



Accurate
positioning

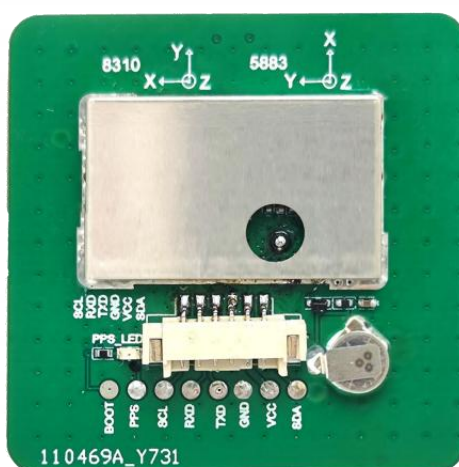
22°39'48.37"N 114°02'10.91"E



JS-AUP36FG-9

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 Product Application	5
1.4 Performance	5
1.5 Protocols	6
1.6 Antenna	6
2 Pin definitions	6
2.1 Definition of Pin Assignment	6
3 Electrical Specifications	7
4 Mechanical Specifications	8
5 Interface configuration selections	8
5.1 Interfaces description	8
6 RoHS	9



Change History of Revision

[illegible]

1 Functional description

1.1 Overview

Featuring a multi-mode solution, low power consumption and low costs, the JS-AUP36FG-9 are multi-GNSS (GPS, BDS, GLONASS, Galileo) positioning modules 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 SOC series
- 49 acquisition-channel / 49 tracking
- Cold start acquisition sensitivity of -148dBm and -167dBm tracking sensitivity
- Default 1Hz navigation update rate
- Supports GPS, BDS, GLONASS, Galileo
- Supports A-GNSS
- Integrated TCXO, LNA, SAW, RTC
- Configurable peripheral IO pins
- Integrated high gain antenna
- Low power consumption and It has Intelligent power control mechanism
- Single supply with wide voltage range
- Compact size (36.0*36.0*8.5mm±0.3mm) suitable for space-sensitive application
- Rich hardware interface to support multiple configurations. UART, can optional

1.3 Performance

Parameter	Specification		
Receiver type*	■GPS L1C/A ■GLONASS L1OF	■SBAS L1C/A ■BDS B1I	■QZSS L1C/A ■Galileo E1B/C
Sensitivity	Tracking & Navigation	-167dBm	
	Reacquisition	-163 dBm	
	Cold Start	-148dBm	
Time-To-First-Fix ¹	Cold Start	26 s	
	Hot Start	1 s	
Horizontal Position accuracy ²	Autonomous	2.5 m CEP	
	SBAS	2.0 m CEP	
Accuracy of time pulse signal	RMS	30 ns	
Velocity accuracy ³	0.05 m/s		
Operational limits ⁴	Dynamics	≤ 4 g	
	Altitude	80000 m	
	Velocity	500 m/s	
Frequency of time pulse signal	1Hz		
Baud Rate	4800-921600bps		
Max navigation update rate	10 Hz (Default 1Hz)		

¹ All satellites at $\geq -130\text{dBm}$

² CEP 50%, 24 hours static, $\geq -130\text{dBm}$, $> 6\text{SVs}$

³ 50% @ 30m/s dynamic operation

⁴ Assuming Airborne $< 4\text{g}$ platform

1.4 Product Application

- Handheld GPS receiver application
- Ideal for PDA, Pocket PC
- AVL and Location-Based Services
- Timing application
- UAV
- Automotive application
- Car navigation and tracking
- Sports and Recreation
- Marine Navigation, Fleet Management

