## SPOTIUM IoT

SMART AGRICULTURE IOT SOLUTIONS

Agriculture Engineering Agronomy Horticulture Food Science and Technology Land and Water Management Plant Breeding and Genetics Soil Science

### **Smart information**

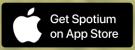
The Spotium platform is an IoT that really makes a difference from the solutions on the market

- Innovative technology
- Easy to use
- Wireless battery powered devices
- Combination of smart devices and cloud platform consisting of a userfriendly mobile & web application

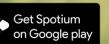
## **Mobile application**

The Mobile application allows easy information sharing with other users, ensuring the flow and integrative use of data. It includes the connection of Agri sensors in different branches of agriculture.

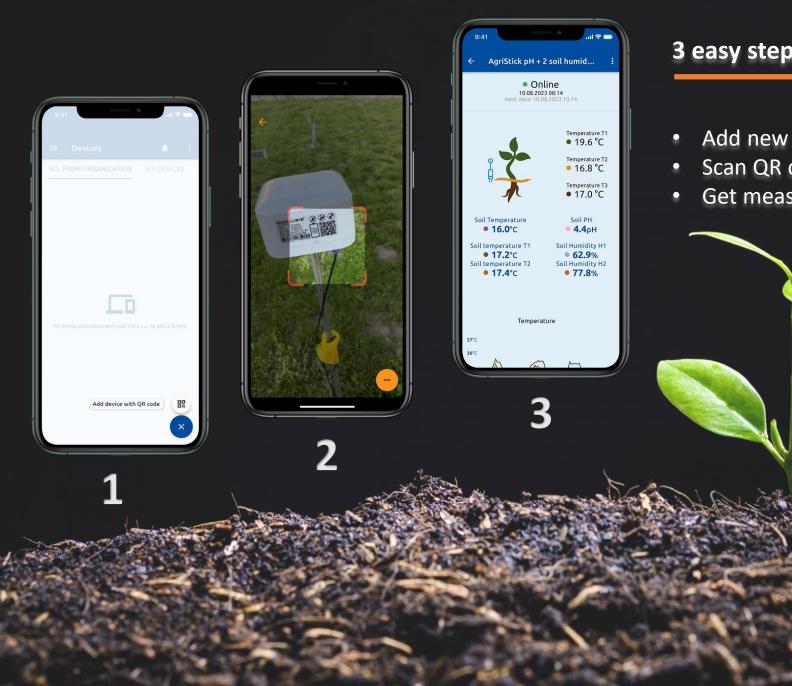












#### **3** easy steps to get data

- Add new device
- Scan QR code
- Get measured data

#### **Measurement data**

- Soil & Air temperature
- Soil & Air humidity
- Leaf wetness
- Soil pH

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- Soil EC & Salinity
- Precipitation (rain/snow)
- Solar radiation Illuminance Dust concentration Soil NPK value

## AgriStick

AgriStick is a smart agrometeorological device that integrates 3 temperature sensors for measuring soil and air temperature.

In combination with the NBIoT network, the results of all these measurements are transmitted to the Spotium platform.

In addition, different wired sensors can be combined with Agristick. The built-in battery, supported by an intelligent control system, guarantees a longer service life with minimal maintenance and autonomous operation in rural areas.



Product Name	AgriStick TS1000	AgriStick TS1000H	AgriStick TS1000C	AgriBox TS1
Order Code	31000133	31000134	31000160	31000161
Built-In Sensor	3 x Temperature	3 x Temperature + 1 x Soil humidity (optional up to 3)	3 x Temperature + Custom developed sensors	Air Temperature&Humidity + accessory sensors
Technology	NBIOT	NBIOT	NBIOT	NBIOT
Communication	LTE Cat NB	LTE Cat NB	LTE Cat NB	LTE Cat NB
Power Supply	Internal battery	Internal battery	Internal battery	Internal battery
Battery	Li-SOCl2 17Ah 3,6V	Li-SOCl2 17Ah 3,6V	Li-SOCI2 17Ah 3,6V	Li-SOCI2 17Ah 3,6V
Battery Life	6 years	5 years*	5 years*	5 years*
Installation	P'n'P	P'n'P	P'n'P	P'n'P
Dimension	1450x130x130 mm	1450x130x130 mm	1450x130x130 mm	150x150x50 mm
IP Protection	IP66	IP66	IP66	IP66
Usage Area	outdoor	outdoor	outdoor	outdoor
nv. Temperature	-20 °C to +70 °C	-20 °C to +70 °C	-20 °C to +70 °C	-20 °C to +70 °C

