SenseCAP Gateway - LoRaWAN EU915
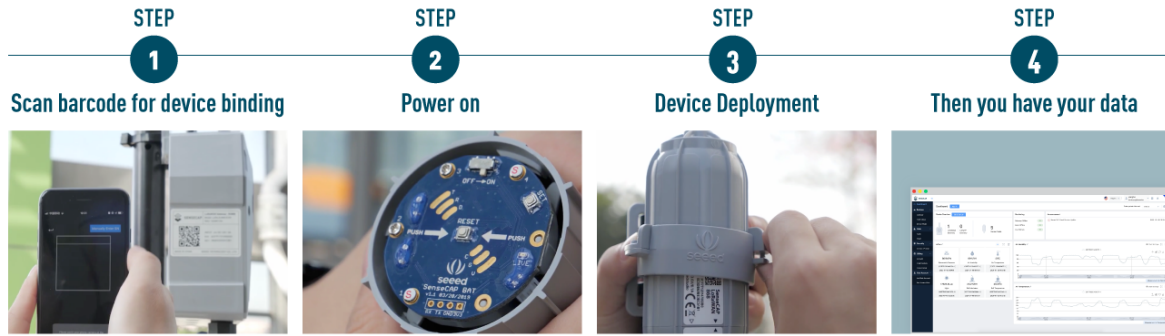

SenseCAP Gateway - LoRaWAN US915MHz

SKU
102991155

PRODUCT DETAILS

About SenseCAP

Among the first launch of Seeed industrial IoT (IIoT) product series, **SenseCAP** is focusing on wireless environmental sensing applications: smart agriculture, precision farming, and smart city, to name a few. It consists of hardware products (sensors, data-loggers & gateways, etc.), software services (SenseCAP portal, mobile App, open dashboard), and API for device & data management.
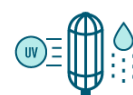
Easy deployment and quick provisioning

STEP 1	STEP 2	STEP 3	STEP 4
Scan barcode for device binding	Power on	Device Deployment	Then you have your data

Industrial design supports extended operating temperature range

Ultra-wide-distance data transmission and low-power consumption

Suitable for outdoor and harsh environment like with UV, rain, dust

Provides a variety of flexible cloud services with Open API for further development

Certified by CE, FCC, RoHS

Applicable to world-wide market

SenseCAP Gateway - LoRaWAN is based on LoRaWAN protocol, applicable for low-power consumption, long-range environmental data collection, and remote monitoring scenarios such as smart agriculture and smart city.

As the central device of SenseCAP LoRaWAN network, the gateway is used for collecting data from different SenseCAP Sensors and transmit the data to the cloud platform via cellular LTE or Ethernet. Equipped with a high-performance processor AM3358 and telecom-operator-level LoRa chip SX1301, this device ensures robustness and high performance in large-scale networks. Mutual authentication and encryption are established in the whole network to increase security.
The gateway is designed with an IP66 enclosure and supports an extended operating temperature range, making it suitable for industrial applications in both indoor and outdoor severe environments.

We offer different SenseCAP Gateway - LoRaWAN with different ISM bands:

SenseCAP Gateway - LoRawan EU 868 (subset of 863 - 870 MHz)
SenseCAP Gateway - LoRawan US 915 (subset of 902 - 928 MHz)

SenseCAP Gateway - LoRawan CN 470 (subset of 470 - 510 MHz)

Note

Please choose the corresponding frequency according to regional regulation.

SenseCAP mobile APP and SenseCAP Portal are provided to enable easy and efficient provisioning and management of devices & data at scale.

SenseCAP API is provided to access data and devices for further development.

