



Accurate
positioning

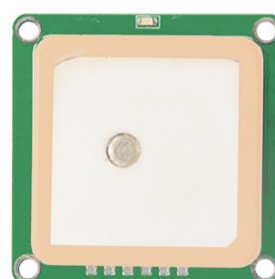
22°39'48.37"N 114°02'10.91"E



JS-AUP30-1

PRODUCT SPECIFICATION

Data Sheet



Shenzhen Jumpstar Technology Co.,Ltd

Email : info@jumpstar-tech.com

Tel : (86) 0755-23732282

Fax : (86) 0755-23732823

Add : Room 213, Building B, Youth Pioneer Park, Jianshe East Road,
Longhua District, Shenzhen, Guangdong Province, China, 518109.

Contents

Change History of Revision	3
1 Functional description	4
1.1 Overview	4
1.2 Product Features	4
1.3 Performance	5
1.4 Block Diagram	6
1.5 Protocols	6
1.6 Antenna	6
1.7 Product Application	6
2 Pin definitions	7
2.1 Definition of Pin Assignment	7
2.2 Description of geomagnetic sensors	7
3 Electrical Specifications	7
4 Mechanical Specifications	8
5 Version of the configuration	错误！未定义书签。
6 Interface configuration selections	8
6.1 Interfaces description	8
7 ROHS	9

Change History of Revision

[illegible]

1 Functional description

1.1 Overview

The JS-AUP30-1 uses multi mode solution, low power consumption, low cost, the JS-AUP30-1 are multi GNSS (BDS, GPS, GLONASS, Galileo, QZSS and SBAS) positioning module developed to meet the requirements of an extensive range of applications and end-products. Based on the high performance SOC position engine, these receivers provide exceptional sensitivity and acquisition times and interference suppression measures enable reliable positioning even in difficult signal conditions.

1.2 Product Features

- Build on high-performance GNSS UP26-1
- Over 2 million effective correlators
- 72 acquisition-channel / 32 tracking
- Cold start acquisition sensitivity of -148dBm and -166dBm tracking sensitivity
- Up to 10 Hz navigation update rate
- Supports BDS, GPS, QZSS, SBAS, GLONASS, Galileo
- Supports AGPS
- Integrated TCXO, LNA, SAW, RTC
- Compact size (30.0mm x 30.0mm x 8.5mm±0.3mm) suitable for space-sensitive application
- Support standard NMEA 0183, version 4.0 and 4.1, UBX

1.3 Performance

Parameter	Specification
Receiver type*	■GPS/QZSS L1C/A ■SBAS EGNOS, GAGAN, MSAS and WAAS ■GLONASS L1OF ■BDS B1I ■Galileo E1B/C
Sensitivity	Tracking & Navigation -166dBm Reacquisition -160dBm Cold Start -148dBm
Time-To-First-Fix ¹	Cold Start 29s Hot Start 1s
Horizontal Position accuracy ²	Autonomous 2.0m CEP
Accuracy of time pulse signal	RMS 30ns 99% 60ns
Velocity accuracy ³	0.05m/s
Operational limits ⁴	Dynamics ≤ 4g Altitude 80000m Velocity 500m/s
Frequency of time pulse signal	1Hz
Baud Rate	9,600 -- 460800 bps (Default 38400 bps)
Max navigation update rate	10 Hz (Default 1Hz, configurable)

*Default GPS+Galileo+QZSS+SBAS, and BDS and GLONASS are not supported at the same time