1.5 Protocols

Protocol	Type
NMEA 0183 V4.11	Input/output, ASCII

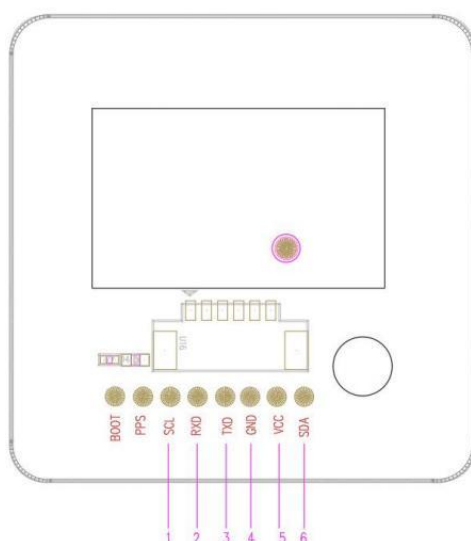
1.6 Antenna

The JS-AUP36FG-9 module was designed for use with passive and active antennas.

Parameter	Specification
Passive Antenna Type	25.0*25.0*4.0mm

2 Pin definitions

2.1 Definition of Pin Assignment



No.	Name	I/O	Description
1	SCL	I/O	I2C Clock (keep open if not used)
2	CANL/RXD	I	Serial Port (keep open if not used)
3	CANH/TXD	O	Serial Port (keep open if not used)
4	GND	G	Ground
5	VCC	P	Main Supply
6	SDA	I/O	I2C Data (keep open if not used)

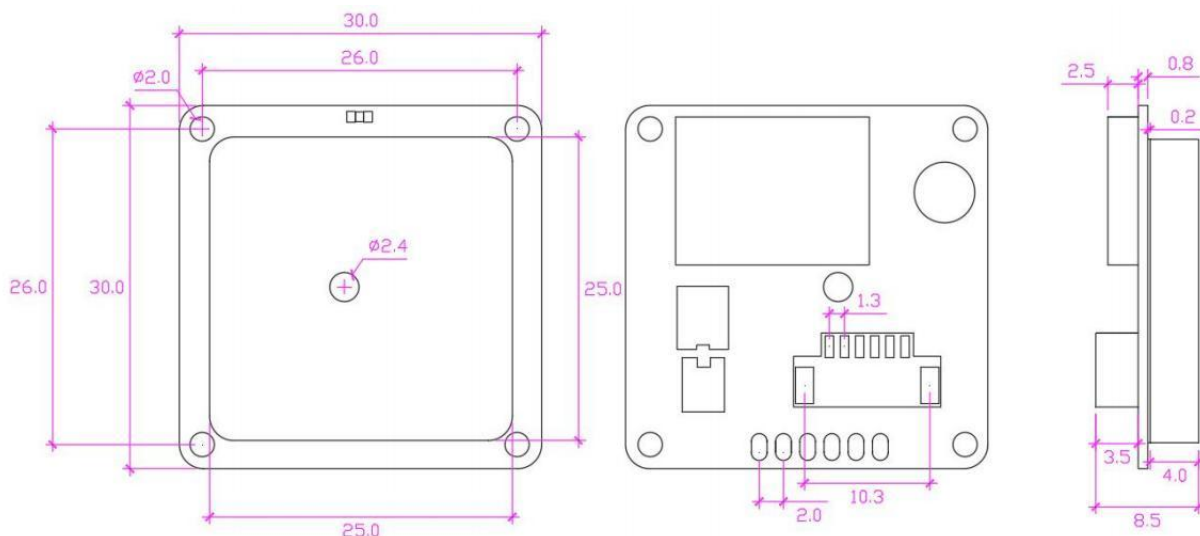
3 Electrical Specifications

Parameter	Symbol	Min	Type	Max	Units
Power supply voltage	VCC	2.25	3.3	3.6	V
Average supply current	Acquisition	39@5V	44@5V	51@5V	mA
	Tracking				mA
Backup battery			0.07		F
Backup battery current	I_BCKP		15@3.3V		uA
Digital IO voltage	Div	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



