



Accurate
positioning

22°39'48.37"N 114°02'10.91"E



JS-N27UP36-9

PRODUCT SPECIFICATION

Data Sheet



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Revision History

[illegible]

1 Functional description

1.1 Overview

Featuring a multi mode solution, low power consumption and low costs, the JS-N27UP36-9 are multi-GNSS (GPS, BDS, GLONASS, Galileo) 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 AUP36FG-9
- 49 acquisition-channel / 49 tracking
- Cold start acquisition sensitivity of -148dBm and -167dBm tracking sensitivity
- Up to 25Hz 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 (52.0*52.0*14mm±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/QZSS L1C/A ■ GLONASS L1OF ■ BDS B1I ■ Galileo E1-B/C ■ SBAS L1C/A
Sensitivity	Tracking & Navigation -167dBm Reacquisition -160dBm Hot Start -159dBm Cold Start -148dBm
Time-To-First-Fix ¹	Cold Start 24s Hot Start 2 s
Horizontal Position accuracy ²	PVT 2.0 m CEP
Accuracy of time pulse signal	RMS 30 ns 99% 60 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	0.25Hz to 10 MHz(configurable)
Baud Rate	4800-921600bps (Default 38400 bps)
Max navigation update rate	25Hz
Dynamic heading accuracy	0.3 deg

¹ All satellites at ≥-130dBm

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

³ 50% @ 30m/s dynamic operation

4 Assuming Airborne < 4g platform

1.4 Product Application

- Marine navigation, fleet Management
- Driving test
- 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 V4.10	Input/output, ASCII
UBX	Input/output, binary, u-blox proprietary

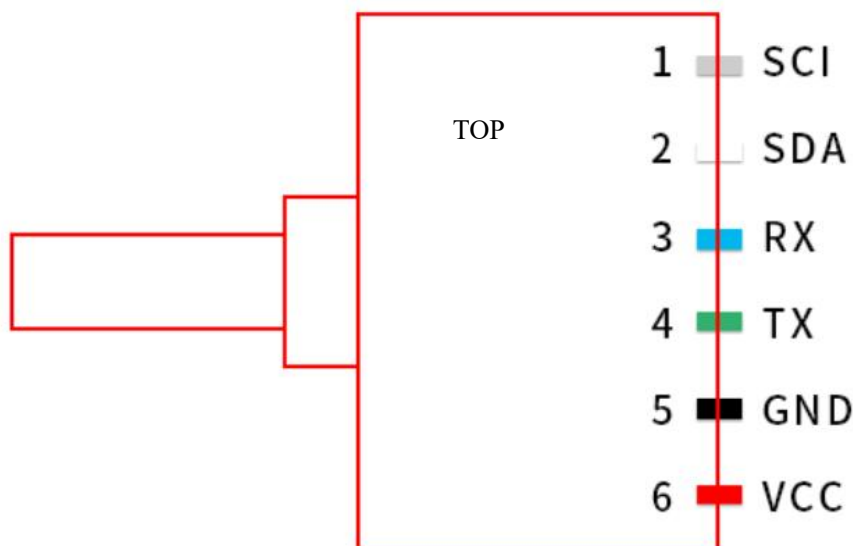
1.6 Antenna

The JS-N27UP36-9 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	SDA	I/O	I2C Data (keep open if not used)
3	CANL/RXD	I	Serial Port (keep open if not used)
4	CANH/TXD	O	Serial Port (keep open if not used)
5	GND	G	Ground
6	VCC	P	Main Supply

