



ZXIMCU sMesh150

Broadband Mesh Individual Device

Portable Design, Connectable Anytime & Anywhere



The sMesh ("s" is smart, means highly flexible) broadband ad hoc network system adopts centerless and co-frequency ad hoc networking technology and a distributed network architecture. It supports arbitrary network topologies and multi-hop relaying, and can provide users with reliable, timely, efficient, and secure all-IP integrated multimedia services such as clear voice and broadband data under non-line-of-sight and high-speed movement conditions.

- Quick Startup, Second-level Connection
- Diversified Services, Easy Management
- Multi-purpose, Flexible Deployment
- Professional Design, Smaller and Lighter



Features

High Communication Capability Excellent Performance

- Adopt an advanced SDR architecture, based on carrier-grade LTE technology, and combine mature COFDM technology with flexible channel coding, thus achieving excellent transmission performance. The single-hop throughput rate can reach 90Mbps, and the single-hop communication distance can reach 100km.

Flexible Ad Hoc Networking High Communication Anti-destruction

- Support more than 64 nodes, with automatic link switching between remaining nodes if one goes offline to ensure anti-destruction. Its anti-interference mechanism enhances data transmission reliability under severe interference. Nodes moving faster than 300km/h maintain connections without packet loss, leaving services unaffected.



Video Dispatch



Position Dispatch

Multiple Optional Functions Meet the Needs of Different Scenarios

- Support optional adaptive frequency selection, space division multiplexing, and MIMO functions, enhancing link stability and reliability.
Optional device silence and frequency hopping functions improve the communication security of the system.

Strong Expandability Abundant Interfaces and Accessories

- Support standard Ethernet and Wi-Fi interfaces, enabling IP data communication between nodes with non-differentiated transparent transmission, and interconnects with satellite, public/private networks, LTE systems, etc. The device can connect to HDMI modules, USB cameras, handset/shoulder microphones, with strong functional expandability and audio-visual capabilities.



Industry Applications



Forest Fire Fighting



Fire Fighting and Rescue



On-site Rescue for Natural Disasters



Chemical Park



Security for Major Events



Maritime Communication



Coverage along the Power Grid



Public Safety

Accessories

Standard



Li-ion Battery



Power Adapter



Aviation Plug
Network Cable



Wi-Fi Antenna



GNSS Antenna



4G Antenna

Optional



Gooseneck Antenna



USB HD
Camera



HDMI Module



Air Tube Earphone



Hand Microphone



Backpack



Aviation Case



Tripod

Specifications

General

Frequency	1.4GHz, Other bands customizable
Protocol	TDD
Transmission	COFDM
Bandwidth	1.25MHz/2.5MHz/5MHz/10MHz/20MHz
Transmitting Power	2×2W
Receiving Sensitivity	≤-103dBm
Data Rate	≥50Mbps, MIMO≥90Mbps
Networking	Ad hoc network
Ad Hoc Network Maximum Nodes	More than 64 nodes
Hop	Suggest≤9 hops
Encryption	DES/AES256
Public Network	public network 4G
Path	2 paths, 2T2R

Environmental Conditions

Operating Temperature	-40°C~+60°C
Storage Temperature	-50°C~+70°C
Air Pressure Range	70~106 kPa
Dust and Water Resistance	IP67
Seismic Strengthening	GB/T 4798.7-2007 (Part 7: Portable & Non-stationary Use, Above Grade 7M2)

Basic Functions

Data	Support IP data transmission
Voice	Support voice calls
Image	Realize image transmission via external camera or HDMI module
Position	GPS
Wi-Fi	Support Wi-Fi

Physical

Dimensions	About 265mm×98mm×43mm
Weight	About 1.2kg
Port	Network port: data transmission and network management Wi-Fi port: Wi-Fi Antenna Voice port: headphone (18PIN) Video port: external camera (18PIN) RF port: RF antenna GPS port: GPS antenna Switch: main power switch

System Management

Unified Network Management	All nodes management, supports structures such as point-to-point, point-to-multipoint, chain, mesh, and hybrid topologies.
	Support check the communication quality between nodes in real time.
	Support the frequency scanning and allow real-time monitoring of interference in the frequency.
	Support GIS map positioning, allowing real-time viewing of the location of each node.

Electrical

Power Supply	With a 6500mAh detachable battery, also support external power supply. Adapter: 100-240VAC 50/60Hz DC input: 12VDC
Working Time	6 hours

System Extension (Optional)

Functional Extension	Support optional adaptive frequency selection, space division multiplexing, MIMO, device silence, and frequency hopping.
Accessory Extension	Support optional accessories such as HDMI module, USB HD camera, headset/hand microphone, etc.

General Disclaimer:
The specifications in this document are in accordance with the applicable standard test.
Due to the continuous technology development, Caltta may change the specifications without prior notice.

Caltta CALTTA TECHNOLOGIES CO.,LTD.

Address: 12F/Building G2, International E-City, Nanshan, Shenzhen, China

Web: <https://www.caltta.com/> E-mail: sales@caltta.com Post: 518052

Privacy Statement: Caltta Technologies is a leading provider of comprehensive critical communication solutions and committed to protecting personal data in accordance with applicable laws and regulations and with technologies including anonymization and data encryption and necessary security management measures.

