LinkAmerica labs

creative minds connecting people, objects and data: the professional IoT & business automation services!

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DOMUS
SMART FARMING MONITORING SYSTEMS

it's time to change the way you think about agriculture!

DOMUS allows you to manage your farm using IoT technologies to increase the quantity and quality of products while optimizing the human labor required by production.

DOMUS
SMART FARMING MONITORING SYSTEMS

easily adaptable!

DOMUS is easily adaptable and an easy to install IoT toolset than can be deployed in minutes, no tech savvy

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DOMUS
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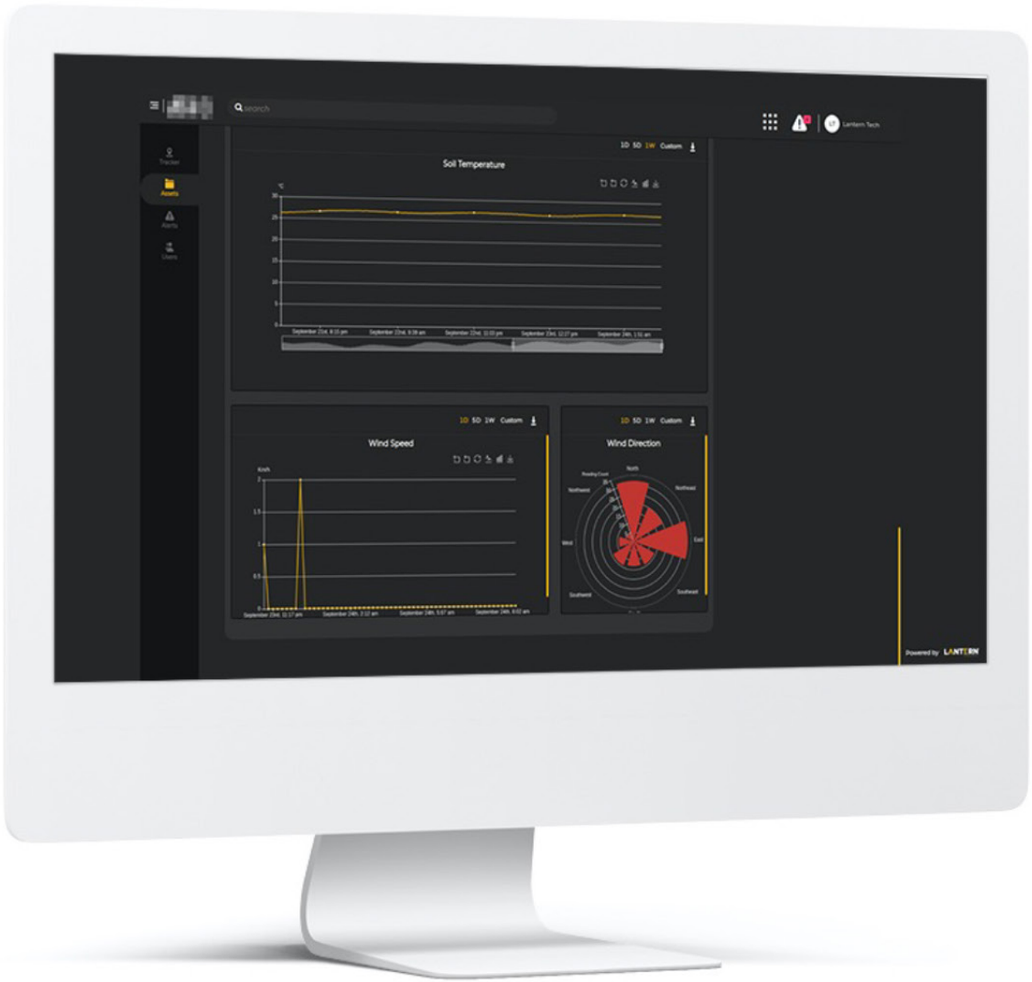
enabling smart farming with IoT technologies!