Here is a collection of SenseCAP LoRaWAN sensors for you to use with SenseCAP LoRaWAN Gateway seamlessly without extra workload for provisioning. It only takes you a few minutes to set up with this instruction.
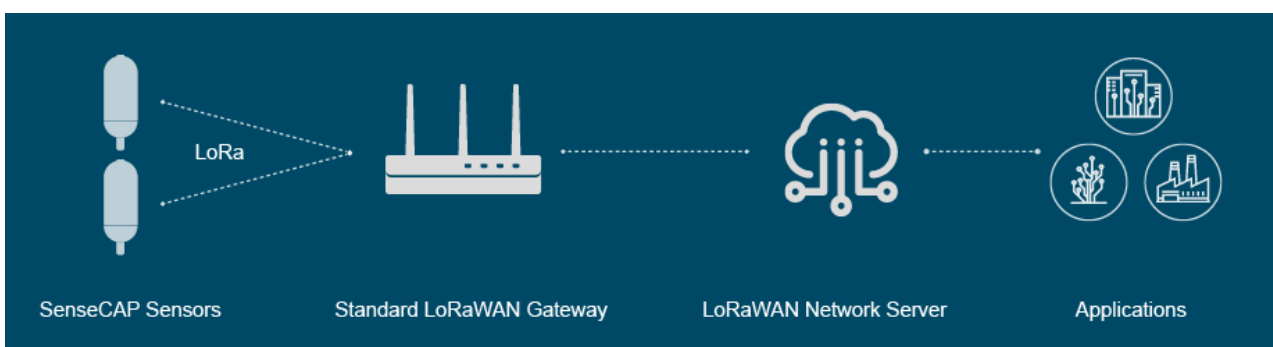
If you want to add other LoRaWAN sensors, no problem at all. Please kindly refer to this document to connect any LoRaWAN sensors to SenseCAP LoRaWAN Gateway.

System Architecture

SenseCAP Architecture
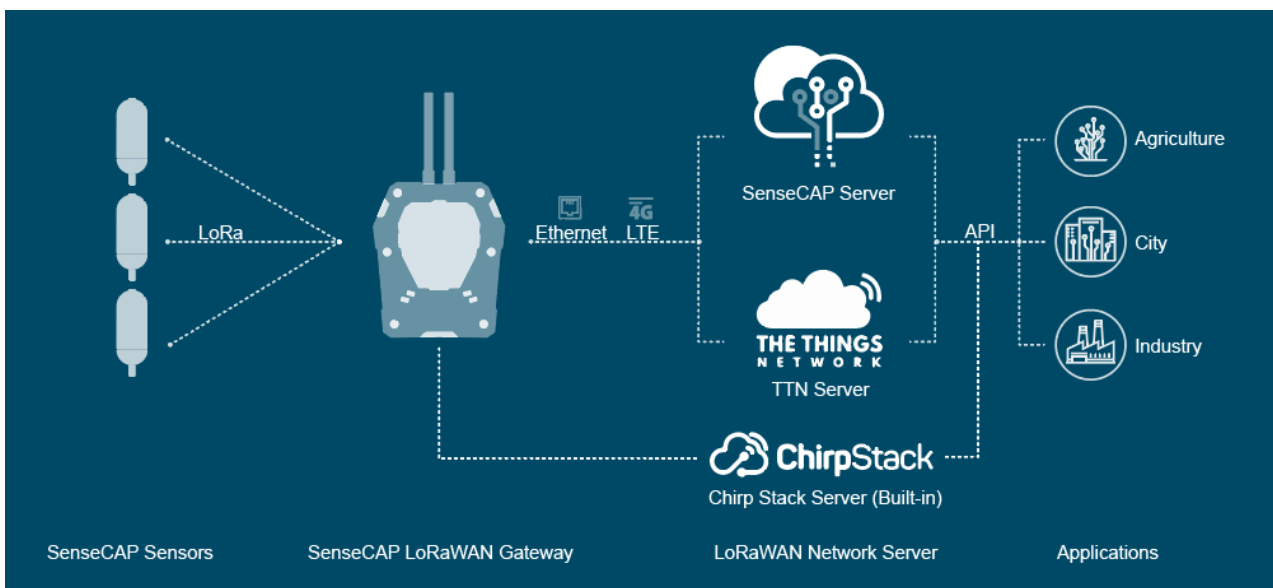
SenseCAP Sensor + Other LoRaWAN Gateway Architecture

Features

- High-performance Cortex A8 1GHz processor, Linux system.

