

INDUSTRIAL PRODUCT DATASHEET

SenseCAP Solar Node P1 for Meshtastic

Outdoor Meshtastic node with solar panel, 8-9km range, and Grove sensor support.

SKU

114993643

UPDATED

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PRICE

\$69.90(Excl. VAT)



Overview



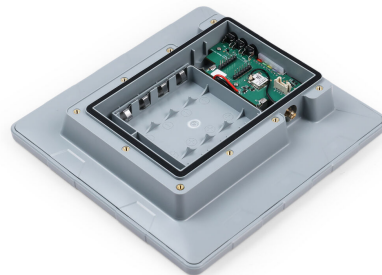
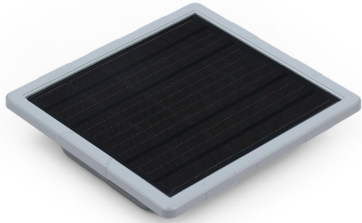
The SenseCAP Solar Node P1 is a cost-effective Meshtastic device with an integrated 5W solar panel and support for user-provided external batteries. It provides 8-9km transmission range in open areas, plug-and-play Grove sensor compatibility, and can serve as an outdoor node or mesh repeater.

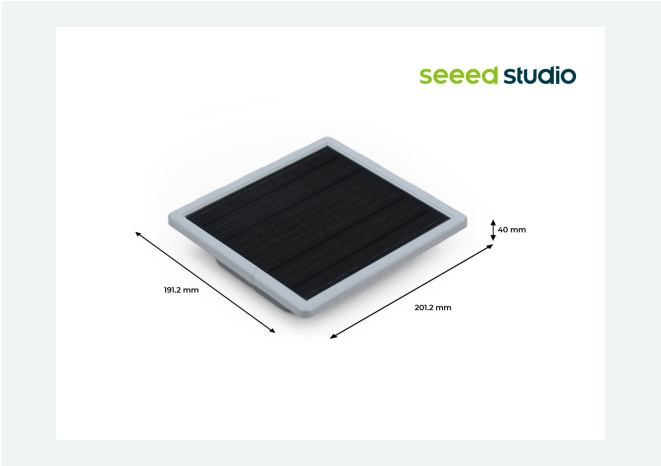
Key Features

Note:

- The device is compatible with **Meshcore firmware**. Please [click here](#) to follow the tutorial.
- **Enjoy an automatic 10% off when you purchase any two or more devices from T1000-E (SKU : 114993369)、Wio Tracker L1 series (SKUs:114993648, 114993649, 114993653, 114993654) and Solar Node series (SKUs: 114993633, 114993643).**
- **SenseCAP Solar Node P1** is cost-effective and lacks the XIAO L76K GPS module and four 18650 batteries. But users can buy and install them independently. For the model with positioning and batteries, opt for the **SenseCAP Solar Node P1-Pro**.
- To add battery, use Button-top 18650 battery. [Click here](#) to see the reference battery.
- Integrated with a **5W solar panel**, and supports external batteries (which need to be provided by users themselves).
- The device comes **pre-installed with Meshtastic firmware** at the factory. It can be seamlessly integrated into the Meshtastic ecosystem.
- Compatible with the **Grove Ecosystem (The list of [supported sensors](#) is provided below.)**, and supports plug-and-play of sensors such as temperature and humidity sensors, light sensors, etc.
- It is suitable for **long-term outdoor use**.
- **Supports 8 to 9KM Transmission** in open areas. It can be used as an outdoor node or repeater, easily expanding the Mesh network and enhancing network coverage.□
- **Accessory Options** : If you need an antenna with higher gain, we recommend these antennas:
 - **Plug-and-play**: Comes with a standard RF cable, which can be directly inserted into the pre-drilled hole (standard D-shaped hole) on the Solar Node bracket
 - **Three-step installation**: Align → Insert → Lock

