Product Brief

Luna Sense

Digital Input Monitor with LoRaWAN® long-range low-power radio

Digital Input Monitoring Node

- LoRaWAN low-power long-range connectivity
- Dual dry-contact digital inputs
- Wake-on-transition with immediate reporting
- Battery life up to 10 years with daily reporting
- Keep track of sensors with multi-constellation GNSS
- Fully reconfigurable via LoRaWAN downlinks



Product Description

Definium's digtal input monitor with LoRaWAN is a drop-in solution for monitoring any digital signal, such as relays, float switches, and any system which uses digital outputs to provide feedback or alarms.

Based on Definium's Internet of Things sensor platform and backed by long-range low-power LoRa® radio, each sensor has a designed battery life of up to 10 years with daily reporting.

Each dry-contact digital input is capable of waking the device on any change, instantly adding LoRaWAN capabilities to existing hardware and systems. The optional multi-constellation GNSS ensures you won't lose track of your device.

Each input is made available via an IP-rated standard connector or a gland with terminal block combination, simplfying installation.

Each sensor comes pre-configured with unique LoRaWAN ids and encryption keys, with optional reconfiguration via LoRaWAN downlinks or USB.

Incoming data can be integrated directly into existing SCADA or other systems, replacing manual data-entry processes with up-to-date information automatically. Combine the digital inputs with existing off-the-shelf sensors to automate systems which currently require manual visitation, such as monitoring fluid levels, monitoring motors and transformers, or even monitoring a switch or alarm button.

Definium Technologies designs and manufactures its devices inhouse in Launceston, Tasmania. Definium produces a broad range of gateways and sensors to use in any IoT network.

Product Selector

Model	Re	gion		Ser	isors	Rad	dios	Int	erfac	ces	Fea	tures	Enc	losure
	AU915, AS923 (Australia / Asia)	US915 (United States)	EU868 (Europe)	Dry-contact digital inputs	Digital Outputs	LoRa, LoRaWAN, FSK	Multi-constellation GNSS	USB Serial Console	LoRaWAN Downlink Config	Bluetooth	Periodic Reporting	Transition-based Alarm	IP65 Polycarbonate	IP66+ Polycarbonate
DT1065	0	0	0	2	0	•		•	•		•	•	•	
DT1065-OUTBACK	0	0	0	2	0	•	•	•	•		•	•		•

Ensure you order the correct product for your LoRaWAN region. \bullet = Included. \circ = Differs with product variants.



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Features

Inputs	Two dry-contact digital inputs Wake-on-transition
LoRaWAN	Class A LoRaWAN™1.0.2 Support Supports multiple regions (firmware variants) Supports adaptive data rate Device settings configurable via downlink Pre-configured EUI and keys with QR-code Reconfigurable LoRaWAN™keys via USB serial
GNSS (Outback)	Concurrent multi-constellation GNSS (3) GPS, Gallileo, GLONASS, and BeiDou support GPS time synchronisation

Electrical Data

Power	3.6 V Lithium battery (LS14500-compatible)
Input limit	0 V minimum, 3.6 V maximum
Consumption	Up to 120 mA (transmitting) Below 5 uA (sleeping) Up to 10 years battery life (varies with report frequency)

Enclosure

 $\begin{array}{lll} \text{IP65 Polycarbonate} & 95\times75\times35\text{ mm, }300\text{ g} \\ \text{IP67 Polycarbonate} & 82\times85\times56\text{ mm, }300\text{ g} \\ \text{Enclosures may vary slightly, contact us for latest info} \end{array}$

Environmental data, quality & reliability

Operating range	-20°C to 60°C	
RoHS compliant (le	ead-free)	

Security

Secure internal storage of keys
Radio noise-based random number generator

Certifications and approvals

AS/NZS 60950.1:2011, AS/NZS 4268:2012 Other certifications TBA

Support products

DT1046	Definium Nexus 8 LoRaWAN Gateway with CAN, LTE, PoE			
LoRaWAN network provision and hosting via partners				

Further Information

For conact information, see www.definium.net/contact.

For more product details and ordering information, see the product data sheet.

LoRa* and LoRaWAN* are registered marks used under license from Semtech Corporation and the LoRa Alliance*.

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