SDI-12 to IoT Converter

OVERVIEW:

The Dragino SDI-12 series outdoor end node is a SDI-12 to IoT Converter designed for Smart Agriculture solution.

The Dragino SDI-12 (Serial Digital Interface at 1200 baud) is an asynchronous serial communications protocol for intelligent sensors that monitor environment data. SDI-12 protocol is widely used in Agriculture sensor and Weather Station sensors.

The Dragino SDI-12 series have SDI-12 interface and support 12v output to power external SDI-12 sensor. It can get the environment data from SDI-12 sensor and sends out the data via LoRaWAN/NB-IoT/LTE-M/LTE CAT-1 wireless protocol.

With built-in BLE configuration and wireless OTA firmware updates, the SDI-12 is simple to set up and maintain.

To support various deployment scenarios, the SDI-12 offers multiple power options — including 8,500 mAh and 19,000 mAh high-capacity non-rechargeable battery, 1,000 mAh rechargeable Li-ion battery, as well as a solar-powered version with a rechargeable Li-ion battery for long-term, maintenance-free operation.

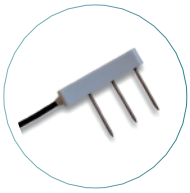


Features:

- Controllable 3.3v, 5v and 12v output to power external sensor
- SDI-12 Protocol to connect to SDI-12 Sensor

Applications:

The SDI-12 series can be connected to different SDI-12 protocol senosr such as soil moisture sensors, temperature sensors, weather stations, or water level sensors, etc.



Soil Moisture Sensor



Wind Direction Sensor



Temperature Sensor



SDI-12 to IoT Converter



Weather Station



Water Level Sensor



Water Quality Sensor

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Wireless & Battery Selection

	LB	LB2	LS	NB	NB2	NS	CB	CB2	CS	KS	KN
Wireless	LoRaWAN	LoRaWAN	LoRaWAN	NB-IoT	NB-IoT	NB-IoT	NB-IoT & LTE-M	NB-IoT & LTE-M	NB-IoT & LTE-M	LTE CAT-1	LTE CAT-1
Module	LA66	LA66	LA66	BC660K-GL	BC660K-GL	BC660K-GL	BG95-M2	BG95-M2	BG95-M2	EG800xx	EG800xx
Frequency Band	EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4	EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4	EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4	**CAT-NB2:** B1/B2/B3/B4/B5/ B8/B12/B13/B17/ B18/B19/B20/B25/ B28/B66/B70/B85	**CAT-NB2:** B1/B2/B3/B4/B5/ B8/B12/B13/B17/ B18/B19/B20/B25/ B28/B66/B70/B85	**CAT-NB2:** B1/B2/B3/B4/B5/ B8/B12/B13/B1/ B18/B19/B20/B25/ B28/B66/B70/B85	**CAT-NB2:** B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/ B25/B28/B66/B71/B85 **LTE-M:** B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/ B25/B26/B27/B28/B66/ B85	**CAT-NB2:** B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/ B25/B28/B66/B71/B85 **LTE-M:** B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/ B25/B26/B27/B28/B66/ B85	**CAT-NB2:** B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/ B25/B28/B66/B71/B85 **LTE-M:** B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/ B25/B26/B27/B28/B66/ B85	**EU:** For European, Asia, Australia, LTE-FDD: B1/ 3/5/7/8/20/28 **LA:** For Latin America, LTE-FDD: B2/3/4/5/7/ 8/28/66 **NA:** For North America, LTE-FDD: B2/4/5/12/ 13/66	**EU:** For European, Asia, Australia, LTE-FDD: B1/ 3/5/7/8/20/28 **LA:** For Latin America, LTE-FDD: B2/3/4/5/7/ 8/28/66 **NA:** For North America, LTE-FDD: B2/4/5/12/ 13/66
Uplink Method	LoRaWAN, OTAA, ABP	LoRaWAN, OTAA, ABP	LoRaWAN, OTAA, ABP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP, UDP or CoAP	MQTT, MQTTs, TCP or UDP	MQTT, MQTTs, TCP or UDP
Enclosure	Type B	Type B2	Type S	Type B	Type B2	Type S	Type B	Type B2	Type S	Type S	Type N
Battery	8500mAh	19000mAh	3000mAh	8500mAh	19000mAh	3000mAh	8500mAh	19000mAh	3000mAh	3000mAh	1000mAh
Battery Type	Li-SOCI2	Li-SOCI2	Li-ion	Li-SOCI2	Li-SOCI2	Li-ion	Li-SOCI2	Li-SOCI2	Li-ion	Li-ion	Li-ion
Rechargeable	--	--	Yes	--	--	Yes	--	--	Yes	Yes	Yes
Solar Panel	--	--	Yes	--	--	Yes	--	--	Yes	Yes	--
Solar Panel Power	--	--	0.9W	--	--	0.9W	--	--	0.9W	0.9W	--
DC Connector	--	--	Optional	--	--	Optional	--	--	Optional	Optional	Provides 12V DC power
GNSS	--	--	--	--	--	--	Yes	Yes	Yes	--	--
BLE Config	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IP Rate	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP54

