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-SOCI2 battery or solar panel with Li-ion 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

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Model Variants

Variants	LCC01-LB	LCC01-LS	LCC01-NB	LCC01-NS
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	* 8500 mAh Li/SOCI2 Battery	* Solar + 3000 mAh Li-ion Battery	* 8500 mAh Li/SOCI2 Battery	* Solar + 3000 mAh Li-ion 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-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 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, UDP or CoAP
- Multiply Sampling and one uplink

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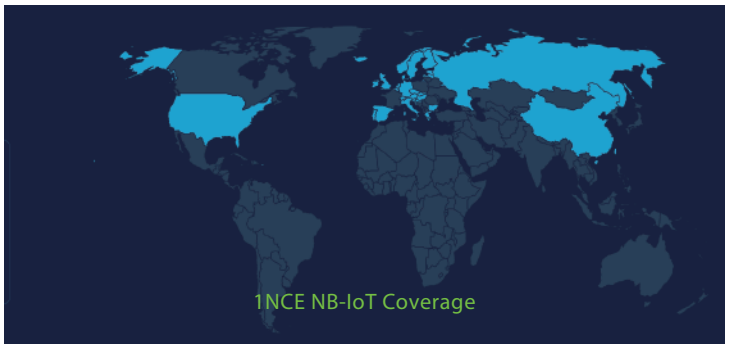
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What is 1T version for NB-IoT version?

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

1NCE SIM Card (10 Years Cellular service with 500MB Data Traffic, Enough for devices to uplink 10 years at 1hour interval).

NB-IoT Network : Austria, Belgium, Bulgaria, China, Croatia, Czech Republic, Denmark, Estonia, Finland, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Malta, Netherlands, Norway, Portugal, Puerto Rico, Russia, Slovak, Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.





ThingsEye.io platform:
1T version with ThingsEye IoT service pre-installed. This save a lot of work from user side to confgure IoT server.

Below is Dash Board is the demo in ThingsEye.io.

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-LS-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)
- 1T: with 1NCE* 10 years 500MB SIM card Pre-configure to ThingsEye server

Part Number: LCC01-NS-XX

XX:

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

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