

## SenseCAP SenseCAP M1

# SenseCAP M1 LoRaWAN Indoor Gateway User Manual

Model: SenseCAP M1

Brand: SenseCAP

## 1. PRODUCT OVERVIEW

The SenseCAP M1 is a high-performance, ready-to-use LoRaWAN indoor gateway designed for compatibility with the Helium LongFi Network. It enables users to connect to The People's Network quickly and build LoRa applications with minimal cost. This device provides extensive wireless network coverage and data transmission capabilities for LoRa/LoRaWAN devices, allowing users to contribute to and benefit from the Helium community's infrastructure.



Image: Front view of the SenseCAP M1 LoRaWAN Indoor Gateway, a compact black rectangular device with an antenna connected on the right side.

## 2. KEY FEATURES

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- **Easy Setup:** Connects to The People's Network in minutes with practical configuration.
- **Secure & Reliable:** Integrated ECC608 crypto chip for high security and reliable connectivity.
- **Large Storage:** Equipped with a 64GB MicroSD card, expandable for future updates.
- **Efficient Cooling:** Aluminum casing with heat sink and internal fan ensures stable and long-term operation.
- **Automatic Updates:** Supports OTA (Over-The-Air) firmware updates without manual intervention.
- **Remote Diagnostics:** Built-in remote diagnostic mechanism with efficient online support.

- **Connectivity:** Integrated BLE and supports Wi-Fi or Ethernet internet connection.



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The IoT Hardware Enabler

**Configuração Prática para Rede Helium**  
6 etapas, 5 minutos, pronto para ir.

**Seguro e Confiável.**  
Chip de criptografia ECC608 integrado, autenticação de alta segurança e conectividade confiável.

**Atualizações Online Automáticas**  
Atualizações OTA automáticas, sem operação manual.

**Diagnóstico Remoto.**  
Mecanismo de diagnóstico remoto integrado, suporte online eficiente.

**Grande Armazenamento de 64 GB**  
Armazenamento grande do cartão MicroSD de 64 GB, estendendo a vida útil do gateway, atendendo ao requisito de memória de uma possível atualização.

**Solução de resfriamento eficiente.**  
Gabinete de alumínio com dissipador de calor e ventilador interno, garantindo operação estável e de longo prazo.

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Image: A diagram highlighting key features of the SenseCAP M1, including easy setup, security, large storage, efficient cooling, automatic updates, and remote diagnostics. The device itself is shown in the center.

# SENSECAP M1 LORAWAN INDOOR GATEWAY

## CONECTAR · MINERAR · CRIAR

Powered by: 

A Versão deste SenseCAP M1 é a AU915 com certificados FCC/CE

O SenseCAP M1 é um gateway interno LoRaWAN de alto desempenho e sai da caixa funcionando, powered by pela Helium LongFi™ Network

Fornecer quilômetros de cobertura de rede sem fio e capacidade de transmissão de dados para dispositivos LoRa/LoRaWAN.

Ele fornece BLE integrado, que ajuda a configurar o dispositivo em algumas etapas simples e suporta conexão à Internet via Wi-Fi ou Ethernet.



Image: A promotional image for the SenseCAP M1, emphasizing "Connect, Mine, Create" with the device shown and the Helium logo.

### 3. PACKAGE CONTENTS

While specific package contents are not detailed, a typical SenseCAP M1 package includes:

- SenseCAP M1 LoRaWAN Indoor Gateway
- Antenna (US915 frequency band)
- Power Adapter
- Ethernet Cable (may vary)
- User Manual / Quick Start Guide

*Please verify the actual contents against the product packaging upon receipt.*

### 4. SETUP GUIDE

#### 4.1 Initial Setup

1. **Unpack:** Carefully remove the SenseCAP M1 gateway and all accessories from the packaging.

