as 10 centimeters (+/- 5cm up to 6m) and as far as 12 meters (+/-1% starting at 6m)! The LiDAR probe uses laser induction technology for distance measurement.

The Dragino LDS12 series can be applied to scenarios such as horizontal distance measurement, parking management system, object proximity and presence detection, intelligent trash can management system, robot obstacle avoidance, automatic control, sewer, etc.

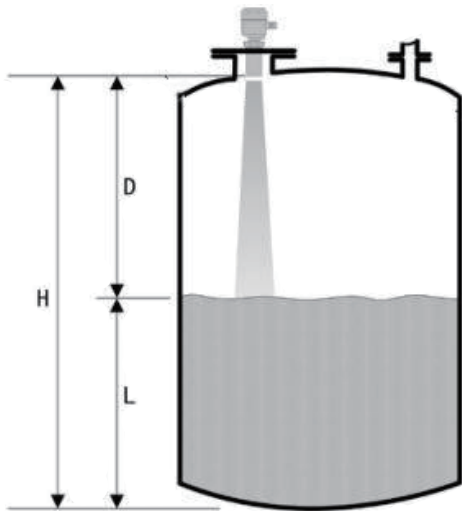
It detects the distance between the measured object and the sensor, and uploads the value via wireless to **LoRaWAN** and **NB-IoT** Server.

It supports **BLE configure** and **wireless OTA update** which make user easy to use.

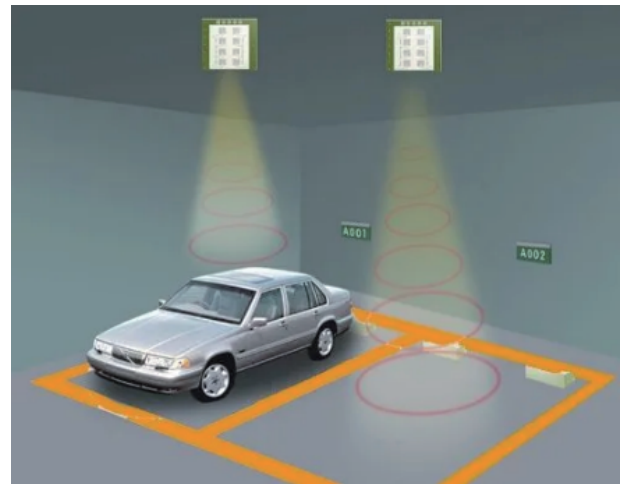
The Dragino LDS12 series is powered by **8500mAh Li-SOCI2 battery** or **solar panel with li-on battery**, it is designed for long-term use up to several years.



Applications:








Water tank level measurement



Parking Radar Ranging

Model Variants

Variants	LDS12-LB	LDS12-LS	LDS12-NB	LDS12-NS
Appearance				
Connectivity				
Configure Method	TTL, BLE, LoRaWAN	TTL, BLE, LoRaWAN	TTL, BLE, NB-IoT	TTL, BLE, NB-IoT
Upgrade Method	TTL, BLE, LoRa	TTL, BLE, LoRa	TTL, BLE	TTL, BLE
Features	<ul style="list-style-type: none"> * Ultra-low power consumption * Laser technology for distance detection * Measure Distance: 0.1m~12m * Accuracy : ±5cm@(0.1-5m), ±1%@(5m-12m) * FOV : 3.6° * Support Bluetooth v5.1 remote configure and OTA update firmware * Downlink to change configure 			
Battery & Power	* Li/SOCI2 Battery	* Solar + Li-on Battery	* Li/SOCI2 Battery	* Solar + Li-on Battery
Power Consumption	<ul style="list-style-type: none"> * Sleep Mode: 5uA @ 3.3v * LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm 	<ul style="list-style-type: none"> * Sleep mode: 74uA@3.8V * LoRa Transmit Mode: 206mA@14dBm, 236mA@20dBm 	<ul style="list-style-type: none"> * Sleep mode: 14uA@3.3V * Max Transmit power: 350mA@3.3V 	<ul style="list-style-type: none"> * Sleep mode: 74uA@3.4V * Max Transmit power: 350mA@3.4V
Supply Voltage	2.5v ~ 3.6v	3.7v ~ 4.2v	2.5v ~ 3.6v	3.7v ~ 4.2v
Operating Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C