\* Depending on accessory sensors connected

#### Accessories

- Add-on sensors for upgrading AgriStick, AgriBox and AgriSensor products
- Provide additional capabilities for measuring, collecting data, extending autonomy and increasing information management efficiency

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				Rain sensor		Soil NPK sensor
31000149	31000150	31000151	31000152	31000166	31000165	31000216
Soil Humidity 0-100%	Leaf wetness 0-100%	Soil pH (0-14 pH)	EC 0-5000 us/cm SAL 0-10000 ppm(mg/L)	Precipitation mm	Air Humidty 0-100%RH Air Temp -40°C~+80°C	J/P/K range: 0 – 1999 mg/kg Soil Humidty 0-100%RH Soil Temp -30°C - + 70°C
Digital wire sensor	Digital wire sensor	Digital wire sensor	Digital wire sensor	Puls wire sensor	Digital wire sensor	Digital wire sensor
(0-50%) +/- 3%, +/- 5% (>50%)	(0-50%) +/- 3%, +/- 5% (>50%)	0,05 PH (resolution 0,01 PH)	1%	0,2 mm	±2 % RH ±0.3 °C	±0.2 °C ±2 % RH ±3 % (mg/kg)
3,3 VDC	12 VDC	12 VDC	12 VDC	and the second se	3,3 VDC	12 VDC
Yes	No	Yes	Yes	No		Yes
1 year		6 months	6 months	C. Martin	and the second	· ····
Under the ground	Tree branch	Under the ground	Under the ground	On the ground	wall/pole	Under the ground
250 x 20 x 5 (mm), cable 3 m	250 x 20 x 5 (mm), cable 5 m	220 mm x Ø15 mm cable 3 m	215 mm x Ø14 mm cable 3 m	V 270, Ø200 mm cable 3 m	97.4 mm x 16 x 16, cable 0.8 m	55 mm x Ø3 mm cable 2 m
IP68	IP65	IP68	IP68	IP68	IP68	IP68
outdoor	outdoor	outdoor	outdoor	outdoor	outdoor	outdoor
-10 °C to +55 °C	-10 °C to +55 °C	0 °C to +70 °C	-20 °C to +70 °C	0 °C to +70 °C	-20 °C to +70 °C	-20 °C to +70 °C
	0-100% Digital wire sensor (0-50%) +/- 3%, +/- 5% (>50%) 3,3 VDC Yes 1 year Under the ground 250 x 20 x 5 (mm), cable 3 m IP68 outdoor	3100014931000150Soil Humidity 0-100%Leaf wetness 0-100%Digital wire sensorUital wire sensor(0-50%) +/- 3%, +/- 5% (>50%)(0-50%) +/- 3%, +/- 5% (>50%)3,3 VDC12 VDC YesYesNo1 year-Under the groundTree branch cable 3 m cable 5 m LP68IP68IP65 outdoor	310001493100015031000151Soil Humidity 0-100%Leaf wetness 0-100%Soil pH (0-14 pH)Digital wire sensor Digital wire sensorDigital wire sensorDigital wire sensor(0-50%) +/- 3%, +/- 5% (>50%)(0-50%) +/- 3%, +/- 5% (>50%)0,05 PH (resolution 0,01 PH)3,3 VDC12 VDC12 VDCYesNoYes1 year6 monthsUnder the groundTree branch cable 3 m cable 5 mUnder the ground yes cable 3 m cable 3 mIP68IP65IP68outdooroutdooroutdoor	31000149310001503100015131000152Soil Humidity 0-100%Leaf wetness 0-100%Soil pH (0-14 pH)EC 0-5000 us/cm SAL 0-10000 ppm(mg/L)Digital wire sensor Jigital wire sensorDigital wire sensorDigital wire sensorDigital wire sensor(0-50%) +/- 3%, +/- 5% (>50%)(0.50%) +/- 3%, +/- 5% (>50%)(0.05 PH (resolution 0,01 PH)1%3,3 VDC12 VDC12 VDC12 VDCYesNoYesYes1 year-6 months6 monthsUnder the groundTree branch cable 3 mUnder the ground cable 3 m215 mm x Ø14 mm cable 3 mIP68IP65IP68IP68outdooroutdooroutdooroutdoor	Hum Soil sensorLeafWet sensorSoil pH sensorSoil EC/SAL sensorRain sensor3100014931000150310001513100015231000166Soil Humidity 0-100%Leaf wetness 0-100%Soil pH (0-14 pH)3100015231000166Digital wire sensorLeaf wetness 0-100%Soil pH (0-14 pH)Soil 0-10000Precipitation mm ppm(mg/1)Digital wire sensorLeaf wetness 0-100%Digital wire sensorDigital wire sensorPuls wire sensor0-50%) +/- 3%, +/- 5% (>50%)0.05 PH (resolution 0,01 PH)1%0.2 mm3,3 VDC12 VDC12 VDC-YesNoYesYesNo1 year-6 months6 months-1 year-0nder the groundOn the ground cable 3 mOn the ground cable 3 m0n the ground 	Hum Soil sensorLeafWet sensorSoil pH sensorSoil EC/SAL sensorRain sensorTemp&Hum sensor310001493100015031000151310001523100016631000165Soil Humidity 0-100%Leaf wetness 0-100%Soil pH (0-14 pH)310001523100016631000165Soil Humidity 0-100%Leaf wetness 0-100%Soil pH (0-14 pH)Stal 0-10000 ppm(mg/L)Precipitation mm Precipitation mmAir Humidty 0-100%RH Air Temp-40°C**80°CDigital wire sensor Digital wire sensorDigital wire sensorDigital wire sensorDigital wire sensorDigital wire sensor(0-50%) +/-3%, +/- 5% (>50%)0,05 PH (resolution 0,01 PH)1%0,2 mm±2 % RH ±0.3 °C3,3 VDC12 VDC12 VDC12 VDC3,3 VDCYesNoYesYesNo1 year-6 months6 months-1 yearTree branch cable 3 m cable 3 mUnder the ground cable 3 mOn the ground cable 3 m cable 3 m97.4 mm x 16 x 16, cable 0.8 m1P68IP65IP68IP68IP68IP680utdooroutdooroutdooroutdooroutdooroutdoor

