

INDUSTRIAL PRODUCT DATASHEET

SenseCAP Solar Node P1-Pro for MeshCore

SenseCAP Solar Node P1-Pro for MeshCore: solar-powered GNSS positioning node with long-range MeshCore communication for outdoor networks.

SKU	UPDATED	PRICE
100023690	2026-06-10 12:36:16	\$89.90(Excl. VAT)



Overview



The SenseCAP Solar Node P1-Pro combines a 5W solar panel with 4x 3350mAh 18650 batteries for continuous outdoor power, and features pre-flashed MeshCore firmware with a built-in XIAO L76K GPS module for real-time positioning. With an 8-9KM open-area communication range, it serves as a MeshCore node or repeater for network expansion, suitable for outdoor adventure messaging, multi-hop relay, and educational experiments.

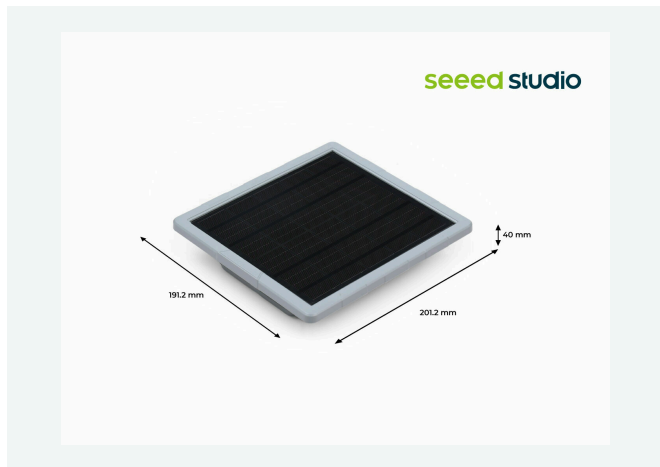
Key Features

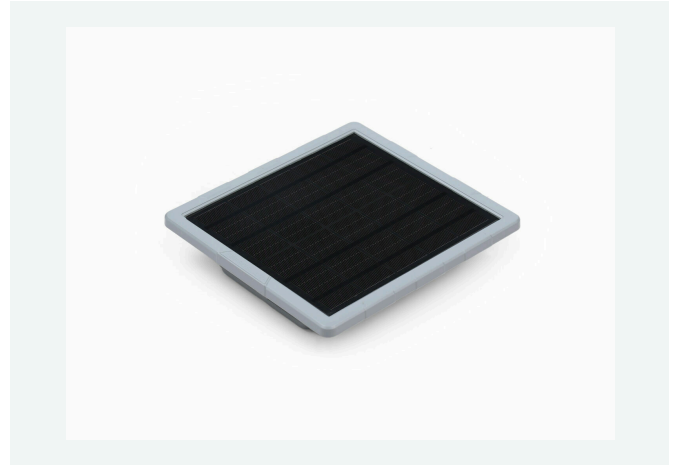
- Utilizes a **5W solar panel** in combination with **4*18650 batteries** with a capacity of 3350mAh each. This setup ensures continuous operation even in the absence of sunlight, effectively solving the problem of outdoor power supply.
- The device comes **pre-flashed with MeshCore firmware** at the 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