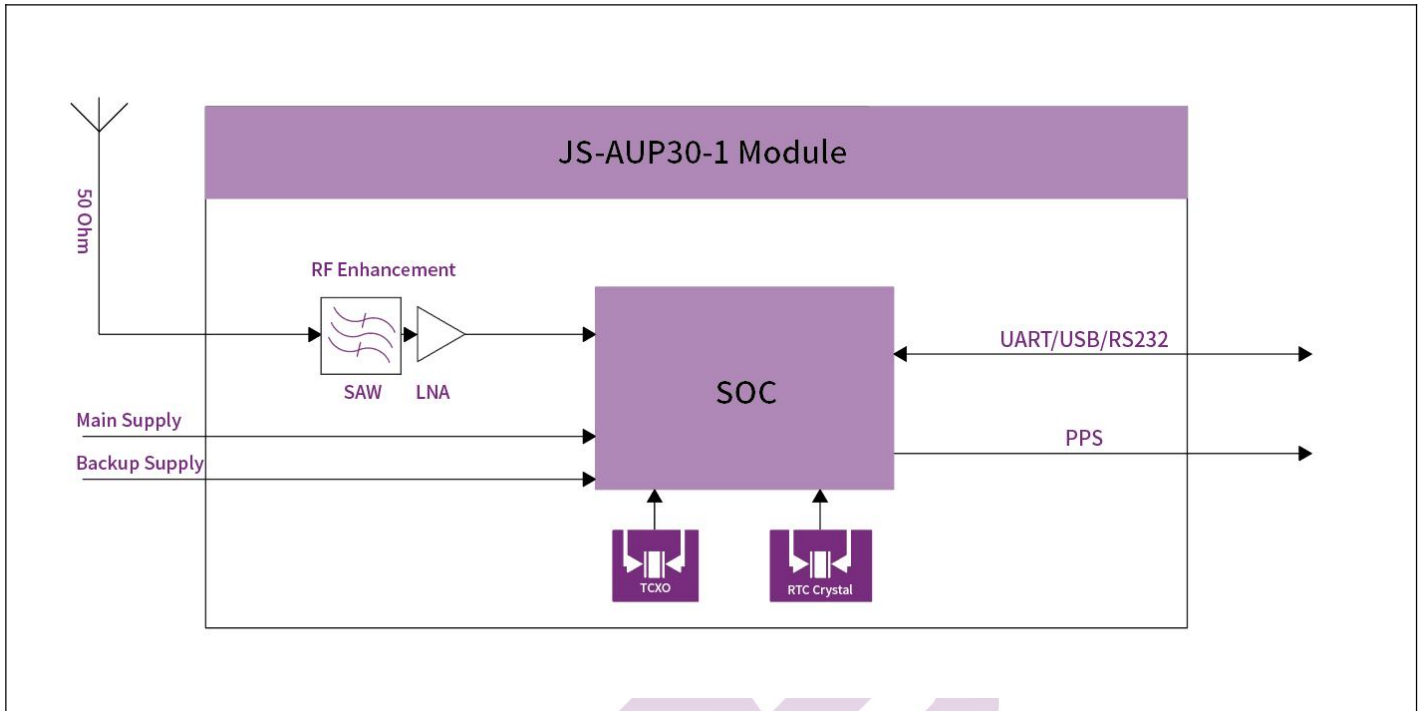
¹ All satellites at ≥-130dBm

² CEP 50%, 24 hours static, ≥-130dBm, > 6SVs

³ 50% at 30 m/s for dynamic operation

⁴ Assuming Airborne < 4g platform

1.4 Block Diagram



1.5 Protocols

Protocol	Type
NMEA 0183 v4.0 and 4.1	Input/output, ASCII
UBX	Input/output, binary, u-blox proprietary

1.6 Antenna

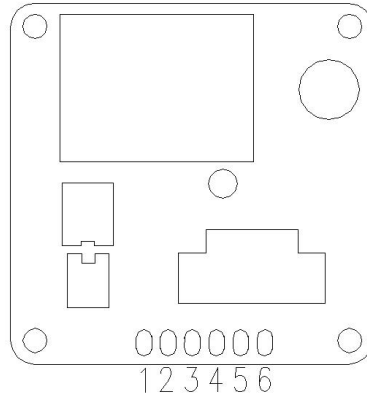
Parameter	Specification
Passive Antenna Type	25.0*25.0*4.0mm

1.7 Product Application

- Automotive applications
- Marine navigation, Fleet management
- Intelligent logistics scheduling
- Ground vehicle tracking and urban intelligent traffic management
- Intelligent robots
- Formation drones
- Personal travel and wilderness adventure
- Emergency survival

2 Pin definitions

2.1 Definition of Pin Assignment



No.	Name	I/O	Description
1	RXD/DP	I	TTL Input/D+
2	TXD/DM	O	TTL Output/D-
3	GND	G	Ground
4	VCC	P	Main Supply
5	1PPS	O	Time pulse output
6	EN	I	Module power control switch