#### AgriSensor

AgriSensor is a smart agrometeorological device that has integrated several different sensors for measuring meteorological values.

AgriSensor differs from the AgriStick device in terms of powering the device. While AgriStick uses lithium nonrechargeable 3.6V batteries, AgriSensor uses a 12V rechargeable battery and a solar panel.

AgriSensor has a larger IP65 enclosure but retains the functionality of additional AgriStick sensors such as leaf or soil moisture, PH or soil salinity that can be used additionaly to standard parameters.



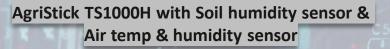
Product Name	AgriSensor MX5	AgriSensor MX6	AgriSensor MX9
Order Code	31000145	31000146	31000147
Built-In Sensor	Wind speed & direction, Air temperature/humidity/pressure	Wind speed & direction, Air temperature/humidity/pressure, Precipitation (rain, snow, hail)	Wind speed & direction, Air temperature/humidity/pressure, Precipitation (rain, snow, hail), Solar radiation, illuminance, UV, dust concentration
Technology	NBIOT	NBIOT	NBIOT
Communication	LTE Cat NB	LTE Cat NB	LTE Cat NB
Power Supply	Internal battery + 20W solar panel	Internal battery + 20W solar panel	Internal battery + 20W solar panel
Battery	LeadAcid 12V 9Ah	LeadAcid 12V 9Ah	LeadAcid 12V 9Ah
Battery Life	rechargable battery	rechargable battery	rechargable battery
Installation	Aprox. 60 min / P'n'P	Aprox. 60 min / P'n'P	Aprox. 60 min / P'n'P
Dimension	N/A (compact pole design)	N/A (compact pole design)	N/A (compact pole design)
IP Protection	IP66	IP66	IP66
Usage Area	outdoor	outdoor	outdoor
Env. Temperature	-20 °C to +70 °C	-20 °C to +70 °C	-20 °C to +70 °C

### Examples

AgriBox with soil pH sensor



AgriSensor MX9 weather station





# SPOTIUM IOT

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