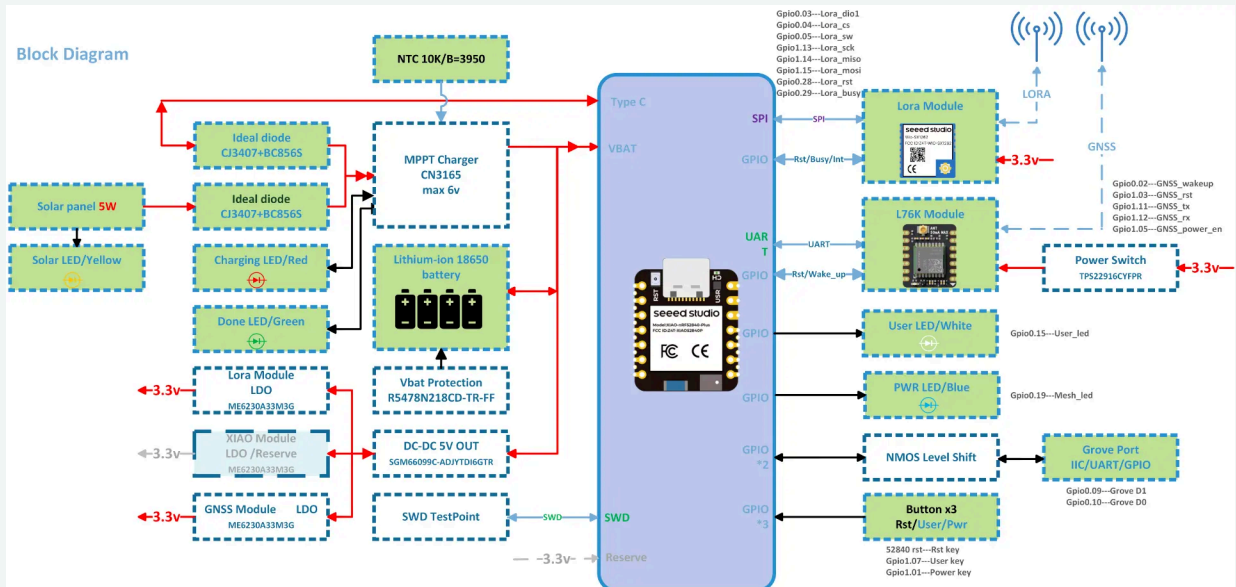


Specification

 RF Explorer[®] 860-930MHz, 3dBi, 360mm▶	 RF Explorer[®] 902-928MHz, 5.8dBi Gain, 800mm▶ Bi-Female SP-SMA Plug	 RF Explorer[®] 863-870MHz, 8dBi Gain, 1300mm▶ Bi-Female SP-SMA Plug	 RF Explorer[®] 902-930MHz, 8dBi Gain, 1300mm▶ Bi-Female SP-SMA Plug
860-930MHz-3dBi-360mm	902-928MHz-5.8dBi-800mm	863-870MHz-8dBi-1300mm	902-930MHz-8dBi-1300mm
Link	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

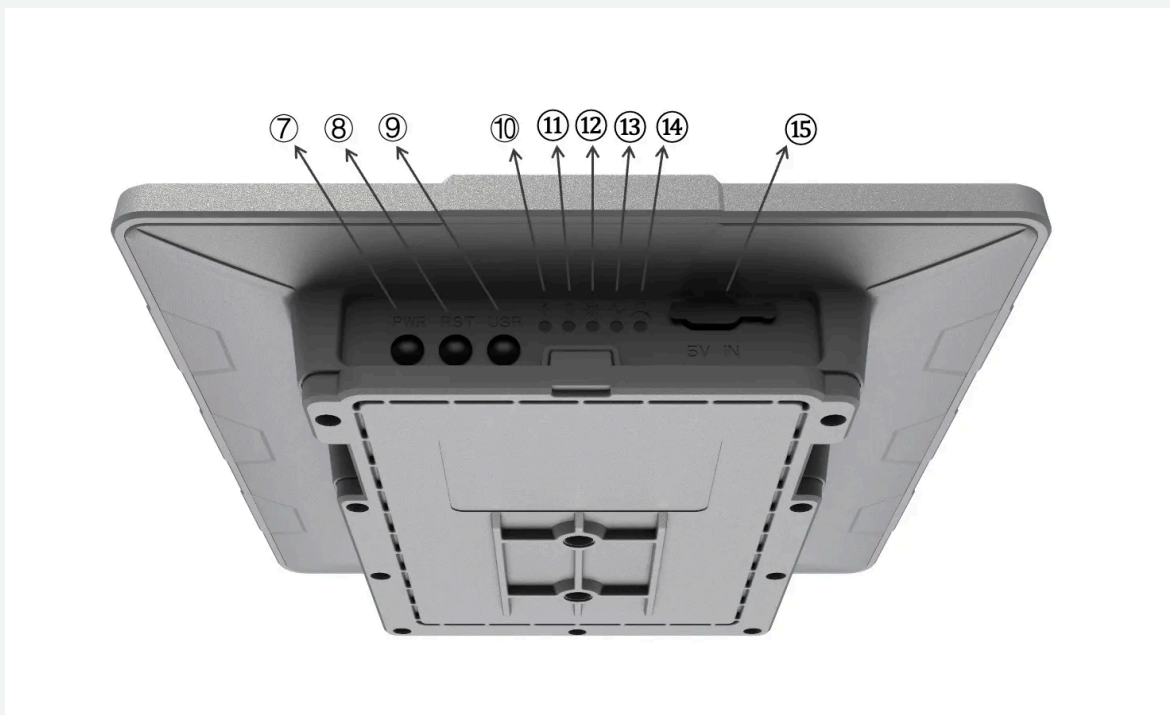
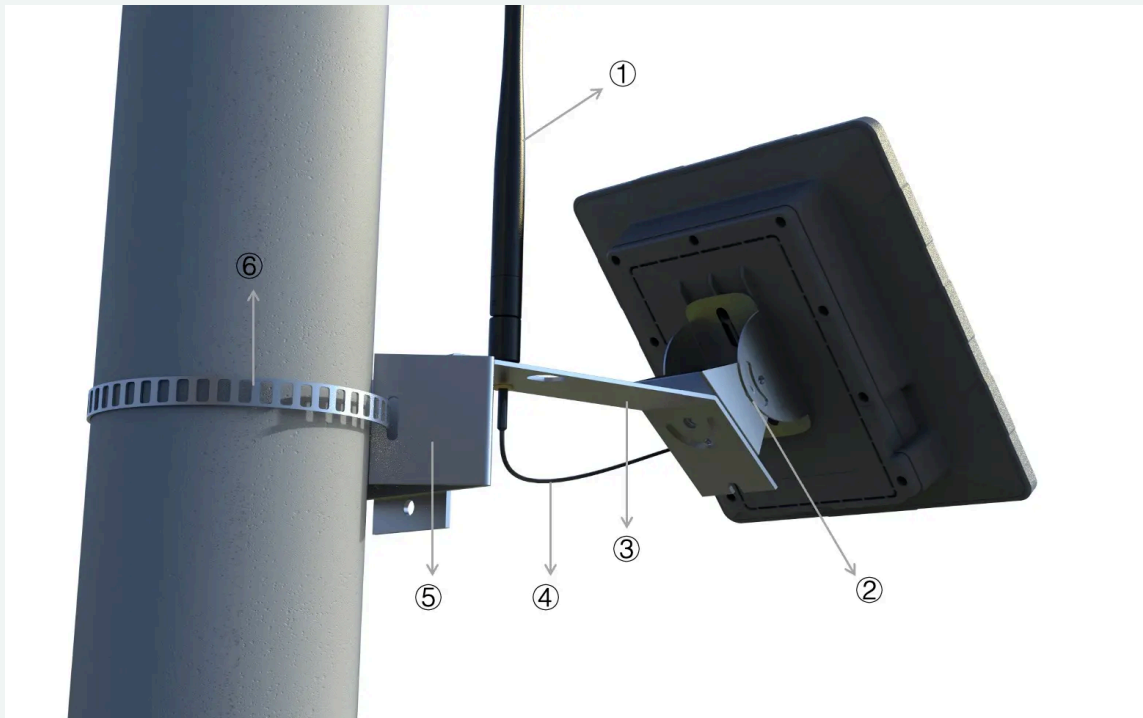
Hardware Overview

