

Solar-Powered Smart Safety Helmet

OW-SPSH

Solar-Powered | LoRaWAN®



Real-Time Worker Safety Monitoring & Tracking

-  Solar-Powered Dual Energy for uninterrupted operation
-  LoRaWAN + GPS + BLE Connectivity for seamless tracking
-  Comprehensive Safety Monitoring for proactive alerts
-  Local Data Storage & Cloud Sync for reliability anywhere

The OmniWOT Smart Safety Helmet is an intelligent safety solution designed to protect workers and improve visibility across industrial, construction, mining, and power environments.

Powered by LoRaWAN® long-range wireless technology, it combines multi-sensor safety monitoring, real-time voice alerts, and solar-assisted power to deliver continuous, connected protection—anytime, anywhere.

Built to meet the highest safety standards, this helmet enhances workforce awareness and operational efficiency through data-driven insights and smart connectivity.

Key Features

1. Solar & Battery Dual Power

Equipped with a 3000mAh rechargeable lithium battery and integrated solar panel, ensuring uninterrupted operation even in remote sites.

2. Multi-Network Connectivity

Supports LoRaWAN®, GPS, and BLE for stable data transmission and precise indoor/outdoor positioning.

3. GPS for outdoor tracking

4. BLE beacons for indoor positioning

5. Advanced Safety Monitoring

Real-time detection of:

- Falls, impacts, and helmet removal
- High-voltage proximity alerts (10kV–220kV)
- Temperature, altitude, and inactivity
- Environmental conditions (humidity, air pressure)

6. Smart Voice & Visual Alerts

Built-in voice prompts notify workers of:

- Battery status
- Safety alarms
- Environmental warnings

LED indicators and buzzer ensure visibility in noisy or low-light environments.

7. Offline Data Logging

In case of network loss, data such as alarms, position, and sensor logs are stored locally and auto-uploaded to the cloud when connectivity resumes — ensuring zero data loss.

8. Comprehensive Alarm System

- Height Detection Warning – Alerts when exceeding safe elevation.
- High-Voltage Proximity – Warns near live power sources.
- Temperature & Impact Alerts – Instant safety response.
- SOS Emergency Button – Sends distress signals to control center.
- Helmet Removal & Inactivity Detection – Promotes compliance and safety discipline.

9. Rugged & Reliable Design

- High-strength ABS shell with IP65 waterproof protection.
- Ergonomic fit for comfort during long work hours.
- Three control buttons for easy in-field operation.

10. Customizable Options

Available in white, yellow, red, blue, and orange. Supports custom branding, logo, and color customization for enterprise deployment.

Applications

1. Construction & Infrastructure Projects
2. Mining & Industrial Safety
3. Power Utilities & Field Operations
4. Smart Factory & Warehouse Management
5. Worker Tracking & Emergency Response



- SOS Button
- Power on/off
- LED Light

Specifications

Item	Description
Wireless Protocol	LoRaWAN®
Frequency Bands	IN865 / EU868 / US915 / AS923 / AU915 / KR923
Antenna	1× LoRa, 1× BLE, 1× GPS, 1× Proximity
Battery	3000mAh rechargeable lithium battery
Solar Power	0.85W integrated solar panel
Charging	Magnetic charging
Indicators	Power / Charging / Configuration
Buttons	Power / Configuration / SOS Alarm
Sensors	Anti-fall, Hat-off status, Air pressure, Proximity, Temperature & Humidity
Positioning	GPS + BLE
Voice Alerts	Supported
Data Storage	Supported (Offline buffering)
Material	High-strength ABS
Protection Level	IP65 (optional IP67)
Operating Temp.	-10°C to +60°C
Humidity Range	10% – 60% RH
Weight	600g
Color Options	White / Red / Blue / Yellow / Orange (customizable)
Accessories	Magnetic charging cable

