

N32_EVB User Manual

GNSS Module Series

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Version History

Date	Version	Modify records	Author
2019-06-17	V1.0	First release	Tp.Lin

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1. Overview

This document defines and specifies the usage of N32 EVB. You can know how to use N32 EVB and GPS demo tool from this document.

1.1 EVB Top View

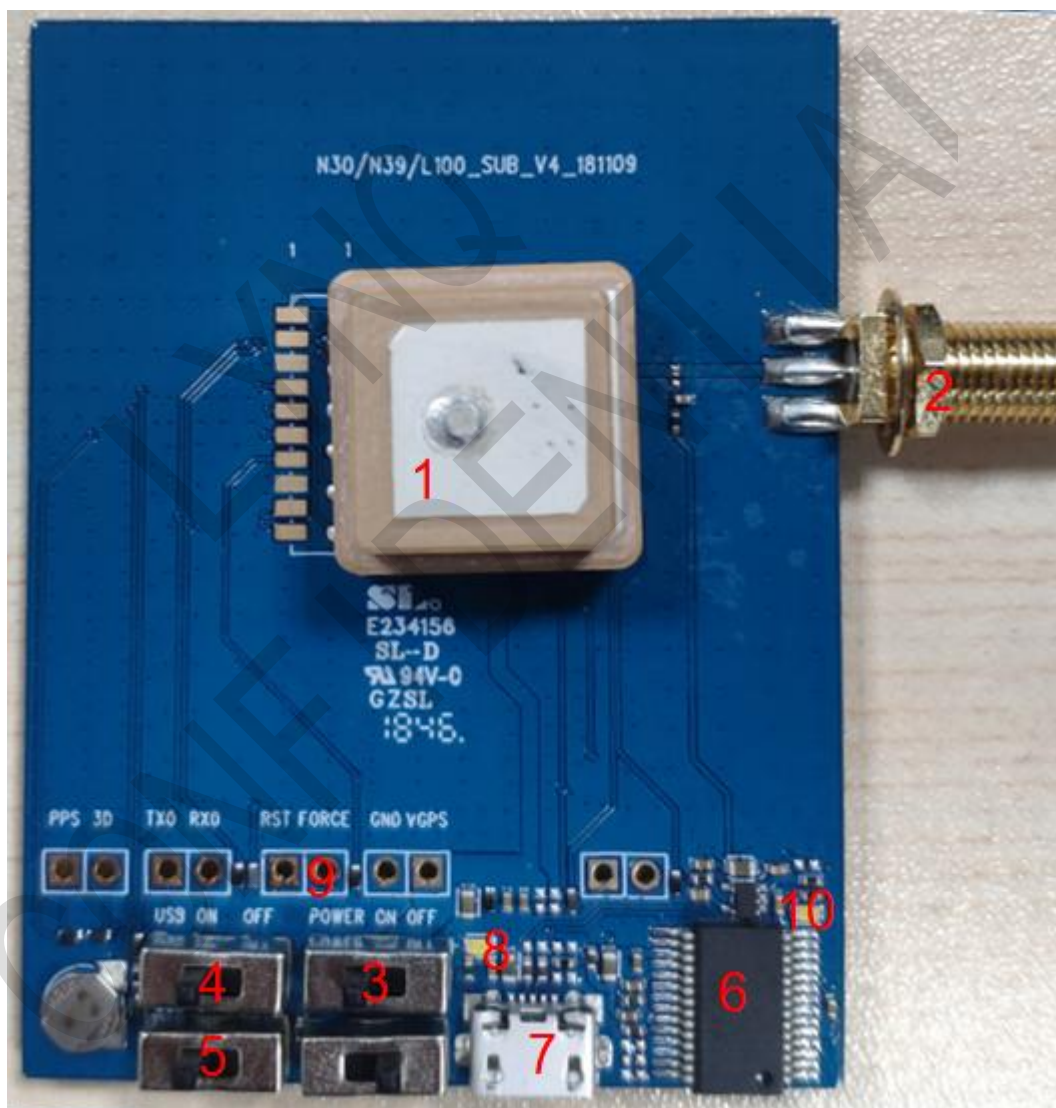


Figure 1-1 N32 EVB Top View

PIN	N32
-----	-----

1	N32 Built-in Antenna
2	N32 External Antenna
3	Power Switch
4	TX Switch
5	RX Switch
6	USB to UART IC
7	5pin Micro USB
8	USB Power Indication LED
9	Test Points
10	PPS Indication LED