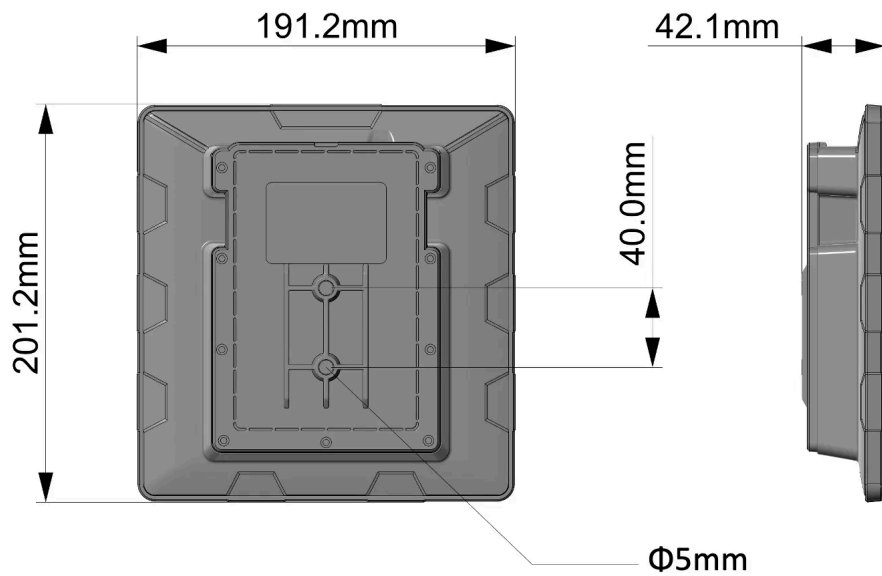


SenseCAP Solar Node

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
Black Type-C Cable	x1
User Manual	x1

Compliance & Logistics



HSCODE	8517629990
USHSCODE	8517620010
UPC	
EUHSCODE	8517180000
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/SenseCAP-Solar-Node-P1-Pro-for-Meshcore-p-6741.html>

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