LoRaWAN/NB-IoT Load Cell Converter

OVERVIEW:

Dragino LCC01 series is a Load Cell Converter for IoT solutions. It is used to accurately measure the weight of objects and then upload it to the IoT server through the wireless protocol.

The LCC01 has a standard 4-wire interface which can connect to different type of load cell. It supports different scaling from gram to ton.

With LCC01 and a suitable load cell, user can build up weight measurement IoT solution. Application are suitable for such as: truck scales, railway scales, supermarket scales, bench scales, heavy duty scales or any type of standard scale.

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

The LCC01 is powered by 8500mAh Li-SOCl2 battery or solar panel with li-on battery, it is designed for long-term use up to several years.

Application:

Bending Beam Load Cell

Compression Load Cell

Type Load Cell

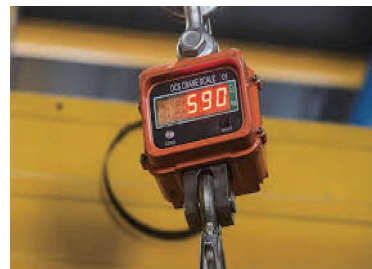Canister load cell

Hopper Weighting

Weighbridge

Test Machine

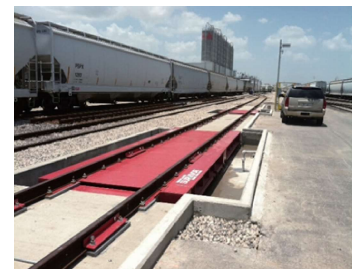
Truck Scales

Packing Machine

Tank Silo Weighing

Crane Scales

Railroad Scales

Model Variants

Variants	LCC01-LB	LCC01-LS	LCC01-NB	LCC01-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 * Standard 4-wire interface to 3rd party load cell * Weigh Measurement, scale from 100g to 10T * Support Bluetooth v5.1 remote configure and OTA update firmware * Uplink on periodically * Downlink to change configure			
Battery & Power	* Li/SOCl2 Battery	* Solar + Li-on Battery	* Li/SOCl2 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°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C

Battery & Enclosure Option:

Li-SOCl2 Battery:
- Li/SOCl2 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 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?

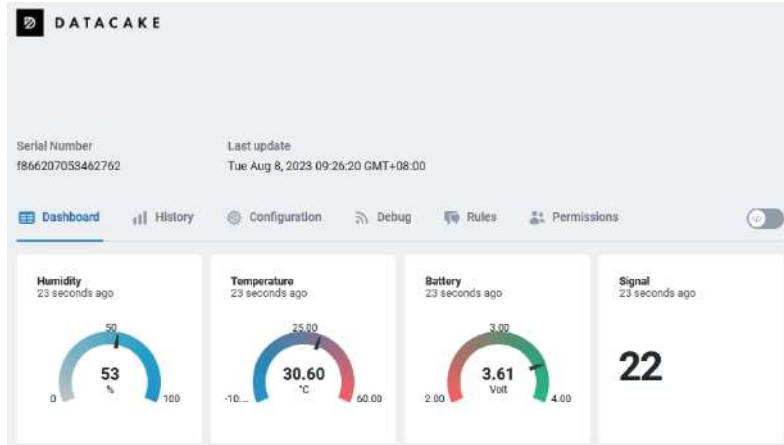The 1D version of NB-IoT Load Cell Converter is with 1NCE SIM Card and DataCake IoT Service.

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: LCC01-LB-XX

XX: The default frequency band

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

Part Number: LCC01-NB-XX

XX:

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

Part Number: LCC01-LS-XX

XX: The default frequency band

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

Part Number: LCC01-NS-XX

XX:

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