*Joint and wire length can be customized

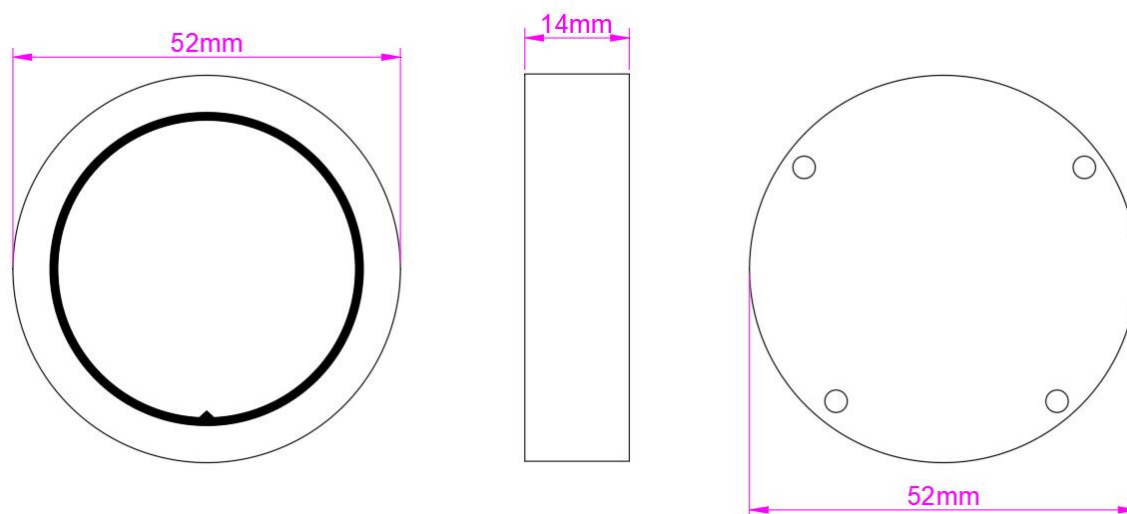
3 Electrical Specifications

Parameter	Symbol	Min	Type	Max	Units
Power supply voltage	VCC	3.0	3.3	5.5	V
Average supply current	Acquisition	39@5V	44@5V	51@5V	mA
	Tracking	35@5V	40@5V	46@5V	mA
Backup battery			0.07		F
Backup battery current	I_BCKP		36@5V		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



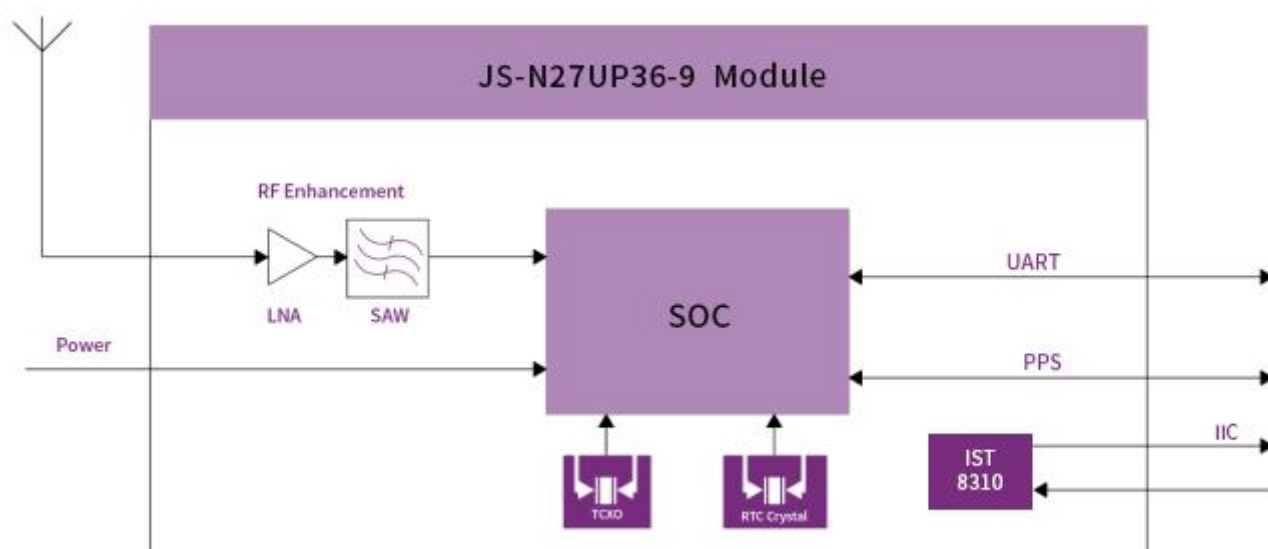
units: mm dimension error: $\pm 0.3\text{mm}$