The combination of IoT information sources with other technologies such as multispectral images and historical farm data can generate predictive models and simulations that allow companies to improve their practices.


search
Lantern Tech
Tracker
Assets
Alerts
Users
Estación Meteorológica #5(CasaRaleigh)
Estación Meteorológica #5(CasaRaleigh).
last seen: 2 minutes ago
Canal Río Turrialba
Ruta 10
Ruta 230
Residencias Estudiantiles
Biblioteca Conmemorativa Orlich
Plaza del CATIE
Club CATIE
mapbox
Powered by LANTERN


search
Lantern Tech
Tracker
Assets
Alerts
Users
Soil Temperature
1D 5D 1W Custom
Wind Speed
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North
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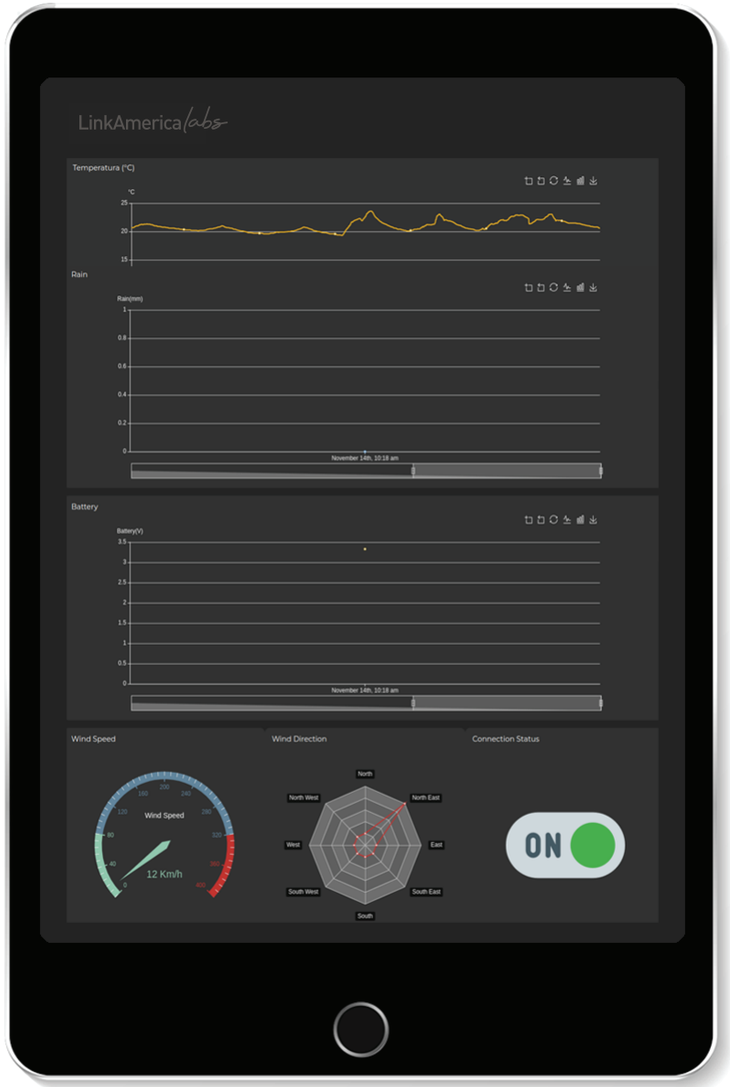
Powered by LANTERN



domus capabilities

•Simple and reliable sensors devices with long term battery. Easy to maintain and operate

•Cost effective connectivity costs using LPWAN technology

•Long range connectivity for large farms fields, yet low cost.

•No need for solar panels or any expensive infrastructure on the sensor*

•Single web platform, multiple users. historical data reports for data analysis

•Used configurable smart alerts and notifications.

linkamericalabs.com

Easy to install IoT toolset that can be deployed in minutes!

LPWAN comprehensive solution for agriculture featuring up to 10 variables such as temperature, soil, moisture, light, water levels, flow, rain, wind speed, among others.