Product Gallery



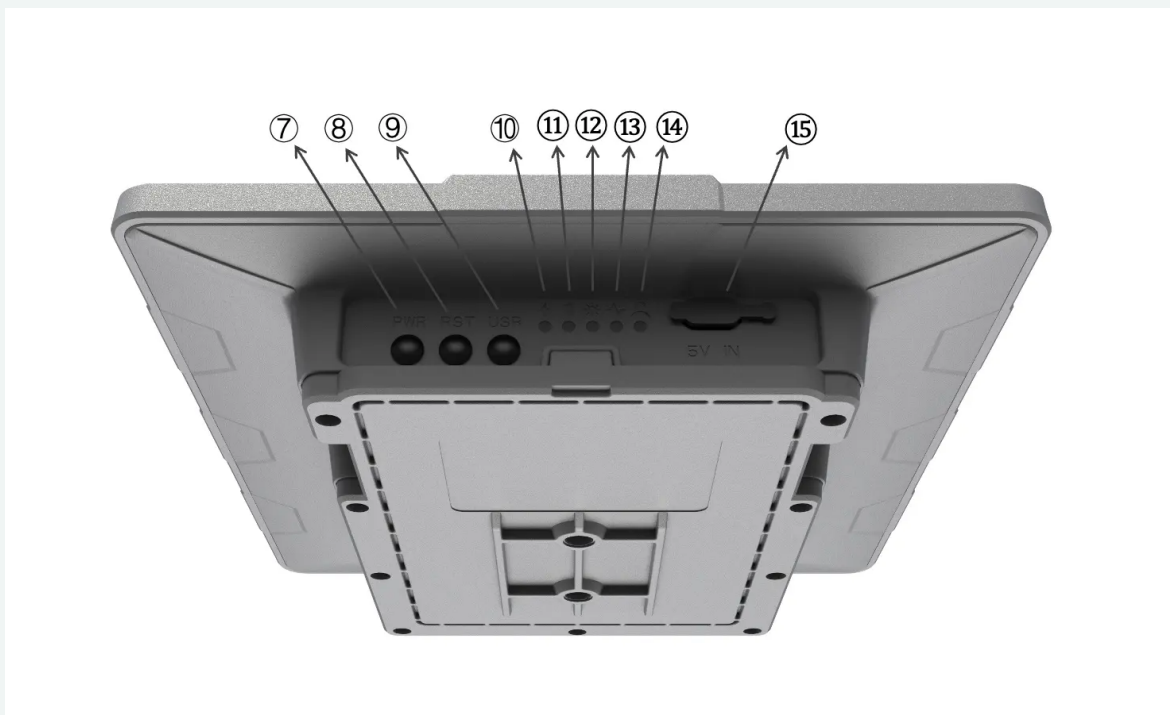
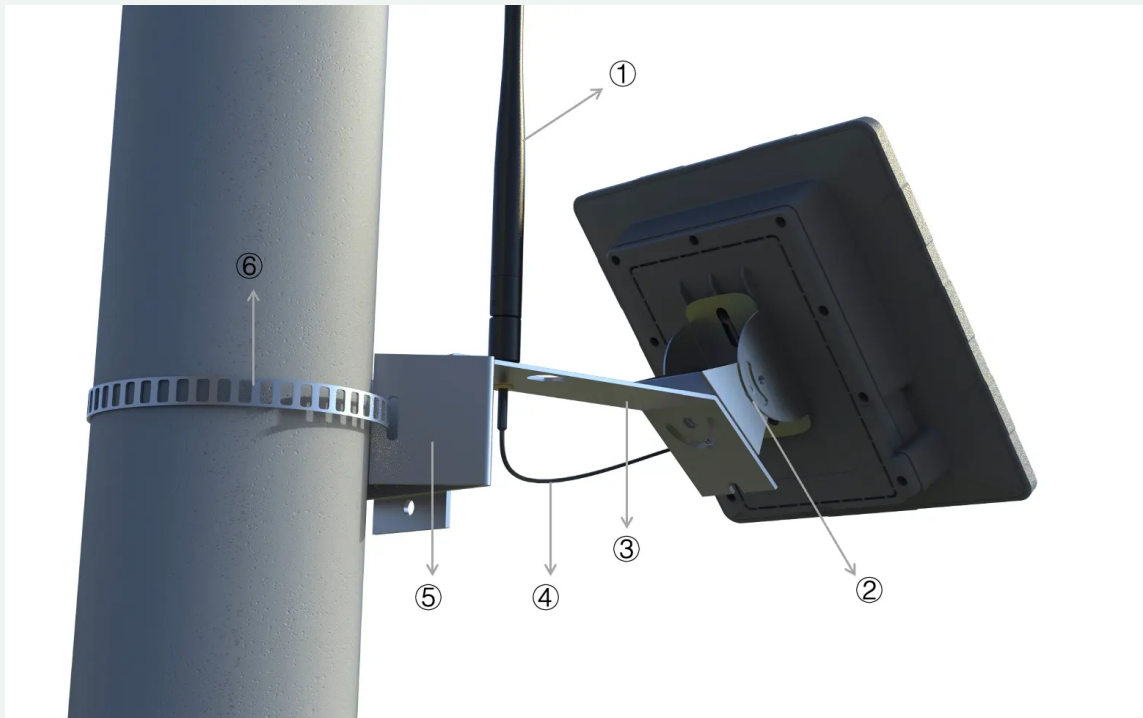


