Milesight

Smart Agriculture Kit

iBox Smart Agriculture Kit Datasheet
Unboxing Your Next Level IoT Adventure

Why Smart Agriculture Kit

Congratulations on beginning the journey of Smart Agriculture towards a fruitful future.
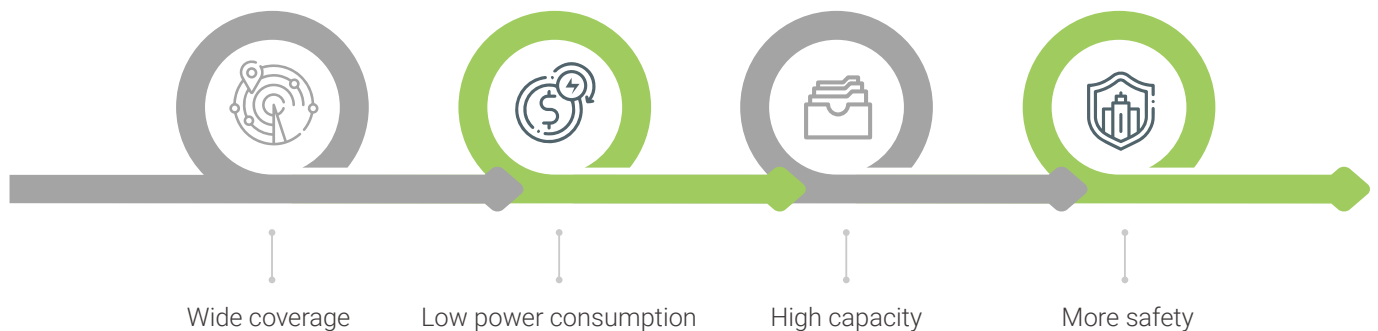
The Milesight iBox Smart Agriculture Kit offers unparalleled IoT connectivity. Gain instant access to valuable data insights, advanced analytics, and immersive visualization tools that will revolutionize your farming practices.

" Together with IoT solutions, it's easy to achieve more stable yields and resilient landscapes." The Milesight Team

Why LoRaWAN®

LoRaWAN® is a long range, wide area, and low-power networking protocol.

| Wide coverage | Low power consumption | High capacity | More safety |

Why Milesight D2D

Milesight D2D is a device to device communications protocol which enables LoRaWAN® based devices to communicate directly with one another when they are in the same group.

* Independently Developed by Milesight

- Low latency (less than 1 second in the same room)
- Low power for battery operation of both sides
- Long range and as secure as LoRaWAN®
- No useless beaconing and difficult synchronization
- Initial feature which coexists with LoRaWAN®
- No additional hardware and LoRaWAN® gateways are needed

Soil Moisture, Temperature and Electrical Conductivity Sensor

EM500-SMTC is suitable for soil condition monitoring. With an external probe, it can accurately and instantly detect conditions on soil moisture content, temperature, and electrical conductivity.

Overall Features

- IP67 Rated and UV Resistance
- Research-Grade Accuracy in Multiple Soil Media
- Rapid Monitoring of Growing Conditions
- Temperature Compensation for Correcting Temperature Changes
- Up to 10 Years Battery Life for Easy Maintenance
- LoRaWAN® Wireless Deployment with Low Power Consumption

EM500-SMTC

Model		EM500-SMTC
Wireless Transmission	Technology	LoRaWAN®
	Frequency	CN470/ IN865/RU864/EU868/US915/AU915/KR920/AS923- 1&2&3&4
	Mode	OTAA/ABP Class A
Measurement	Moisture	Range：0% ~ 100% RH Accuracy：±2%(0~50%), ± 3%(50%~100%) Resolution：0.01%
	Temperature	Range：-40°C ~ 80°C Accuracy: ±0.5°C Resolution：0.1°C
	Conductivity	Range：0~20000 µs/cm Accuracy: ±3%(0~10000 µs/cm), ±5%(10000~20000 µs/cm) Resolution：1 µs/cm
Physical Characteristics	Configuration	NFC, USB Type-C Port
	Battery Life*	Built-in 19000 mAh Can be Used for up to 10 Years
	Operation Temperature	-30°C to +70°C
	Cable Length	2m
	Ingress Protection	IP67 (Transceiver)/IP68(Soil Sensor)
	Installation	Pole, wall or DIN Rail Mounting

* Tested under laboratory conditions and for guideline purposes only.

Smart Agriculture Kit

LoRaWAN® Solenoid Valve Controller

UC511 provides access capabilities for common irrigation vales with embedded pulse counter to monitor flow precisely.

