GN-111, GLONASS/GPS Dual-satellite Systems Smart Antenna Module

RoHS Compliant

Overview

GN-111 is an easy to use, ultra-high performance, industrial grade GLONASS/GPS smart antenna module. Our experienced design provides fast acquisitions and excellent tracking performance. Our flexible customization support of various connectors, cable length, power levels, and software output provide one fast and reliable adoption experience.

Applications

- Automatic vehicle location
- Navigation device
- Driving recorder

Features

- Support both GLONASS and GPS
- UART TTL/RS232 support
- Backup battery or external backup power supply for faster position fix
- Precise time pulse option
- Power control support
- High performance: -159dBm tracking sensitivity
- LED for working indication
- Built-in magnet
- RoHS compliant
- Industrial operating temperature range: **-40 ~ 85℃**

Technical Specifications

Receiver Performance Data+

Receiver Type	12-channel, GLONASS/GPS L1 frequency, C/A code
Horizontal Position Accuracy	2.5m CEP (50% 24hr static, -130dBm)
Velocity Accuracy	0.1 m/s
Time Accuracy	100ns (3D fix)
Time To First Fix Hot start Warm start Cold start	Autonomous <1sec <35sec <42sec (50% -130dBm)
Sensitivity (Autonomous)	-145dBm (acquisition) -159dBm (tracking)
Max. Update Rate	1Hz
Max. Altitude	<18,000 m
Max. Velocity	<1,852 km/hr
Protocol Support	NMEA v3.01 9600bps N,8,1 GPGGA, GPGSA, GPGSV, GPRMC, GPVTG
Dynamics	<4g

Electrical Data

Power Supply	3.3 ~5.5 VDC
Power Consumption	75mA/average tracking
Backup power	1.5 ~ 3.6 V
TTL I/O	V_{IH}: ≧ 2V, V_{IL}: ≦ 0.8V V_{OH}: ≧ 2.4V, V_{OL}: ≦ 0.4V

Environmental Data

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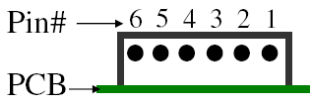
Operating temperature	-40 ~ 85℃ (battery: -20 ~ 60℃)
Storage temperature	-40 ~ 85℃

Mechanical Data

30*31.5*9 mm

6-pin Interface, pitch 1.0mm



Pin	Name	Function	I/O
1	GND	Ground	Input
2	VCC	Power supply	Input
3	$TX/TXD	Serial data output (from GPS)	Output
4	$RX/RXD	Serial data input (to GPS)	Input
5	TIMEPULSE (VBAT, option)	TIMEPULSE signal (External backup power)	Output (Input)
6	PWR_CTRL	Power control, high/floating: ON, low: OFF	Input

$: Either RS232 or TTL

Ordering Information

GN-111X

Built-in backup battery

Where X=	R	T
RS232	Y	-
TTL	-	Y

Optional VBAT pin to support external backup power:

Where X=	Q	S
RS232	Y	-
TTL	-	Y

* Models other than R/T require MOQ

*This document is subject to change without notice.

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