SPHEREFIX

S66UGH-Lite

BASE STATION RECEIVER

- **Provide Single Antenna**

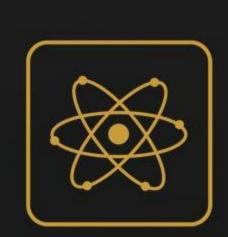GNSS PPS 4G DATA PWR

- **Cloud Service Function**

S66UGH-Lite *GNSS Receiver*

S66UGH-Lite is a miniaturized, and multi-functional GNSS receiver designed for the construction of the Beidou ground-based enhancement system. It has a built-in 1408-channel full-system full-frequency point positioning module, Linux operating system, rich interface types, various communication methods, and supports large capacity data storage. It is the best choice for the construction of the Beidou ground-based enhancement system.

LENGTH	WIDTH	HEIGHT	WEIGHT
135mm	102mm	47mm	470g

Receive all satellite signals

S66UGH-Lite has 1408 channels, integrates a high-precision positioning module, and supports the reception and interpretation of GNSS signals (BDS, GPS, GLONASS, GALILEO, QZSS and SBAS).

Rich interfaces, multiple communication methods

S66UGH-Lite provides single antenna, Ethernet, serial port and mobile network interfaces for customers to choose.

Cloud service function

S66UGH-Lite can regularly report the device status such as device location, network status, signal strength, satellite reception status, etc., and support cloud platform to restart, reset, and upgrade the remote device.

IP68

Industrial design, solid magnesium alloy shell, in line with IP68 design requirements, safe and reliable.

GNSS

Characteristic

- Qualcomm Cortex-A7
- Linux intelligent system

- BDS, GPS, GLONASS, Galileo, QZSS, SBAS
- Ethernet, WiFi, serial ports, Bluetooth, mobile network interfaces

- Supports Ntrip Client/Server/Caster, TCP Client/Server, FTP for file transfers.
- Supports HTTP/HTTPS for secure communications over protected networks.

- Front-end Calculation Capability
- Reduced Cloud Server Load

Key Features

Provide Single Antenna

- Channel:
  1408

- GNSS Tracking:
  BDS, GPS, GLONASS, Galileo, QZSS, SBAS

- Interface:
  PWE*1: Power supply port, SIM*1: Standard SIM card,
  GNSS*2: TCN port, DATA*1, PPS*1, Ethernet*1, 4G*1

- Voltage Input:
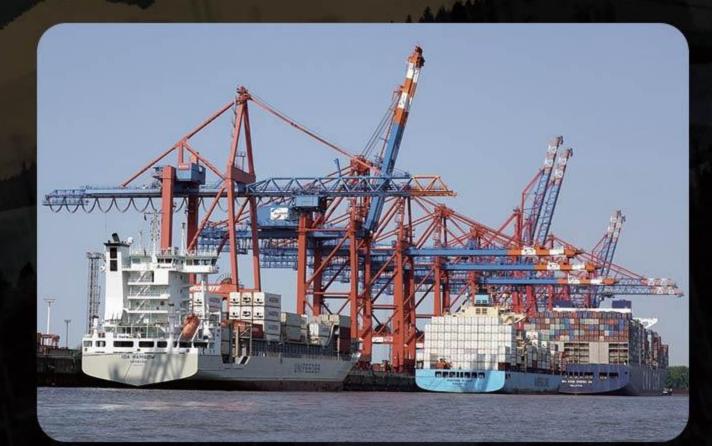 9-24V DC (12V typical)

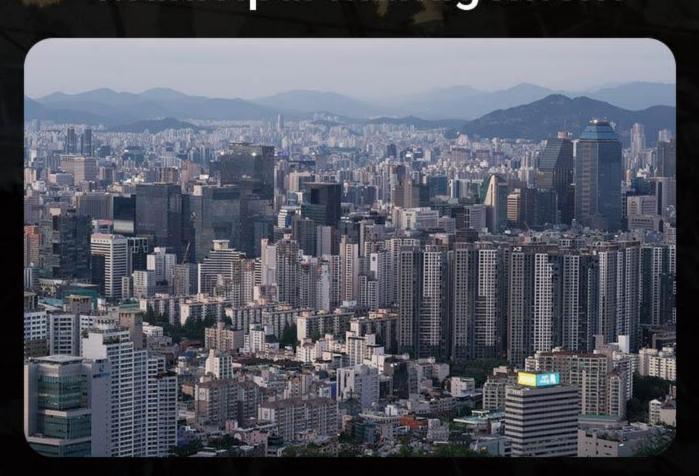- Power Dissipation:
  1.8W(typ)

GNSS1   PPS

Application Scenario

Geodetic measurement

Logistics management

Municipal Management

ITEM		SPECIFICATION	REMARKS
HARDWARE SYSTEM		ARM Cortex-A7 1.8GHz	
OS		Linux	
GNSS	GPS	L1C/A, L1C, L2P(Y), L2C, L5	Support PPP-B2b
	GLONASS	L1, L2, L3	Support PPP-E6
	BDS	B1I, B2I, B3I, B1C, B2a, B2b	Support SBAS
	GALILEO	E1, E5a, E5b, E6	
	QZSS	L1, L2, L5	
	SBAS	L1	
	NavIC(IRNSS)*	L5*	Requires latest firmware support
	Channel	1408 channels	
	Differential Observation Accuracy(RMS)	10.0cm	
	Kinematic Phase Observation Accuracy (RMS)	1.0cm	
	Data format	RINEX, Custom	
	Position Data	NMEA-0183	
	Differential Data	RTCM3.X	
	Data update frequency	1Hz, 2Hz, 5Hz, 10Hz, 20Hz	
	Receive Data Availability	≥98%(Data available/Data collected)	
	Data Integrity	≥98%(Data collected/Data should be collected)	
	Single(RMS)	Horizontal: 1.5m Vertical: 2.5m	
	RTK(RMS)	Horizontal: ±(8mm+1ppm) Vertical: ±(15mm+1ppm)	
	Static Accuracy(RMS)	Horizontal: ±(2.5mm+0.5ppm) Vertical: ±(5mm+0.5ppm)	
	Time Accuracy(RMS)	20ns	
SYSTEM	Serial Port	Standard RS232 interface, Baud rate supports 1200, 2400, 4800, 9600, 19200, 38400, 115200, 230400bps	
	Network port	Standard RJ45 interface, 10/100Mbps network adaptive	
	USB	Integrated on the 7-pin interface, support access to the computer to copy data directly	
	Network Communication (Full Netcom)	LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28 LTE TDD: B38/39/40/41 WCDMA: B1/2/4/5/6/8/19 GSM: B2/3/5/8	
	Interface	PWE*1: Power supply port DATA*1 PPS*1 SIM*1: Standard SIM card Ethernet*1 GNSS*1: TNC interface 4G*1: 4G antenna port	
	Storage	32GB, circular storage support multi-channel storage	
ELECTRICAL CHARACTERISTIC	Voltage Input	9-24V DC (12V typical)	
	Power dissipation	1.8W(typ)	
ENVIRONMENT	Operating Temperature	-40℃~+85℃	
	Storage Temperature	-40℃~+85℃	
	Protection	IP68	
PHYSICAL	Material	Magnesium alloy main body	
	Dimension	135mm*102mm*47mm	
	Weight	470g	

▶ Manufacturers may update parameters at any time, please refer to the latest product information.