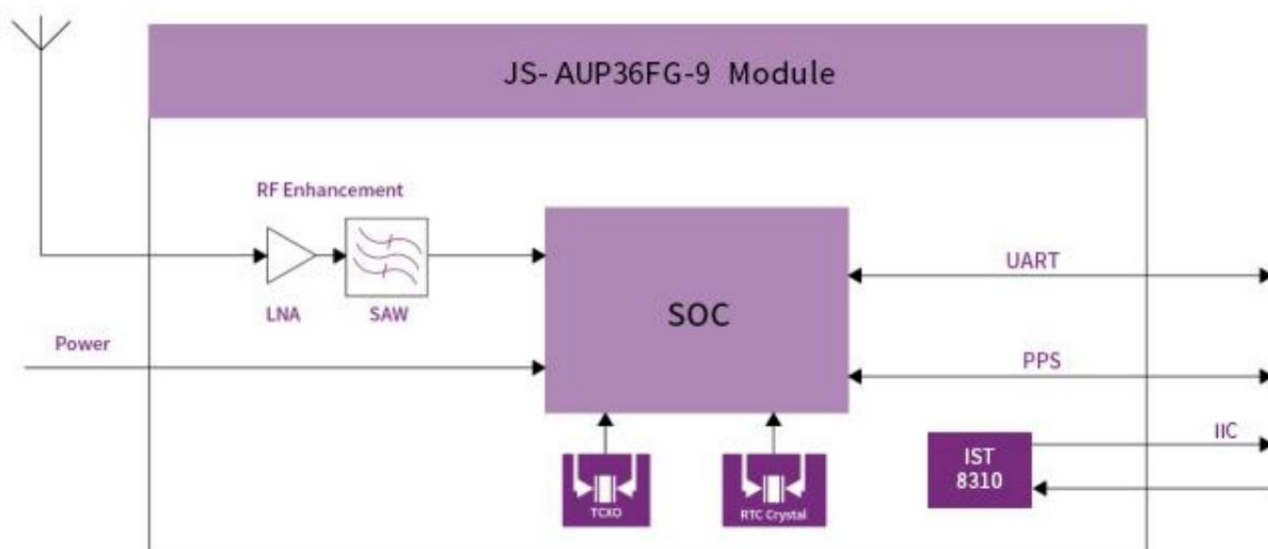
units: mm dimension error: ± 0.3 mm

5 Interface configuration selections

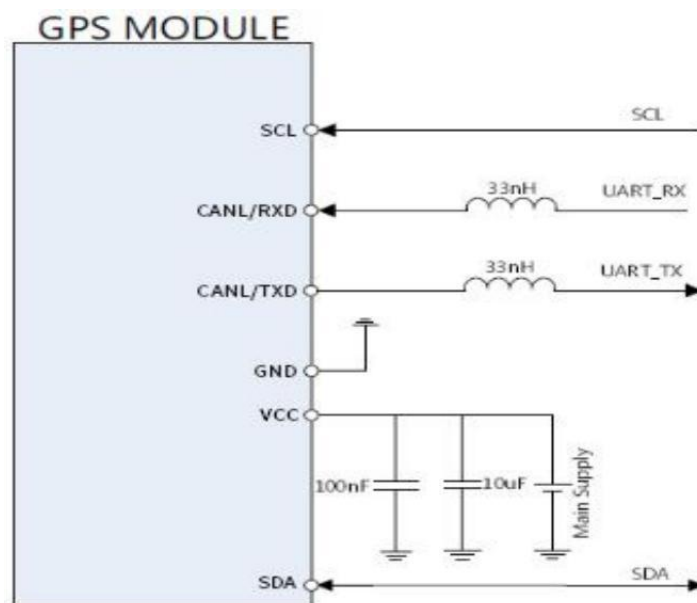
5.1 Interfaces description

The JS-AUP36FG-9 GPS module can be selected according to the needs of the corresponding interface output side and additional sensors, Support UART (default), USB, RS232 interface output.

Block Diagram



Application Circuit



6 RoHS

This product is RoHS compliance