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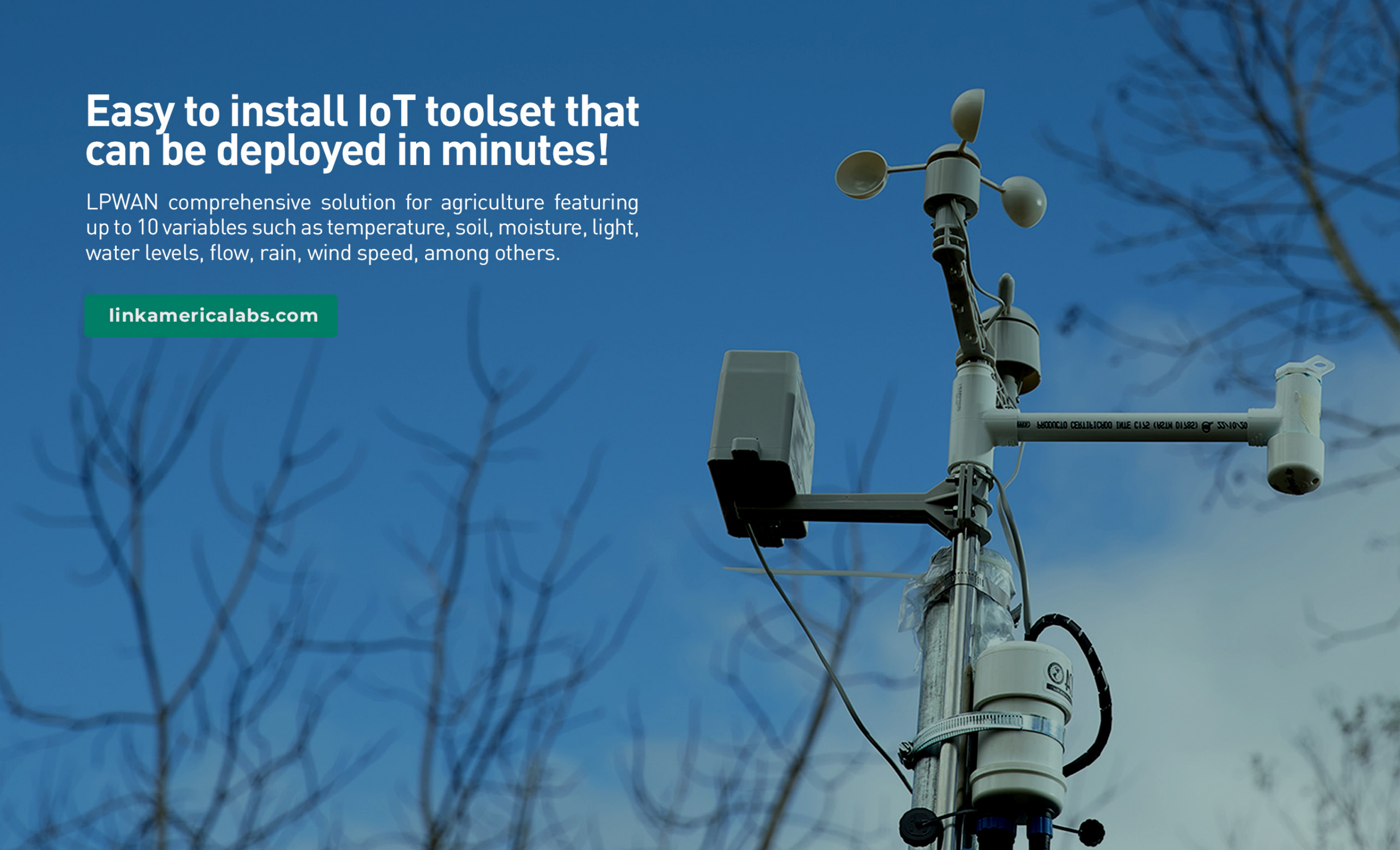

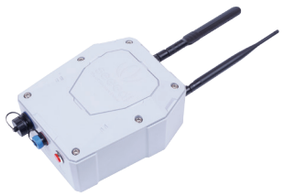

gateway

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	Model	Region
Product Model	LoRa-G-868-E/4G	European, Africa, Asia (India etc.)
	LoRa-G-923-E/4G	Japan, Malaysia, Singapore, Brunei, Cambodia, Hong Kong, Indonesia, Laos, Taiwan, Thailand, Vietnam, Peru etc.
	LoRa-G-915-E/4G	USA, Canada and South America
	LoRa-G-AU915-E/4G	Australia, etc.