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Enclosure Type

Enclosure Type B



- Battery: 8500 mAh
- None-rechargeable
- Dimension: 118 x 57 x 47 mm

Enclosure Type B2



- Battery: 19000 mAh
- None-rechargeable
- Dimension: 145 x 105 x 45 mm

Enclosure Type S



- Battery: 3000 mAh
- Rechargeable
- 0.9w Solar Panel
- Dimension: 108 x 102 x 40 mm

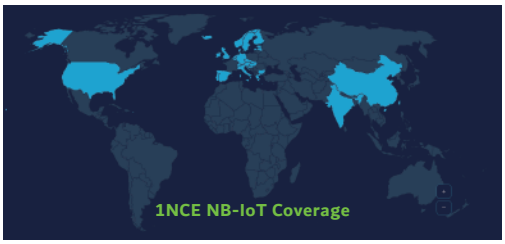
Enclosure Type N

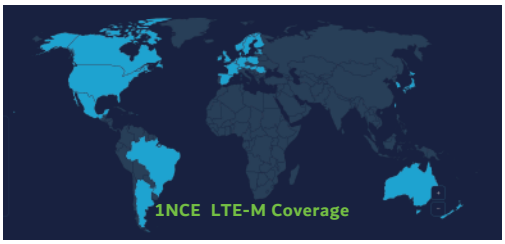


- Battery: 1000 mAh
- Rechargeable
- Provides 12V DC power
- Dimension: 118 x 57 x 47 mm

What is 1T version for Cellular version?

The 1T version of NB-IoT/LTE-M/LTE CAT-1 SDI-12 to IoT Converter is with 1) 1NCE SIM Card & 2) ThingsEye Pre-configured.
1NCE SIM Card (10 Years Cellular service with 500MB Data Traffic, Enough for devices to uplink 10 years at 1hour interval).







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.



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Ordering Information

Example: SDI-12-LB-EU868-M12

Model Name :

SDI-12 (Converter, controllable 3.3v, 5v and 12v output to power external sensors)

Wirless Tech:

L: LoRaWAN
N: NB-IoT
C: NB-IoT & LTE-M
K: LTE CAT-1

Battery Type:

B: 8500 mAh Li-SOIC2 Battery
B2: 19000 mAh Li-SOIC2 Battery
S: Solar Panel + 3000 mAh Li-ion Battery
N: 1000 mAh Li-ion Battery

Frequency Band or Cellular SIM:

Frequency Band:

For LoRaWAN version: EU433, CN470, EU868, IN865, KR920, MA869, AU915, US915, AS923-1, AS923-2, AS923-3, AS923-4
For CAT-1 version: **EU:** For European, Asia, Australia
LA: For Latin America
NA: For North America

Cellular SIM option (For NB-IoT, LTE-M, CAT-1):

GE -- General version (Exclude SIM card)
1T -- With 1NCE & ThingsEye Pre-configured

Hole Option:

M12: With M12 waterproof cable hole
M16: With M16 waterproof cable hole

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