

SensorData using LoRaWAN™ Technology

Data-Logger with SDI-12, I²C, Digital Inputs, Analogue Input, GPS, Ultra-long Battery Life, in a Waterproof Housing



LoRaWAN™



APPLICATIONS



Soil moisture probes



Temperature / cold-chain



Asset location



Tank levels



Door open / close



Meter pulse counting

The SensorData is a battery-powered data communicator that interfaces to a range of sensors, GPS, inputs and outputs, and uploads data via a LoRaWAN network. Great for agriculture and remote sensor monitoring applications.

FEATURES

- SDI-12 interface to soil moisture probes, temperature, EC and others
- I²C interface for a wide range of sensors including: temperature, humidity and many others
- Optional GPS for location updates
- 1 x Analogue Input with auto range
- 2 x Digital Inputs
- Configuration via USB cable (over-the-air downlink messages in future firmware)

MECHANICAL FEATURES

Low-profile IP67 rugged housing	The IP67 rated housing is made of sturdy ABS/Polycarbonate plastic to survive bumps and knocks and to survive many years in the sun and weather. It is low-profile and caters for a number of cable glands to allow for waterproof cable entry to the housing. The housing screws together for easy assembly, and has convenient mounting tabs.
Operating temperature	-20°C to +60°C For operation in extreme temperatures the device must be fitted with 1.5V Lithium batteries
Dimensions (mm)	L 183 x W 145 x H 40

INTERFACES

SDI-12	This interface is commonly used in agricultural sensors and measurement devices for soil moisture probes, temperature, electrical conductivity (EC) of soils, water levels / pressures, other SDI-12 probes and sensors.
I ² C Interface	I ² C (inter-IC communications) is an interface commonly used in sensor modules. This allows the SensorData to talk to a wide range of sensors including: temperature, humidity, vibration, CO ₂ gas and many others. Contact Digital Matter about sensor support.
Digital Inputs	2 x configurable digital inputs
Analogue Inputs	1 x analogue inputs reading 0V to 30V with auto-ranging. Built-in internal battery voltage monitoring.

SPECIFICATIONS

LoRaWAN	Covers 868MHz and 915MHz global regions
External antenna	External ISM band antenna provides for maximum link budget with the flexibility to install a high-gain antenna if needed. Especially important for long range in rural applications.
Input Power (4-6V)	The SensorData is ultra-low power and is designed to run off a set of 4 x "C" cell Alkaline batteries for a full season. This includes powering the sensors and SDI-12 probes. The off-the-shelf batteries are low cost and readily available. It can also be powered by a USB 5V wall socket if permanently installed in a location with power.
Switched Sensor Power (6V or 12V)	Used to control the battery power to external sensors and peripherals. Load limited and short circuit protected. 12V capable boost is available to supply SDI-12 sensors, especially over long cable runs.
3.3V Switched Power	Used to control the 3.3V power to external sensors and peripherals. Load limited and short circuit protected.
GPS	The optional GPS module allows the SensorData to periodically update its location and time. This is very handy to know the exact position of your sensors, and to obtain an accurate time update.
Configuration	Via USB cable for firmware updates and parameters Future firmware will cater for Over-The-Air (OTA) downlink messages for parameters
Test Button	Conveniently test installation and wiring.
Status LED	Visual feedback in the field for testing