Overall Features

- IP67 Rated and UV Resistance Enclosure with M12 Connectors
- Water Flow Monitoring with Programmable Unit per Pulse
- Solar Powered and Built-in Batteries for Flexible Power Supply Options
- Support Configuration via NFC or Wired USB Type-C Port

UC511

Model		UC511
Wireless Transmission	Technology	LoRaWAN®
	Antenna	Internal Antenna or External Antenna (Hardware Optional) External Antenna (EA) Version: 1 × 50 Ω SMA Female Connector
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class A, Class B, Class C, Class C to B
Data Interfaces	Interface Type	M12 A-Coded Male
	Solenoid Interface	2 × Solenoid Interfaces, 5/9/12 VDC Switchable
	GPIO Interface	2 × GPIO Interfaces (Digital Input, Pulse Counter)
Physical Characteristics	Configuration	NFC, USB Type-C Port
	Power Supply	① Solar Powered (6V, 1.7W) ② 2 × Chargeable Batteries ③ 5-24 VDC (EA Version Only)
	Operation Temperature	-20°C ~ +60°C
	Ingress Protection	IP67
	Dimension	116 × 116 × 45.5 mm (4.56 × 4.56 × 1.79 in)
	Installation	Wall or Pole Mounting

Industrial LoRaWAN® Gateway

UG56 is a high-performance 8-channel LoRaWAN® gateway that offers reliable connectivity for industrial applications.

LoRaWAN®   BACnet   </>

Overall Features

- Industrial-Grade Design with Compact Size
- Stay Connected via Ethernet, Cellular, and Wi-Fi
- Gateway Fleet for Comprehensive Networking
- Listen Before Talk (LBT) for Downlink Data Integrity
- Semtech SX1302 Chip with High-Performance Quad-Core CPU
- Embedded Network Server Compatible with TTN, ChirpStack, Everynet, Senet, etc.
- BACnet/IP Support for Seamless Integration into Existing Building Management Systems (BMS)

UG56

Model		UG56
LoRaWAN®	Chipset	SX1302, 8 Channels (Half-duplex)
	Antenna	1 × 50 Ω SMA Connector (Center PIN: SMA Female)
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
Connectivity	Ethernet	1 x RJ45 PoE PD Port, 10/100 Base-T (IEEE 802.3)
	Wi-Fi	IEEE 802.11b/g/n, 2.4 GHz
	Cellular (Opt.)	1 x Mini SIM-2FF Slot, Support Global GSM/3G/4G LTE Frequency Bands
Hardware	CPU	Quad-core 1.3 GHz, 64-bit ARM Cortex-A35
	Power Supply	① 1 × 802.3af Standard PoE Input ② 5V, 2A by Type-C Port
Physical Characteristics	Ingress Protection	IP30
	Dimension	110 x 75 x 24 mm (4.33 x 2.95 x 0.94 in)
	Installation	Desktop, Wall Mounting

Milesight IoT Cloud

Milesight IoT Cloud provides unparalleled levels of vertical integration with Milesight LoRaWAN® devices.

AWS Built on AWS to Provide Confidential and Reliable Infrastructure

Licensing with Ease: Just Copy & Paste and Upgrade Is Done

iOS

*Get the **Free Trial** now and begin your data-driven future.*

Transform Real-Time and Historical Data into Drag-and-Drop Widgets on Dashboard

Control Access and Monitor Projects from Anywhere

Email and Mobile Push Notifications based on Triggered Events

Milesight Development Platform

Milesight Development Platform is an integration platform that simplifies integration and device deployment and management. With the technical complexity managed, you can fully focus on developing your IoT project.

- Easy integration & data exchange
- Centralized management of devices, applications, and projects
- Not requiring extensive software/hardware knowledge

Try the Platform Now!

If you need any assistance or clarification, please send an email to evie@milesight.com.

Auto-provisioning Batch Operations Remote Access Over-the-air Updates Device Sharing

Device Management

Milesight Development Platform

Integration & data exchange

Webhook Open API

Third-party system

Plan and Pricing

Free Plan - For light users	Professional Plan - For regular business users	Private Cloud
• 10 connected devices • 3 applications for integration	• Connected devices: $1/device/year • Unlimited applications for integration	• Contact us

*Camera product users are charged upon the number of image transmissions.

*For pricing details, visit **Milesight Development Platform***

You Can Always Trust Us

Milesight is a multi-dimensional sensing products company transforming how the world is perceived and connected, and delivering safety, efficiency, and business insights.

Our mission is to digitalize the world with connected sensors, deliver the most accurate and valuable data, and extract actionable insights with our partners.

Our vision is to continuously drive the society and environment towards a more connected, efficient, and sustainable future.

EVOLVING

· AM319   · AM307
· AM103   · AM102L
· UG56
· Milesight IoT Cloud

*Enjoy free cloud services for a specified period of time

Indoor Air Quality Solution   **iBox IAQ Kit**

· VS121   · VS340
· DS3604   · UG56
· Milesight IoT Cloud

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Smart Office Solution   **iBox CoWork Kit-A**

· VS121   · WS101
· WS301   · WS156
· UC100   · UG56
· Milesight IoT Cloud

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Smart Office Solution   **iBox CoWork Kit-B**

· WS101   · WS201
· GS301   · VS330
· UC100   · UG56
· Milesight IoT Cloud

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Smart Restroom Solution   **iBox Smart Restroom Kit**

· WS101   · WS301
· AM103   · WS303
· WS558   · UC300
· UG56
· Milesight IoT Cloud

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Smart Building Solution   **iBox Smart Building Kit**

· EM500-SMTC
· UC511
· UG56
· Milesight IoT Cloud

*Enjoy free cloud services for a specified period of time

Smart Agriculture Solution   **iBox Smart Agriculture Kit**

Don't Know Where to Start? Talk with Our Experts

🌐 www.milesight.com   ✉ iot.sales@milesight.com   📞 86-592-5085280