- Support LoRaWAN protocol Class A, support ultra-low-power SenseCAP Sensor

- Support 8 RX, 1 TX transceiver, maximum transmit power 27dBm

- Support multiple ISM bands: CN470, EU868, US915

- Support multiple methods to access the network: 4G, Ethernet

- Ultra-wide-distance transmission: 10km in line of sight scene, 2 km in urban scene

- Industrial grade protection: IP66 enclosure, temperature -40℃~70℃, suitable for outdoor applications

- Easy deployment, and rapid provisioning (see the "how to install" video below)

Watch Video At: https://youtu.be/QZRk8Qa6rrc

Applications

- Smart Agriculture

- Smart Building

- Environmental Monitoring

- Other Wireless Sensing Applications

Specifications

General Parameters

Product Model	LoRa-G-915-E/4G
CPU	TI AM3358 Cortex-A8 1GHz
System	Linux Debian
RAM	DDR3 512MB
Memory	8GB eMMC
Channel Plan	902~928MHz
LoRa Power Output	25dBm
LoRa Sensitivity	-139dBm (SF12BW125)
Ethernet	100Mbps FE (RJ-45)
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)
UMTS Features	Support 3GPP R8 DC-HSDPA, HSPA+, HSDPA, HSUPA and WCDMA DC-HSDPA: Max 42Mbps (DL) HSUPA: Max 5.76Mbps (UL) WCDMA: Max 384Kbps (DL), Max 384Kbps (UL)

LoRa Antenna	2.5dBi gain / Vertical polarization / Omni-directional / SMA-J connector
4G Antenna	0-4dBi gain / Linear polarization / Omnidirectional / SMA-J connector
LED Indicator	Indicating network condition (online/ offline)
Grounding	Reserved 1 screw hole for GND
Power Consumption	3.6W
Power Supply	DC 12V/2A
IP Rating	IP66
UV Resistance	anti-aging (from rain/sun exposure): UL746C F1
Enclosure Material	PC
Operating Temperature	-40 ℃ to +70 ℃
Operating Humidity	0 to 100 %RH (non-condensing)
Installation Method	Wall or pole mounting
Device Weight	777g
Device Dimensions	256mm * 160mm * 81mm
Certification	CE, FCC, RoHS

Interface
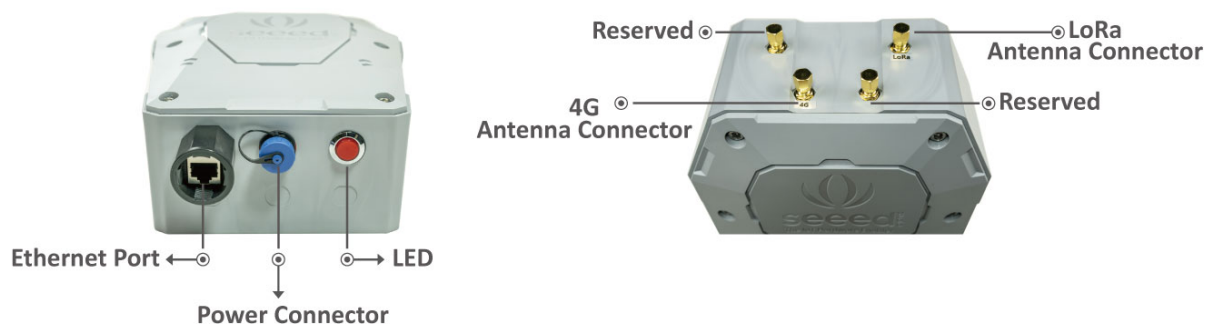
Part List

① LoRaWAN Gateway ② LoRa Antenna ③ 4G Antenna ④ Allen Hex Key ⑤ Mounts

① LoRa Fiberglass Omni Antenna ② Antenna Lightning Protector ③ LoRa Antenna Brackets

⑥ Power Adapter ⑦ Power Extension Cable ⑧ Ferrules and Aluminum piece ⑨ M5 Self-drilling Screw

Optional Antenna

Part List

1	LoRa Gateway	x1
2	LoRa Antenna	x1
3	4G Antenna	x1
4	Allen Hex Key	x1
5	Mounts	x4
6	Power Adapter	x1
7	Power Extension Cable (5M)	x1
8	Zip Ties	x2
9	M5 Self-drilling Screws	x8

*Optional Antenna

1	LoRa Fiberglass Omni Antenna	x1
2	Antenna Lightning Protector	x1
3	LoRa Antenna Brackets	x1

ECCN/HTS

HSCODE	8517629900
USHSCODE	8517620090
UPC	