HUGA
Smart Positioning Safety Helmet

LOCOSYS HUGA Intelligent Positioning Safety Helmet is an upgraded product based on traditional safety helmets. It's not only retains the basic functions of traditional safety helmets but also integrates positioning and Bluetooth modules, providing users with enhanced convenience and safety during work or activities.

Firstly, the HUGA Intelligent Positioning Safety Helmet features RTK high-precision positioning and a high-performance L1/L5 GNSS receiver. This means it can accurately determine the user's location, whether in busy city streets or remote wilderness areas, providing reliable positioning information. Additionally, it employs low-power technology, ensuring excellent performance while conserving energy and extending usage time.

In addition to its positioning function, the HUGA also includes Bluetooth 5.0 wireless functionality. This enables the safety helmet to communicate wirelessly with other devices such as smartphones or tablets. Not only improve user convenience, but also facilitates smart connectivity with other devices, allowing users to easily control and manage various functions of the safety helmet.

Global Positioning System

Equipped with RTK centimeter-level positioning technology, providing high-precision positioning.

Large-Capacity Battery

For long-duration work and hazardous industries, environment is particularly crucial, such as construction sites, tunneling in subways, and road and bridge construction.

Bluetooth Low Energy

Bluetooth 5.x technology enables wireless communication with low power consumption.

Customized APP

The app can be customized according to user needs, with features such as low battery alerts, electronic fence alarms, and location tracking.

Application

The HUGA smart positioning safety helmet is widely used across various industries and environments, including tunneling in subways, road and bridge construction, construction sites, railway maintenance, oil drilling, chemical energy, factory docks, mining coal, security patrols, municipal construction, and power line inspections. Whether it's monitoring construction progress or ensuring the safety of workers, the HUGA demonstrates excellent performance and reliable stability, making it the preferred safety equipment in many industries.


Factory and Mine Terminal


Electrical Construction


Road and Bridge Construction


Tunnel Subway Construction

Specifications

RTK Specifications

GNSS feature	Description	
GNSS	Dual frequency (L1,L5) and Multi-constellation	
Update rate	1 Hz	
Acquisition Time	Cold start (open sky)	28s (typical)
	RTK Convergence time	< 10s (typical; after 3D fix)
Position Accuracy	GNSS	1.5m CEP
	RTK	1cm + 1ppm (Horizontal)
Limitations	Max. Altitude	< 18,000 m
	Max. Velocity	< 500 m/s
Navigation Outputs	NMEA 0183 ver. 4.1	GGA, RMC

Features

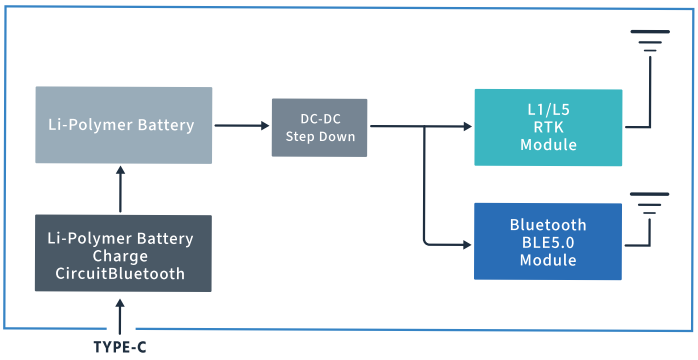
RTK

» RTK centimeter-level positioning
» Supports GPS, GLONASS, BeiDou, Galileo, QZSS
» Supports SBAS
» Stacked antennas
» Dual-frequency L1+L5
» Ultra-low power consumption

Bluetooth LE

» Bluetooth® 5, 2.4 GHz transceiver
» Low power mode : -96 dBm sensitivity
» Granted main regional certification such as FCC (USA),CE(EU), TELEC(Japan), SRRC (China), IC (Canada), NCC (Taiwan), and KC (South Korea)

Block Diagram



Configuration List

Functionality	
Global Positioning	✓
Bluetooth	✓
Battery	Explosion-proof rechargeable lithium battery

Battery Specifications

Parameter	Minimum	Typical	Maximum	Units
Battery capacity	1000		1100	mAh
Charge voltage		5		V
Charge current		500		mA
Charge time		2.5		Hr
Operating time*1		10		Hr

Bluetooth Specifications

Parameter	Description
Operating frequencies	2360 ~ 2500 MHz
Output power	-4 dBm(default), 0 dBm, -4 dBm

Other

Name	Specifications
Battery	Capacity : 1100 mAh
interface	USB Type-C
Operating temperature	Operating temperature : -20°C ~ +60°C

Helmet Specifications

Name	Specifications
size	length/width/height :289*233*150 mm
IP rating	IP65
Material	ABS
Validity period	30 months