Distance Detection Sensor

OVERVIEW:

The Dragino Distance Detection Sensor for Internet of Things solution. It is used to measure the distance between the sensor and a at object.The distance detection sensor is a module that uses ultrasonic sensing technology for distance measurement, and temperature compensation is performed internally to improve the reliability of data.
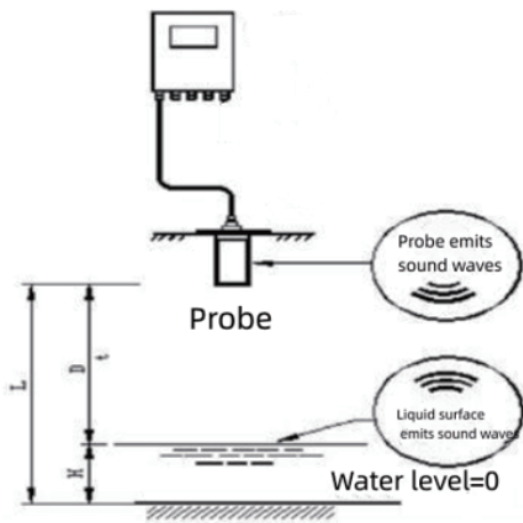
Distance Detection Sensor can be applied to scenarios such as horizontal distance measurement, liquid level measurement, parking management system, object proximity and presence detection, intelligent trash can management system, robot obstacle avoidance, automatic control, sewer, bottom water level monitoring, etc.

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

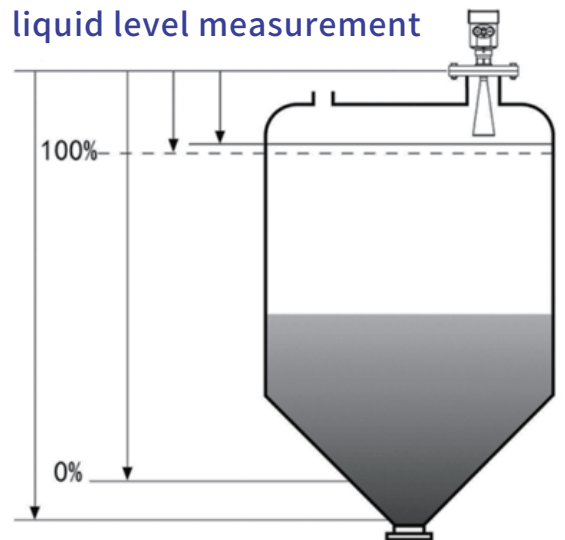## Applications:

bottom water level monitoring

Probe emits sound waves

Probe

Liquid surface emits sound waves

Water level=0

liquid level measurement

100%

0%

Model Variants

Variants	DDS75-LB	DDS75-LS	DDS75-NB	DDS75-NS
Apperance				
Connectivity	LoRaWAN	LoRaWAN	NB-IoT	NB-IoT
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	* Ultra-low power consumption * Distance Detection by Ultrasonic technology * Flat object range: 280mm - 7500mm ; Measure Angle: 40° * IP66 Waterproof Enclosure * Accuracy: ±(1cm+S*0.3%) (S: Distance)			
Battery & Power	* Li/SOCI2 Battery	* Solar + Li-on Battery	* Li/SOCI2 Battery	* Solar + Li-on Battery

Power Consumption	* Sleep Mode: 5uA @ 3.3v
	* LoRa Transmit Mode:
	  125mA @ 20dBm,
	  82mA @ 14dBm
		* Sleep mode：74uA@3.8V
		* LoRa Transmit Mode:
		206mA@14dBm,
		236mA@20dBm
			* Sleep mode： 14uA@3.3V
			* Max Transmit power:
			350mA@3.3V
				* 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℃	-40 ~ 85℃	-40 ~ 85℃	-40 ~ 85℃

Battery & Enclosure Option:

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

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

Wireless Option:

LoRaWAN
- 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
- 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
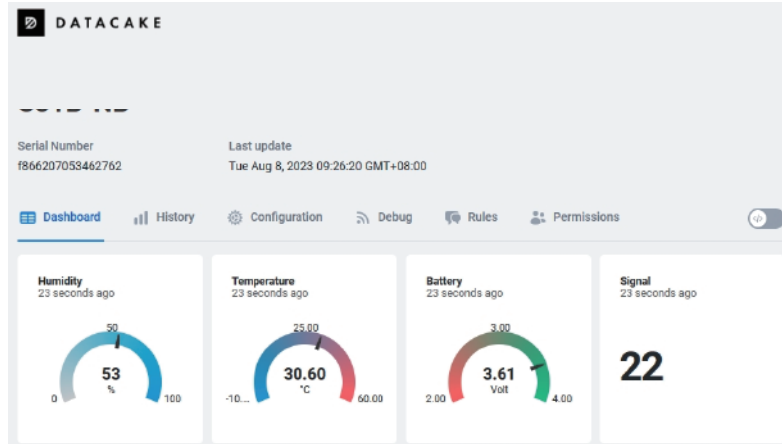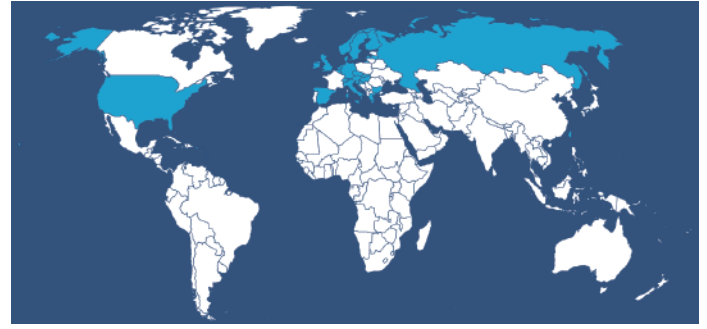
What is 1D version for NB-IoT version?

The 1D version of DDS75 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: DDS75-LB-XX

XX: The default frequency band
- XX: Frequency Bands, options: EU433,CN470, EU868,IN865,KR920,AS923,AU915,US915

Part Number: DDS75-NB-XX

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

Part Number: DDS75-LS-XX

XX: The default frequency band
- XX: Frequency Bands, options: EU433,CN470, EU868,IN865,KR920,AS923,AU915,US915

Part Number: DDS75-NS-XX

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