

INDUSTRIAL PRODUCT DATASHEET

SenseCAP Solar Node P1-Pro for MeshCore

Solar-powered outdoor MeshCore node with GPS, 8-9KM range, and continuous off-grid operation for messaging and network expansion.

SKU	UPDATED	PRICE
100023690	2026-08-06 09:02:27	\$93.90(Excl. VAT)



Overview



The SenseCAP Solar Node P1-Pro for MeshCore is a solar-powered outdoor device utilizing a 5W solar panel and 4*18650 batteries (3350mAh each) for continuous off-grid operation, pre-flashed with MeshCore firmware. It features a built-in XIAO L76K GPS module for real-time positioning, a communication range of 8-9KM in open areas, and serves as an outdoor node or repeater to expand Mesh networks, suitable for outdoor adventures, network expansion, and educational experiments.

Key Features

Note:

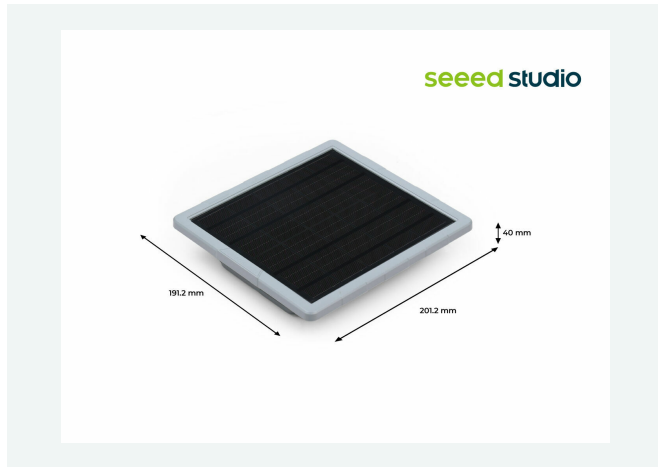
Enjoy 5% off when you purchase any one MeshCore device – the SenseCAP Solar Node P1-Pro (SKU 100023690) or the Wio Tracker L1 Pro (SKU 100030144).

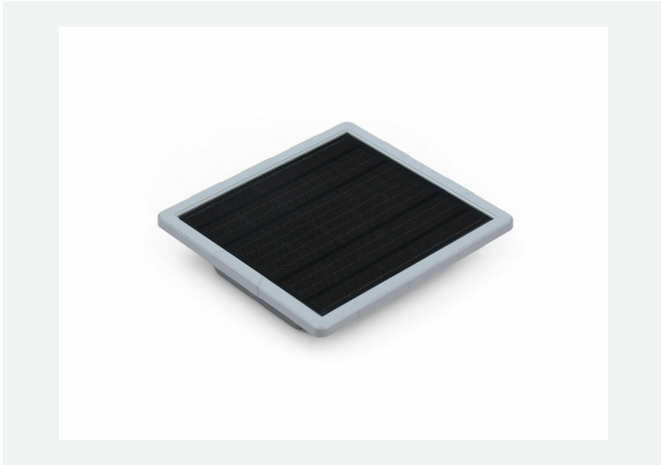
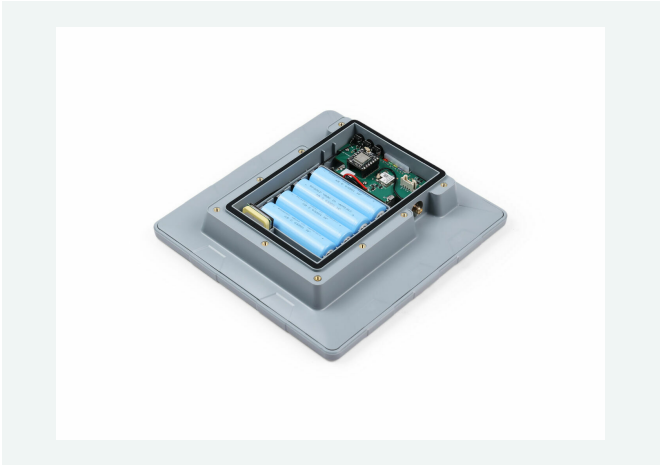
Get up to 8% off when you add both models to your cart.

No quantity limits – discount auto-applies at checkout.