Battery & Enclosure Option:



Li-SOCI2 Battery:

- Li/SOCI2 un-chargeable battery
- Capacity: 8500mAh
- Self-Discharge: <1% / Year @ 25°C
- Max continuously current: 130mA
- Max boost current: 2A, 1 second



Solar Version:

- 3000mAh Re-chargeable battery
- 0.9W on board solar panel Suitable to used in the place where sun is sufficient

Wireless Option:



- LoRaWAN 1.0.3 Class A
- Bands: CN470/EU433/KR920/US915/EU868/AS923/AU915/IN865
- OTAA or ABP Mode.
- World Wide Unique LoRaWAN Key
- RX sensitivity: down to -139 dBm.
- Max +22 dBm - 100 mW RF output



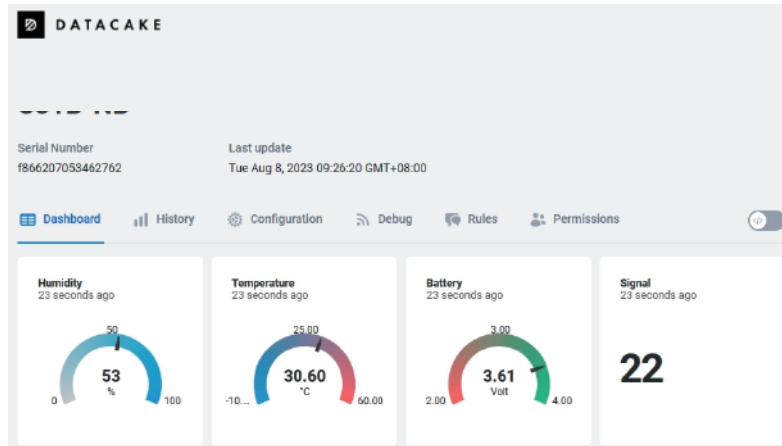
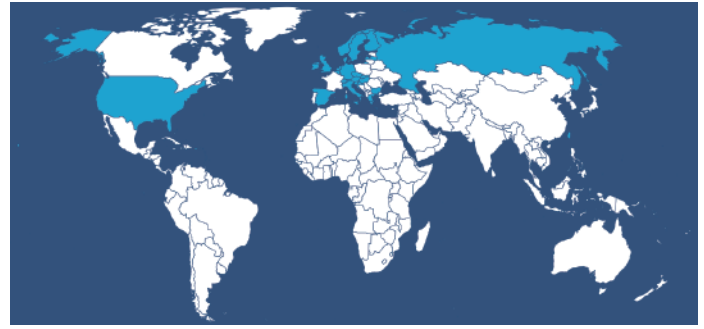
- NB-IoT Bands, B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66/B70/B85 @H-FDD
- Uplink via MQTT, MQTTs, TCP, or UDP
- Multiply Sampling and one uplink

What is 1D version for NB-IoT version?

The 1D version of LDS12 NB-IoT is with 1NCE SIM Card and DataCake IoT Service.

1NCE card provides 10 years lifetime for NB-IoT connection and Includes 500MB data traffic which is enough for 10 years normal uplink for the NB-IoT Sensor.

Coverage of 1NCE card is NB-IoT network coverage: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Malta, Netherlands, Norway, Puerto Rico, Russia, Slovak, Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.



1D version with DataCake IoT service pre-installed. This save a lot of work from user side to configure IoT server.

Below is Dash Board is the demo in DataCake.

Order Info:

Part Number: LDS12-LB-XX

XX: The default frequency band

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

Part Number: LDS12-NB-XX

XX:

- **GE:** General version (Exclude SIM card)
- **1D:** with 1NCE* 10 years 500MB SIM card Pre-configure to DataCake server

Part Number: LDS12-LS-XX

XX: The default frequency band

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

Part Number: LDS12-NS-XX

XX:

- **GE:** General version (Exclude SIM card)
- **1D:** with 1NCE* 10 years 500MB SIM card Pre-configure to DataCake server

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