2. **Connect Antenna:** Screw the provided antenna firmly into the antenna connector on the back of the SenseCAP M1.
3. **Power On:** Connect the power adapter to the gateway's power port and then plug it into a wall outlet. The device will power on automatically.
4. **Network Connection:**
  - **Ethernet (Recommended):** Connect an Ethernet cable from your router to the LAN port on the SenseCAP M1.
  - **Wi-Fi:** If using Wi-Fi, you will need to configure it via the SenseCAP app during the onboarding process.
5. **Download App:** Download the official SenseCAP app (or Helium app) from your smartphone's app store.
6. **Onboarding:** Follow the in-app instructions to onboard your SenseCAP M1 to the Helium network. This typically involves Bluetooth pairing, selecting your region (US915 for this model), and setting up network connectivity.
7. **Wallet Integration:** Ensure your Helium wallet is set up and linked as per the app's instructions. Note that registering the hotspot to your Helium wallet is a critical step.

## 4.2 Placement Considerations

- Place the gateway in an elevated position, ideally near a window, to maximize signal coverage.
- Avoid placing it near large metal objects or thick walls that can obstruct the signal.
- Ensure stable power and internet connectivity.

## 5. OPERATING INSTRUCTIONS

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Once successfully onboarded and connected to the Helium network, the SenseCAP M1 operates autonomously. It will begin to participate in the Helium network by:

- **Witnessing:** Listening for and validating LoRaWAN packets from other Helium hotspots.
- **Beaconing:** Periodically sending out challenge packets to prove its location and connectivity.
- **Data Transfer:** Routing data from LoRaWAN devices on the network.

### 5.1 Monitoring Your Gateway

You can monitor the status and performance of your SenseCAP M1 using:

- **SenseCAP Dashboard:** Access the official SenseCAP online dashboard for detailed statistics and management.
- **Helium Explorer:** Use the Helium Explorer website or app to view your hotspot's activity on the blockchain.
- **SenseCAP App:** The mobile app provides real-time status updates and notifications.

## 6. MAINTENANCE

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- **Firmware Updates:** The SenseCAP M1 supports automatic Over-The-Air (OTA) firmware updates. Ensure your device is connected to the internet to receive these critical updates for optimal performance and security.
- **Cleaning:** Periodically clean the exterior of the device with a soft, dry cloth. Do not use liquid

cleaners or aerosols.

- **Ventilation:** Ensure the ventilation slots are not blocked to allow for proper airflow and cooling.
- **Antenna Check:** Occasionally check that the antenna is securely connected.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device Offline	No internet connection; Power issue; Firmware outdated.	Check Ethernet cable or Wi-Fi connection. Verify power supply. Ensure device is receiving OTA updates. Reboot the device.
No Witnesses/Low Rewards	Poor antenna placement; Antenna issue; Network congestion; Firewall blocking ports.	Relocate the gateway to a higher position or near a window. Check antenna connection. Ensure necessary ports are open on your router (e.g., 44158 TCP). Consult SenseCAP support for advanced diagnostics.
Setup Fails (App)	Bluetooth issue; Incorrect region selected; App glitch.	Ensure Bluetooth is enabled on your phone. Restart the app and the gateway. Verify you selected the correct region (US915).
Device Hot	Poor ventilation; High ambient temperature.	Ensure ventilation slots are clear. Place the device in a well-ventilated area away from direct sunlight or heat sources.

For further assistance, refer to the official SenseCAP documentation or contact SenseCAP support.

## 8. SPECIFICATIONS

Feature	Detail
Model Name	SenseCAP M1
Brand	SenseCAP
Connectivity Technology	Wireless (LoRaWAN, Wi-Fi, Bluetooth), Ethernet
RAM Memory Installed Size	4 GB
Memory Storage Capacity	64 GB (MicroSD)
Package Dimensions	10.79 x 6.97 x 2.44 inches
Item Weight	0.141 ounces
First Available Date	August 9, 2021

Feature	Detail
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## 9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SenseCAP website or contact their customer service directly.

*Note: Some third-party sellers may have different return policies. Please review the seller's policy at the time of purchase. SenseCAP's official policy may not cover units purchased from unauthorized resellers.*