5 Interface configuration selections

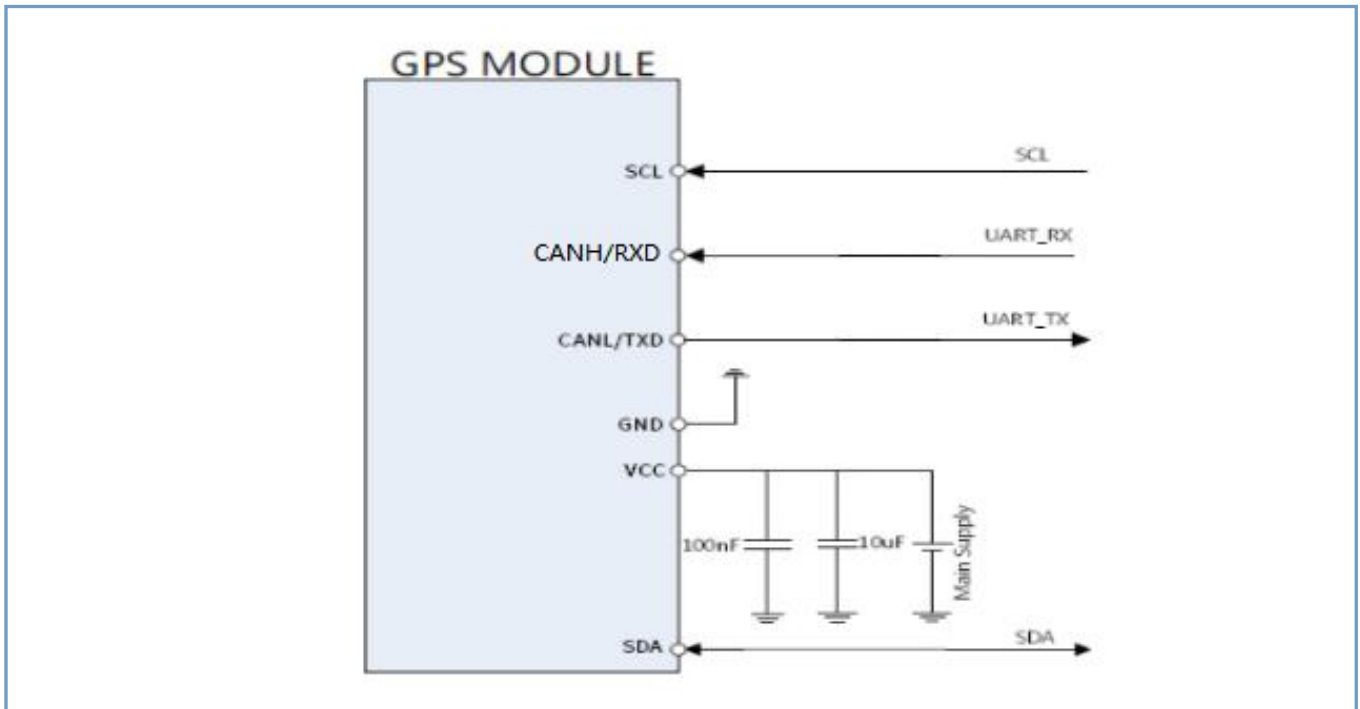
5.1 Interfaces description

The JS-N27UP36-9 GPS module can be selected according to the needs of the corresponding interface output side and additional sensors, Support UART interface output.

Block Diagram



Application Circuit



6 RoHS

This product is RoHS compliance