LoRa Parameters	Protocol	Based on LoRaWAN v1.0.2 protocol
	Channel Plan	EU868/US915/AU915/AS923
	Power Output	25dBm
	Sensitivity	-139dBm (SF12BW125)

General Parameters	CPU	TI AM3358 Cortex-A8 1GHz
	System	Linux Debian
	RAM	DDR3 512MB
	Memory	8GB eMMC
	Ethernet	8GB eMMC
	4G Band	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/ B12/B13/B18/B19/B20/B25/B26/B28 LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: 850/900/1800/1900MHz
	4G Features	Support non-CA Cat 4 FDD and TDD LTE-FDD: Max 150Mbps (DL), Max 50Mbps (UL) LTE-TDD: Max 130Mbps (DL), Max 30Mbps (UL)

air, temperature & humidity sensor

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Air Temperature	Range	-40 °C to +85 °C
	Accuracy	±0.3 °C
	Resolution	0.1 °C
	Drift	< 0.03 °C/year

Air Humidity	Range	0 to 100 %RH (non-condensing)
	Accuracy	±2 %RH
	Resolution	1 %RH
	Drift	< 0.25 %RH/year

General Parameters	Product Model	*LoRa-S-868/915/AU915/923-TH-01
	Microcontroller	Ultra-low-power MCU
	Support Protocol	Based on LoRaWAN v1.0.2 protocol
	LoRa Channel Plan	EU868 / US915 / AU915 / AS923
	LoRa Power Output	16 dBm (EIRP)
	Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
	Current Consumption	5μa (sleep mode) 120 mA max(active mode)
	Communication Distance	2 to 10 km (depending on different antennas and environments)
	Battery Life	≥ 3 year (upload data center)
	Battery Voltage	3.6V

light intensity sensor

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Light Intensity	Range	0 to 188000 Lux
	Sensitivity	0.045 Lux/LSB
	Resolution	0.045 Lux
General Parameters	Product Model	LoRa-S-868/915/AU915/923-Light
	Microcontroller	Ultra-low-power MCU
	Support Protocol	Based on LoRaWAN v1.0.2 protocol
	LoRa Channel Plan	EU868 / US915 / AU915 / AS923
	LoRa Power Output	16 dBm (EIRP)
	Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
	Current Consumption	5μa (sleep mode) 120 mA max(active mode)
	Communication Distance	2 to 10 km (depending on different antennas and environments)
	Battery Life	≥ 3 year (upload data center)
	Battery Voltage	3.6V
	Battery Capacity	19Ah (Non-rechargeable)
	IP Rating	IP66
	Operating Temperature	-40 °C to +85 °C
	Operating Humidity	0 to 100 %RH (non-condensing)
	Device Weight	288g

CO2 sensor

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	Parameters	Condition	Value
Air Temperature	Range	-	0 to 40000 ppm
	Accuracy	400 to 10000ppm	±(30 ppm + 3 %MV)
	Resolution	-	1 ppm
	Temperature Stability	T = 0 to 50°C 400 to 10000 ppm	±2.5 ppm /

General Parameters	Product Model	LoRa-S-868/915/AU915/923-CO2-01
	Microcontroller	Ultra-low-power MCU
	Support Protocol	Based on LoRaWAN v1.0.2 protocol
	LoRa Channel Plan	EU868 / US915 / AU915 / AS923
	LoRa Power Output	16 dBm (EIRP)
	Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
	Current Consumption	5μa (sleep mode) 120 mA max(active mode)
	Communication Distance	2 to 10 km (depending on different antennas and environments)
	Battery Life	≥ 3 year (upload data center)
	Battery Voltage	3.6V
	Battery Capacity	19Ah (Non-rechargeable)
	IP Rating	IP66 (Sensor Node) Indoor (Sensor Probe) *
	Operating Temperature	-0 °C to +50 °C
	Operating Humidity	0 to 95 %RH
	Device Weight	319g

barometric pressure sensor

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Barometric Pressure

Parameters	Condition	Value
Range	-	300-40000 hPa
Accuracy	300 to 1100hPa 25 to 40°C	±(30 ppm + 3 %MV)
Resolution	-	1 pa
Temperature Coefficient Offset	900 hPa 25 to 40°C	1.5 Pa/K