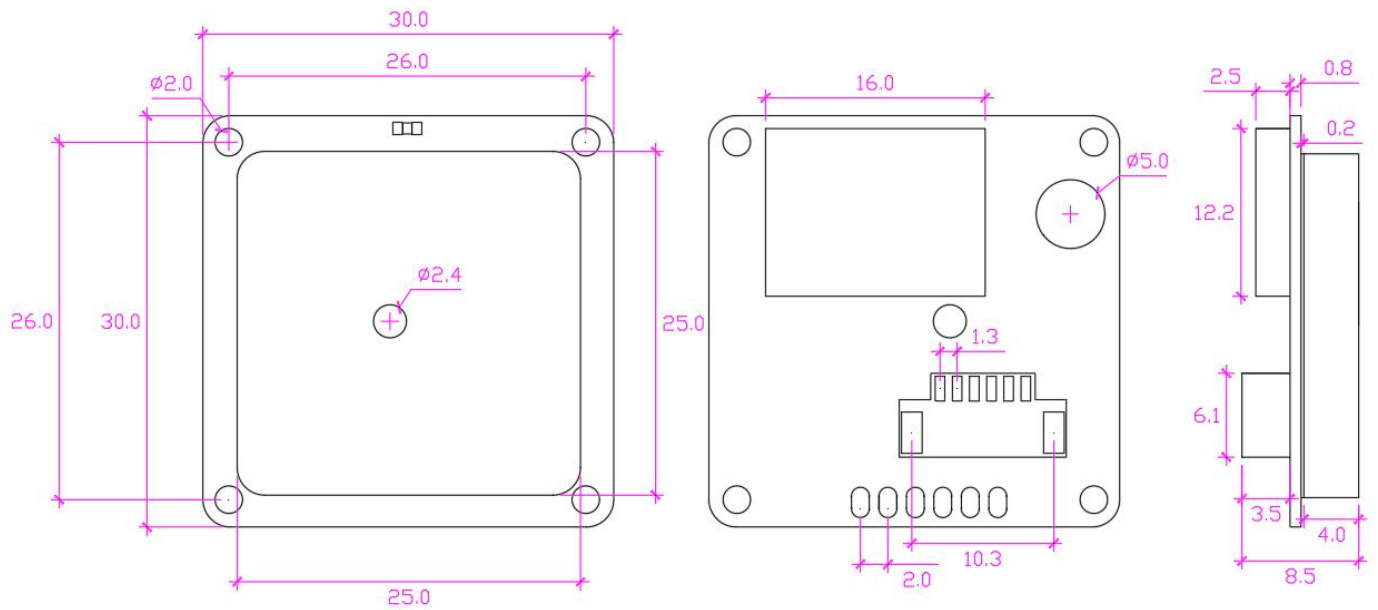
3 Electrical Specifications

Parameter	Symbol	Min	Type	Max	Units
Power supply voltage	VCC	2.8	5.0	5.5	V
Average supply current	Acquisition	27@5.0V	35@5.0V	41@5.0V	mA
	Tracking	27@5.0V	32@5.0V	40@5.0V	mA
Backup battery			0.07		F
Backup battery current	I_BCKP		8@3.3V		uA
Digital IO voltage	Div	2.8	3.3	3.3	V
Storage temperature	Tstg	-40		85	°C
Operating temperature ¹	Topr	-40		85	°C
Farah capacitance ²	Tstg	-25		60	°C
Humidity				95	%

¹ The temperature range is the operating temperature range without the Farad capacitor

² Hot start cannot be carried out when the temperature is below -20°C or above 60°C

4 Mechanical Specifications



units: mm dimension error: $\pm 0.3\text{mm}$

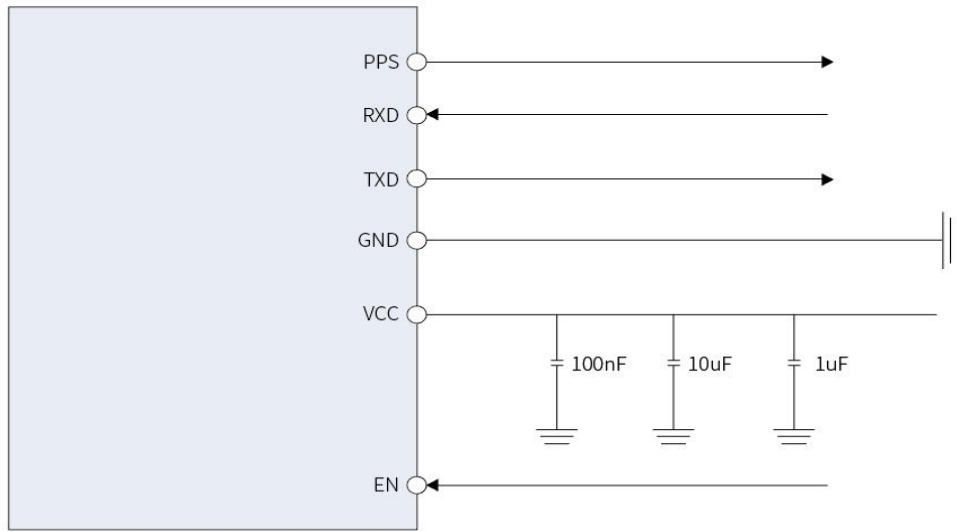
5 Interface configuration selections

5.1 Interfaces description

JS-AUP30-1 series modules can be selected according to the corresponding interface output end, there are mainly the following choices.

NAME	UART	USB	RS232
JS-AUP30-1 (Default)	√	NC	NC
JS-AUP30B-1	NC	√	NC
JS-AUP30R-1	NC	NC	√

5.2 Application Circuit



6 How to obtain the USB driver

To use the USB interface of this product, you need to install the PL2303 driver, which can be downloaded from the website or obtained from our official website (Windows driver).

7 ROHS

This product is RoHS compliance