

LoRaWAN/NB-IoT Current Sensor Converter

OVERVIEW:

The Dragino CS01 series is 4 Channels current sensor converter. It can convert the reading from current sensors and upload to IoT server via LoRaWAN or NB-IoT Network.

CS01 can be used to monitor the machine running status and analyze power consumption trends.

The CS01 supports maximum 4 current sensors. The current sensors are detachable and can be replaced with different scales.

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

The CS01 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.



Application:



Machine Monitor



Car Charging Pile











Solar Inverter



Building Electric Monitor

Model Variants

Variants	CS01-LB	CS01-LS	CS01-NB	CS01-NS
Apperance				
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 * Supports maximum 4 current sensors * Support various current sensor Ratio: 50A, 100A etc. * Monitor the machine running status * Analyze power consumption trends * Current Alarm * Support Bluetooth v5.1 remote configure and OTA update firmware * Uplink on periodically * 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 pannel 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



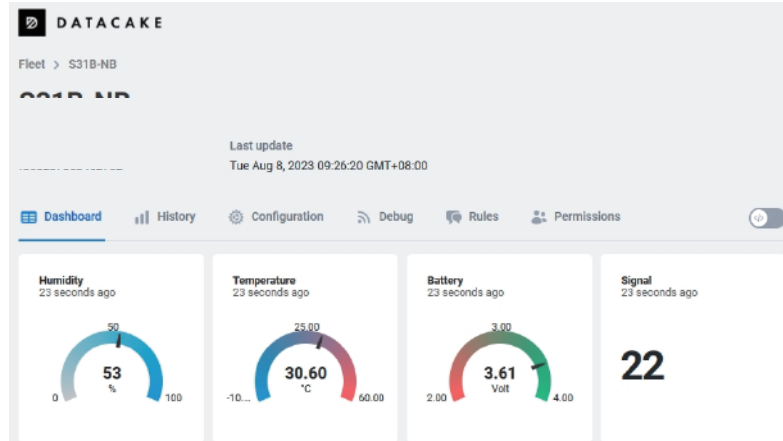
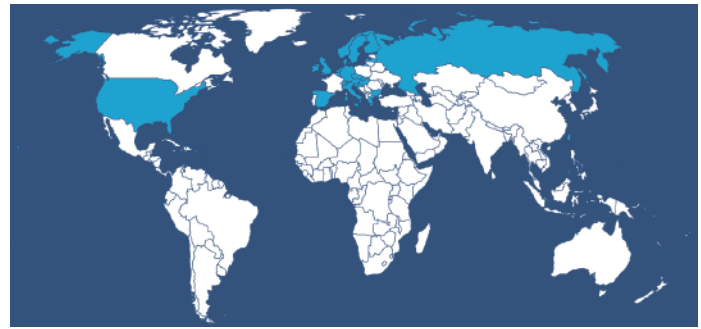
- NB-IoT Bands, B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66/B70/B85 @H-FDD
- Uplink via MQTT, MQTTs, TCP, or UDP
- Multiply Sampling and one uplink

What is 1D version for NB-IoT version?

The 1D version of NB-IoT Current Sensor 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:

Notice: This part number doesn't include the current sensor. Users need to purchase separately.

Part Number: CS01-LB-XX

XX: The default frequency band

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

Part Number: CS01-NB-XX

XX:

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

Part Number: CS01-LS-XX

XX: The default frequency band

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

Part Number: CS01-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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