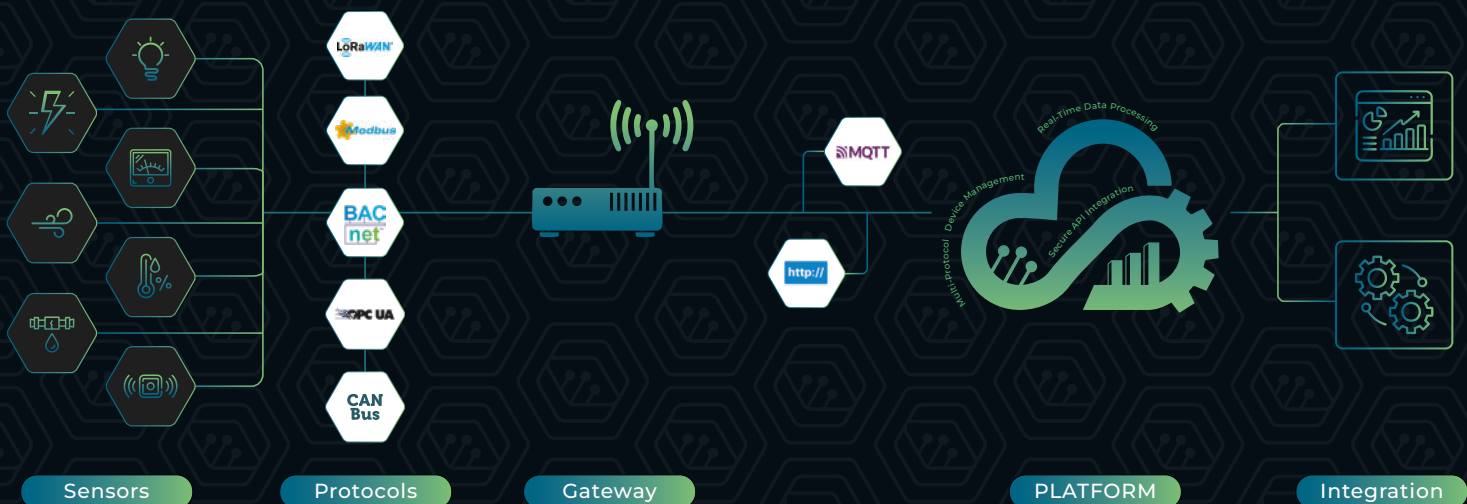
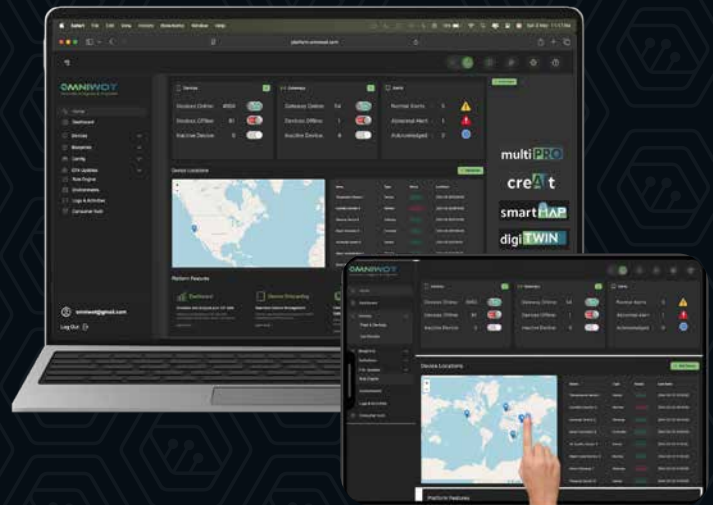
Why Choose OmniWOT Smart Safety Helmet

1. Dual Power System – Solar + Battery
2. Long-range LoRaWAN® Connectivity
3. Real-time Alerts & SOS Emergency System
4. Offline Data Backup with Cloud Sync
5. Rugged, Ergonomic & IP65 Certified Design
6. Seamless Integration with OmniWOT IoT Cloud Platform



Multi-Protocol Unified IOT Platform

-  **Tech-Agnostic**
-  **Rapid-onboarding of devices**
-  **NO code, Zero Tech Skills required**
-  **AI Driven and futuristic dashboard**
-  **Solutions Across Industries**



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