- Utilizes a **5W solar panel** in combination with **4*18650 batteries** with a capacity of 3350mAh each. This setup ensures continuous operation even in the absence of sunlight, effectively solving the problem of outdoor power supply.
- The device comes **pre-flashed with MeshCore firmware** at the factory.
- Features a **built-in XIAO L76K GPS module**, enabling high-precision real-time positioning. It supports real-time sharing of location information, providing reliable location assurance for outdoor activities.
- It is suitable for **long-term outdoor use**.
- The communication range between the two devices can **reach 8-9KM in open areas**. It can seamlessly integrate into the MeshCore ecosystem and be used as an outdoor node or repeater to easily expand the Mesh network, 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



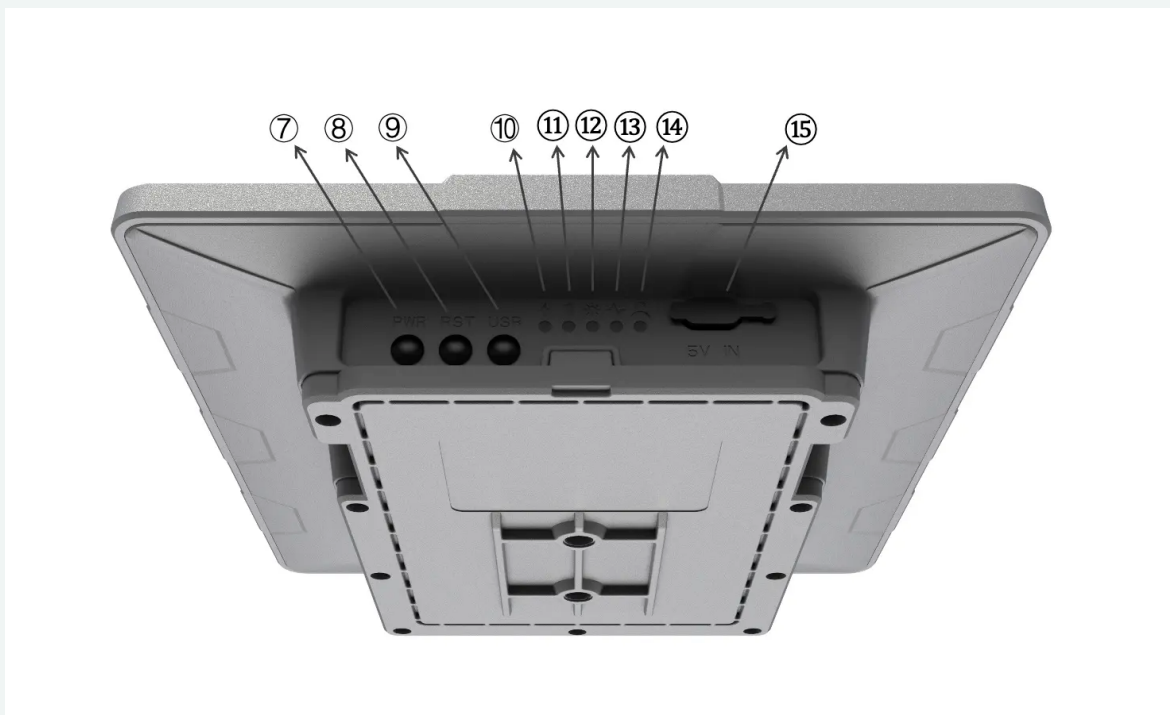
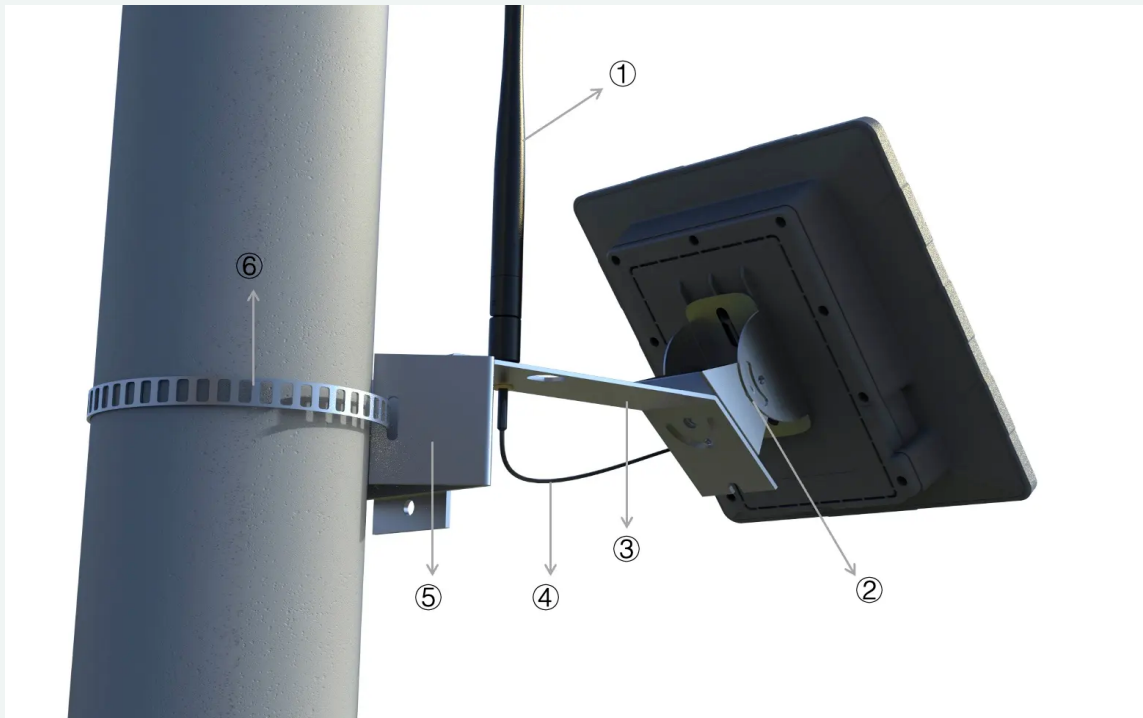