General Parameters

Product Model	LoRa-S-868/915/AU915/923-Baro-01
Microcontroller	Ultra-low-power MCU
Support Protocol	Based on LoRaWAN v1.0.2 protocol
LoRa Channel Plan	EU868 / US915 / AU915 / AS923
LoRa Power Output	16 dBm (EIRP)
Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
Current Consumption	5μa (sleep mode) 120 mA max(active mode)
Communication Distance	2 to 10 km (depending on different antennas and environments)
Battery Life	≥ 3 year (upload data center)
Battery Voltage	3.6V
Battery Capacity	19Ah (Non-rechargeable)
IP Rating	IP66 (Sensor Node) IP65 (Sensor Probe)
UV Resistance	anti-aging (from rain/sun exposure): UL746C F1

soil moisture & temperature sensor

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Soil Temperature

Range	-30 °C to +70 °C
Accuracy	±0.5 °C
Resolution	0.1 °C

Soil Moisture

Product Model	LoRa-S-868/915/AU915/923-Soil MT-01
Microcontroller	Ultra-low-power MCU
Support Protocol	Based on LoRaWAN v1.0.2 protocol
LoRa Channel Plan	EU868 / US915 / AU915 / AS923
LoRa Power Output	16 dBm (EIRP)
Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
Current Consumption	5μa (sleep mode) 120 mA max(active mode)
Communication Distance	2 to 10 km (depending on different antennas and environments)
Battery Life	≥ 3 year (upload data center)
Battery Voltage	3.6V
Battery Capacity	19Ah (Non-rechargeable)
IP Rating	IP66
Operating Temperature	-30 °C to +70 °C
Operating Humidity	0 to 100 %RH (non-condensing)
Device Weight	415g

soil, temperature, VWC & EC sensor

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Soil Temperature	Range	-40 °C to +60 °C
	Accuracy	±0.5 °C from -40 to 0 °C ±0.3 °C from 0 to +60 °C
	Resolution	0.1 °C
General Parameters	Product Model	LoRa-S-868/915/AU915/923-Soil
	Microcontroller	Ultra-low-power MCU
	Support Protocol	Based on LoRaWAN v1.0.2 protocol
	LoRa Channel Plan	EU868 / US915 / AU915 / AS923
	LoRa Power Output	16 dBm (EIRP)
	Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
	Current Consumption	5μa (sleep mode) 120 mA max(active mode)
	Communication Distance	2 to 10 km (depending on different antennas and environments)
	Battery Life	≥ 3 year (upload data center)
	Battery Voltage	3.6V
	Battery Capacity	19Ah (Non-rechargeable)
	IP Rating	IP66
	Device Weight	385g

soil PH sensor

SenseCAP Wireless • LORAWAN

Specifications	Range	0-14 pH
	Accuracy	±0.1 pH
	Resolution	0.1 pH
Soil Moisture	Product Model	LoRa-S-868/915/AU915/923-pH-01
	Microcontroller	Ultra-low-power MCU
	Support Protocol	Based on LoRaWAN v1.0.2 protocol
	LoRa Channel Plan	EU868 / US915 / AU915 / AS923
	LoRa Power Output	16 dBm (EIRP)
	Sensitivity	EU868: -137.5dBm (SF12, BW125KHz) US915/AU915/AS923: -136.5dBm (SF12, BW125KHz)
	Current Consumption	5μa (sleep mode) 120 mA max(active mode)
	Communication Distance	2 to 10 km (depending on different antennas and environments)
	Battery Life	≥ 3 year (upload data center)
	Battery Voltage	3.6V
	Battery Capacity	19Ah (Non-rechargeable)
	IP Rating	IP66
	Operating Temperature	-20 °C to +50 °C
	Operating Humidity	0 to 100 %RH (non-condensing)
	Device Weight	594g