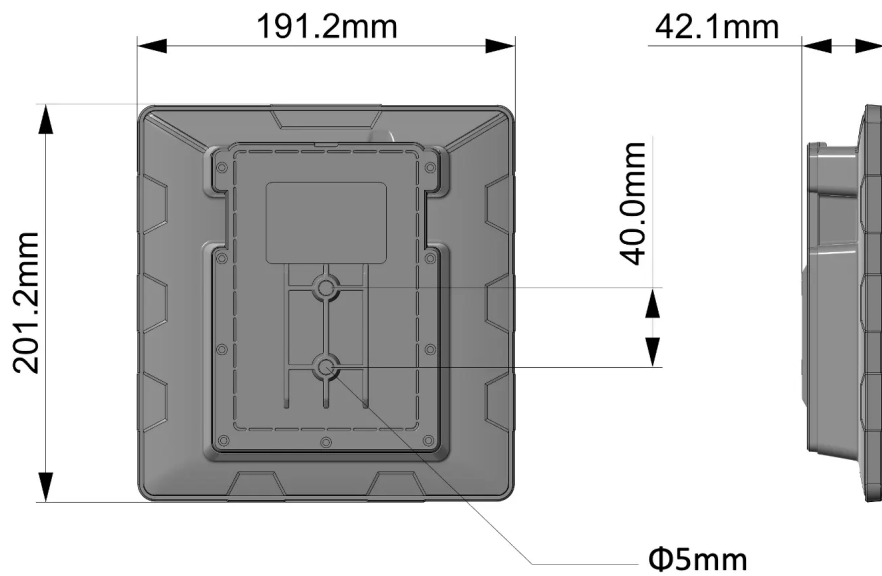
Specification

Main controller	XIAO nRF52840 Plus (Nordic nRF52840, ARM® Cortex®-M4 32-bit processor with FPU, 64 MHz, 256KB RAM, 1MB Flash, 2MB onboard Flash)
LoRa Module	Wio-SX1262 Module (Semtech SX1262, TXOP=22dBm@862-930MHz)
GPS Module	Users self-purchase and add XIAO L76K (Support GPS/GLONASS/Galileo)
Antenna	LoRa: Type: Rod-shaped rubber antenna Frequency range: 868-915MHz Gain: 2dbi
	GNSS: GPS L1 C/A: 1575.42MHz GLONASS L1: 1602MHz BeiDou B1: 1561.098MHz
	Bluetooth 5.0
Solar Panel	5W
Interface	Grove *1: IIC/GPIO
	USB-C debugging
Button	Power on/off
	Reset
	User-defined
LED	Charging status indicator lights *2
	Solar panel status indicator light *1
	Mesh heartbeat light *1
	User-defined *1
Power supply	5V
Battery	Users self-purchase and add
Dimension	191.2 x 201.2 x 42.1 mm

①	2dbi, 868~915MHz rubber rod antenna	
②	Universal joint bracket, angle adjustable.	
③	Bracket connector, can support the antenna	
④	RF Cable; RP-SMA Male to RF-SMA Female; 300mm	
⑤	Hoop bracket	Diameter: 70-100mm
⑥	Hoop ring	

⑦	Power switch
⑧	Reset
⑨	User-defined
⑩	Red light on: Charging
⑪	Green light on: Charged
⑫	Yellow light on: Device is exposed to light.
⑬	Blue light: Mesh heartbeat
⑭	White light: User-defined
⑮	Type-C: 5V 1A





Applications

- **Outdoor Adventure:** Send real-time location and text messages in areas without network coverage.
- **Mesh Network Expansion:** Serve as a Mesh relay node to expand the coverage of the existing Meshtastic network. Support multi-hop transmission, where data can be relayed through multiple nodes, enhancing network reliability.
- **Educational Experiments:** Learn about the development of Meshtastic and LoRa decentralized networks.
- **Environmental Monitoring:** Provide a Grove interface to connect sensors for remote monitoring of the environment (such as temperature, humidity, air quality, etc.).

Part List

SenseCAP Solar Node P1 (without GPS & battery)	x1
Mounting Brackets • Universal Joint • Connector • Hoop Bracket • Hoop Ring	x1
2dBi 868 - 915MHz Rubber Rod Antenna	x1
RF Cable: RP-SMA Male to RF-SMA Female-300mm	x1
Black Type-C Cable	x1
User Manual	x1

Compliance & Logistics



HSCODE	8541430000
USHSCODE	8541410000
UPC	
EUHSCODE	8531202090
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/SenseCAP-Solar-Node-P1-for-Meshtastic-LoRa-p-6425.html>
- [Seeed Sensecap Solar Node Consumption Test and Battery Life Calculation](#)

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