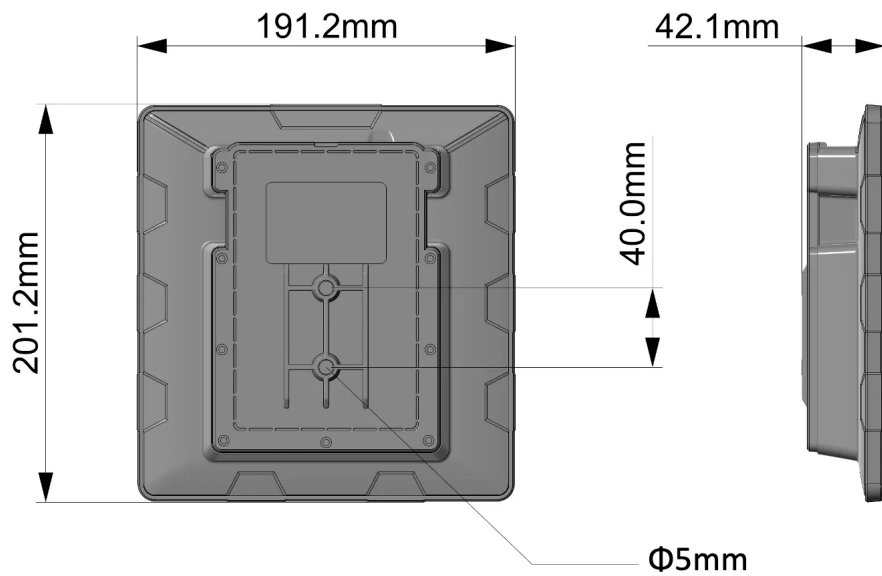
Specification

	 7dBi Gain, 920mm N-Female to RP-SMA plug cable	
860-930MHz-3dBi-360mm	900-930MHz-7dBi-920mm	902-930MHz-8dBi-1300mm
Link	Link	Link

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 (Semtech SX1262, TXOP=22dBm@862-930MHz)
GPS Module	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/UART
	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	Type-C: 5V 1A
	Solar power supply: 5V 1A
Battery	4 x 18650 lithium batteries (3350mAh each) - Supporting Type-C and solar charging. - Discharge environment : -40 ~ 60°C - Charging environment: 0 ~ 50°C
Certification	FCC、CE
Dimension	191.2 x 201.2 x 42.1 mm

A solar-powered off-grid communication and positioning solution based on MeshCore to build a smart network without boundaries.





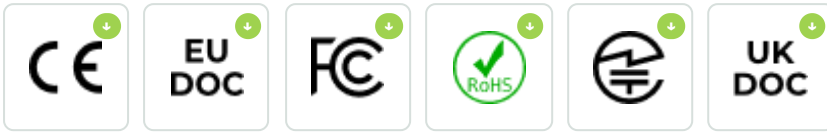
Applications

- **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 MeshCore Support multi-hop transmission, where data can be relayed through multiple nodes, enhancing network reliability.
- **Educational Experiments:** Learn about the development of MeshCore and LoRa decentralized networks.

Part List

SenseCAP Solar Node P1-Pro (with 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
1/4-20 UNC Hex Head Machine Screw, 6 mm Long(Screw Pack)	x2
Screw, Phillips Pan Head Machine, M6 × 14 mm, P1.0(Screw Pack)	x4
Black Type-C Cable	x1
User Manual	x1

Compliance & Logistics



HSCODE	8517629990
USHSCODE	8517620010
UPC	
EUHSCODE	8517180000
COO	CHINA

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy.

If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Resource Links

- <https://www.seeedstudio.com/SenseCAP-Solar-Node-P1-Pro-for-Meshcore-p-6741.html>
- [SenseCAP_Solar_Node_instruction_diagram](#)

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