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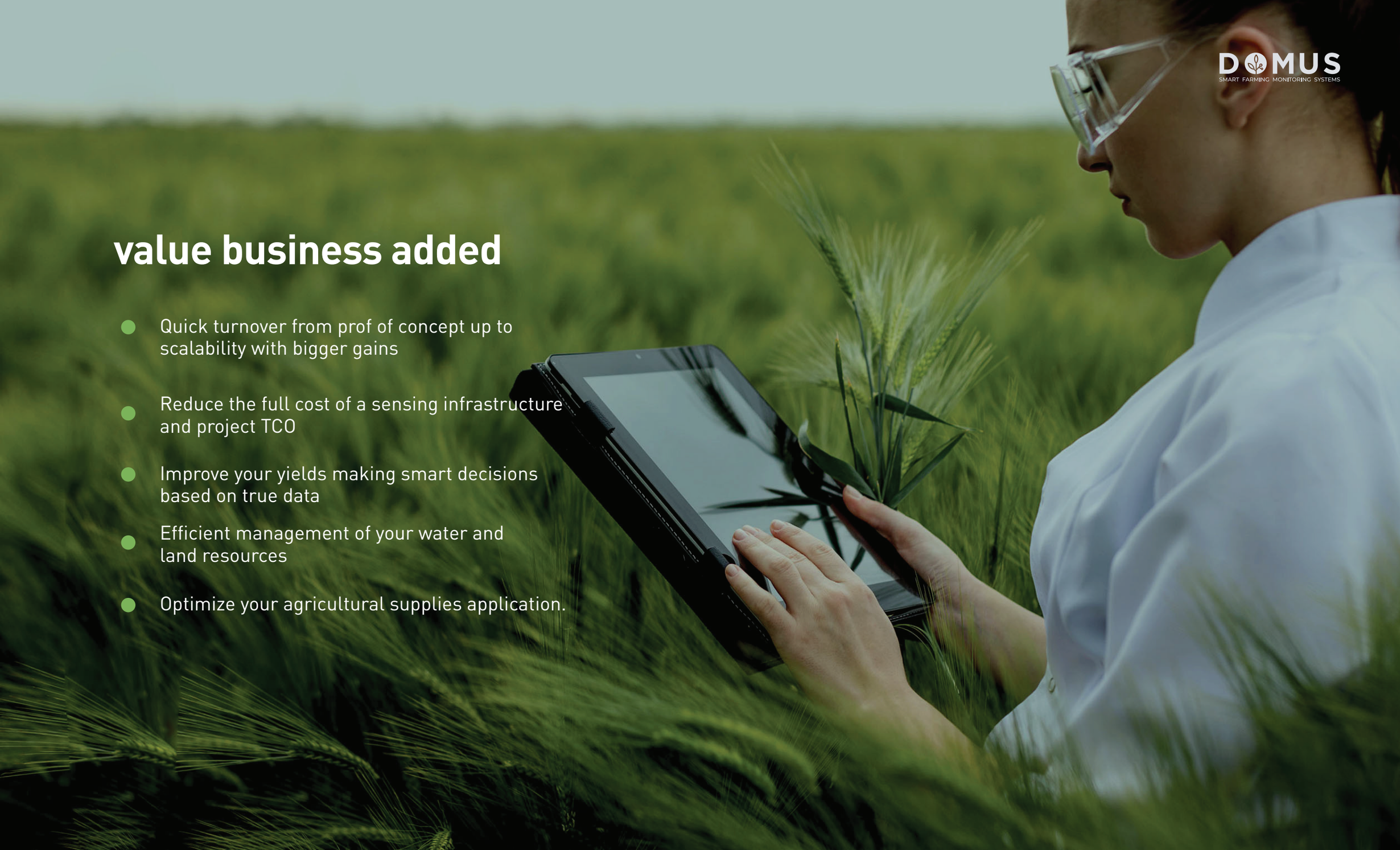
value business added

- Quick turnover from prof of concept up to scalability with bigger gains
- Reduce the full cost of a sensing infrastructure and project TCO
- Improve your yields making smart decisions based on true data
- Efficient management of your water and land resources
- Optimize your agricultural supplies application.



simplicity

No technical worries, simple battery sensors

coverage

Big fields to cover: long range coverage LPWAN network

versatility

Many different things to monitor: multiple variables & customizable capabilities

scalable

Scale from pilot projects: with scalable costs

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creative minds connecting people, objects and data: the professional IoT & business automation services!