1.2 EVB Accessories



Figure 1-2 EVB Accessories: USB Cable

2. Application

2.1 GNSS Module



Figure 2-1 GNSS Module

N32 module can not only supports automatic antenna switching function, which can achieve switching between external active antenna and internal patch antenna, but also supports external active antenna detection and short protection.

2.2 Switch



Figure 2-2 Switch

The EVB board has three switches for the UART and Power of GNSS module. All these three switches should turn left when connect the module to the computer through the Micro-USB, like getting the NEMA data or downloading the software.

2.3 USB Interface

The EVB board only provides one way for data communication. Micro-USB interface can also supply the main power for the EVB, not need another power. You can cut the UART communication via the switch (4, 5) and the power supply of GNSS module via the switch (6).

2.4 Antenna Interface

N32 module supports automatic antenna switching function. Defaults to using the built-in antenna, when detect the external active antenna, will automatically switch to the external active antenna.

2.5 Status LEDs

The EVK board has two indication LEDs. One is USB power indication (8) and another is PPS indication (10). USB power indication led will light on when USB cable plugging. PPS indication led will on when the GNSS module outputs the PPS signal.

2.6 Test Points

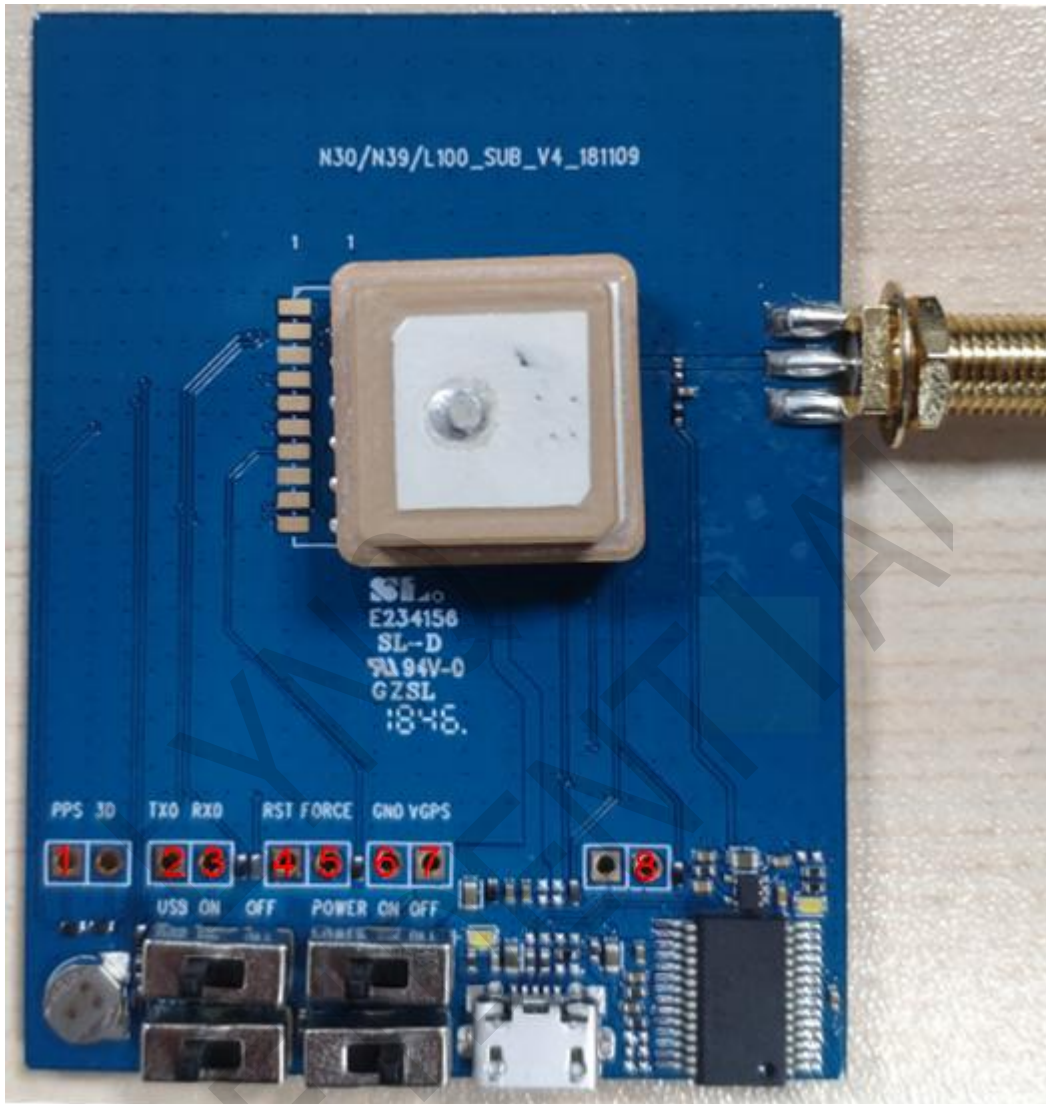


Figure 2-3 Test Point

Table 2-1: Pins of Test Point

Pin	Pin Name	I/O	Description
1	PPS	O	1 pulse per second
2	TX0	O	Transmit data
3	RX0	I	Receive data
4	RST	I	System reset

5	FORCE_ON	I	Wakeup module
6	GND	I	GND
7	VGPS	I	GPS Module Power Supply
8	ANT_DET	O	Active antenna detection $V_{OH}=2.64V\sim 3.3V$ $V_{OL}=0V\sim 0.4V$ Refer to "N32_Hardware Design" chapter 4.6.

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3. EVB and Accessories

The EVB and its accessories are showed as follow figure which tell user how to connect them.



Figure 3-1 EVB and Accessory Equipments

4. USB Driver

You need to install the driver of Micro-USB, when use Micro-USB for data communication. Please get the driver from our FAE of Mediatek Company or download them from internet.

We have two different driver ICs for the Micro-USB. These download paths are as below:

http://www.ftdichip.com/Drivers/CDM/CDM21218_Setup.zip

http://www.prolific.com.tw/US/ShowProduct.aspx?p_id=225&pcid=41

5. Satrack

5.1 Satrack panel

The Satrack version is V1.29.115. The Satrack tool can help customer to view the status of GPS&GLONASS&IRNSS&Galileo&QZSS&SBAS receiver. When the tool is opened, the following window will be displayed:

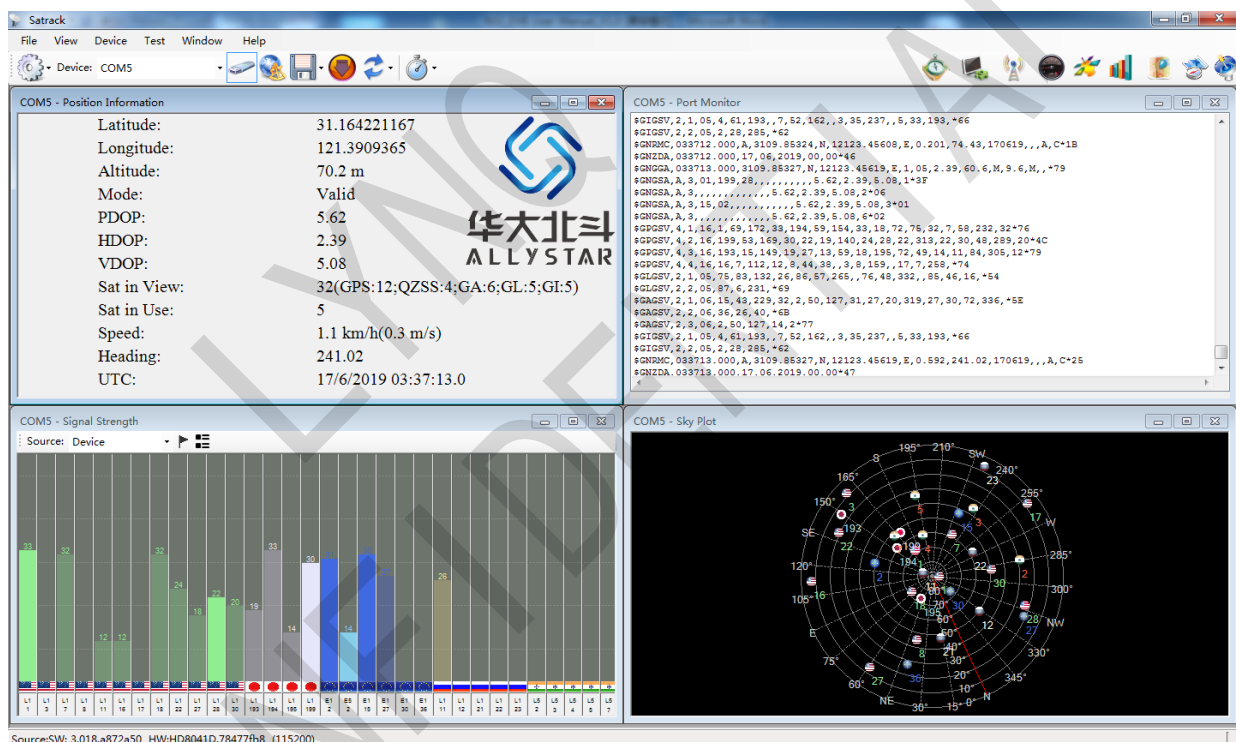



Figure 5-1 Satrack

Assemble the EVB accessories, supply power to the module, start up the Satrack, select a correct COM port (N32 module supports 115200bps by default), to successfully connect.



Specific operation reference "T-5-1806-012-Satrack V1.28-User Manual".

 T-5-1806-012-Satrack V1.28-User Manual

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6. Safety Information

For the reasonable usage of the module, please comply with all these safety notices of this page. The product manufacturers should send followed safety information to user, operator or product's spec.



The devices using the module may disturb some electronic equipment. Put the module away from the phone, TV, radio and automation equipment to avoid the module and the equipment to interfere with each other.



Shut down the mobile device or change to flying mode before boarding. The Using of wireless appliances in an aircraft is forbidden to avoid the interference, or else cause to unsafe flying, even violate the law.



In hospital or health care center, switch off the mobile devices. RF interference may damage the medical devices, like hearing-aid, cochlear implant and heart pacemaker etc.



Mobile devices can't guarantee to connect in all conditions, like no fee or with an invalid SIM card. When you need emergent help, please remember using emergency calls and make sure your device power on in an area with well signal.



Put the module away from inflammable gases. Switch off the mobile device when close to gas station, oil depot, chemical plant etc.



The module is not water proof. Please don't use the module in the area with high humidity like bathroom, which will decelerate the physical performance, insulation resistance and mechanical strength.



Non-professionals can't teardown the module which will damage it. Refer to the specification or communicate the related staffs to repair and maintain it.



Please switch on the module before cleaning. The staffs should be equipped with anti-ESD clothing and gloves.

The users and product manufacturers should abide by the national law of wireless modules and devices. If not, Mobiletek will not respond the related damages.