

SEEED-113990838

SIM7600G-H 4G LTE Module HAT for Jetson Nano



PRODUCT DETAILS

Key Features

- 40PIN GPIO extension header for connecting Jetson Nano
- Supports dial-up, telephone call, SMS, mail, TCP, UDP, DTMF, HTTP, FTP, etc.
- Supports GPS, BeiDou, Glonass, LBS base station positioning
- Onboard USB interface, to test AT Commands, get GPS positioning data, and so on
- Breakout UART control pins, to connect with host boards like Arduino/STM32

- SIM card slot supports 1.8V/3V SIM card
- Onboard 3.5mm audio jack with earphone and mic support, for making the telephone calls
- 2x LED indicators, easy to monitor the working status
- Onboard voltage translator, the operating voltage can be configured to 3.3V or 5V via jumper
- Baudrate: 300bps ~ 4Mbps (default: 115200bps)
- Autobauding baud rate: 9600bps ~ 115200bps
- Control via AT commands (3GPP TS 27.007, 27.005, and V.25TER command set)
- Supports SIM application toolkit: SAT Class 3, GSM 11.14 Release 99, USAT
- Comes with development resources and manual (examples for Jetson Nano/Raspberry Pi/Arduino/STM32)

Description

This is a 4G/3G/2G communication and GNSS positioning module designed for Jetson Nano, it supports global LTE CAT4 up to 150Mbps for downlink data transfer, with pretty low power consumption.

Just attach it onto the Jetson Nano Developer Kit, easily enable functions like 4G high-speed connection, wireless communication, remote video monitoring, making a telephone call, sending SMS, global positioning, and so on.

Specification

Communications Specifications

	LTE	WCDMA / TD-SCDMA / CDMA 2000	EDGE	GSM/GP RS
Band	LTE-TDD B34/B38/B39/B40 /B41	UMTS/HSDPA/HSPA+ B1/B2/B4/B5/B6/B8/B19	GSM/GPRS/EDGE 850/900/1800/1900 MH	

LTE-FDD
 B1/B2/B3/B4/B5/
 B7/B8
 /B12/B13/B18/B1
 9/B20/B25/B26/B
 28/B66

Emit
 ting
 pow
 er

0.25W

0.5W@E 2W@GS
 GSM900 M900
 0.4W@D 1W@DC
 CS1800 S1800

Dat
 a
 Spe
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LTE CAT 4
 Uplink≤50 Mbps
 Downlink≤150
 Mbps

UMTS	TD-SCDMA			
Uplink≤384Kbps	Uplink≤128Kbps			
Downlink≤384Kbps	Downlink≤384Kbps	CDMA2000/EVDO	EDGE	GPRS
		Uplink≤1.8Mbps	Uplink≤236.8kbps	Uplink≤85.6kbps
HSPA+	TD-HSDPA/HSUPA	Downlink≤3.1Mbps	Downlink≤236.8kbps	Downlink≤85.6kbps
Uplink≤5.76Mbps	Uplink≤2.2Mbps			
Downlink≤42Mbps	Downlink≤2.8Mbps			

SIM

Card Normal SIM (Not Included)

Application

Global 4G/3G/2G

Region

GNSS Specifications

- Receiver type
 - 16-channel
 - C/A code
- Sensitivity
 - Tracking: -159 dBm (GPS) / -158 dBm (GLONASS) / TBD (BD)
 - Cold starts: -148 dBm
- Time-To-First-Fix (open-air)
 - Cold starts: <35s
 - Hot starts: <1s
- Accuracy
 - Position: <2.5m CEP

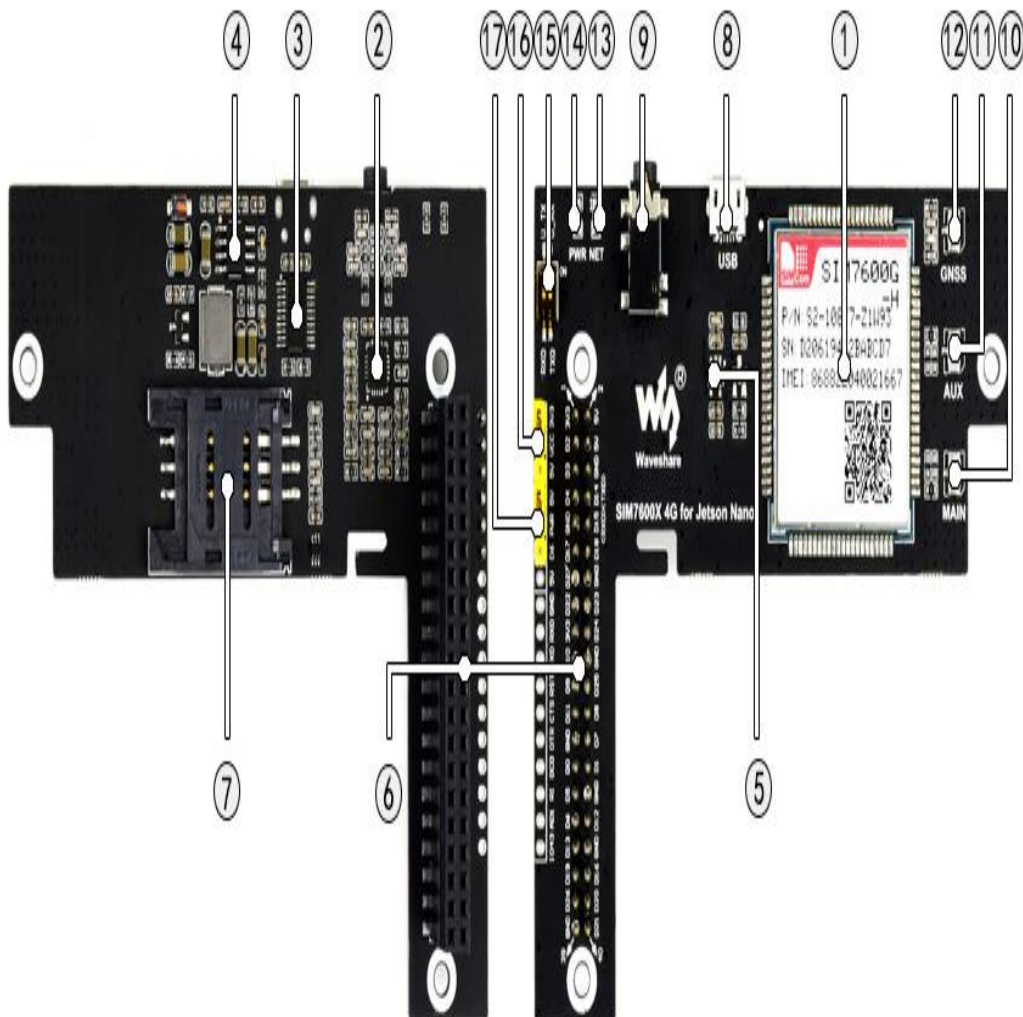
SMS and Audio Specifications

- SMS
 - Supported types: MT, MO, CB, Text, PDU
 - Storage: USIM card and ME (default)
- Audio feature
 - Supports echo cancellation
 - Supports noise reduction

Other Specifications

- Power supply: 5V
- Operating voltage: 5V/3.3V (configured via jumper)
- Operating temperature: -30°C ~ 80°C
- Storage temperature: -45°C ~ 90°C

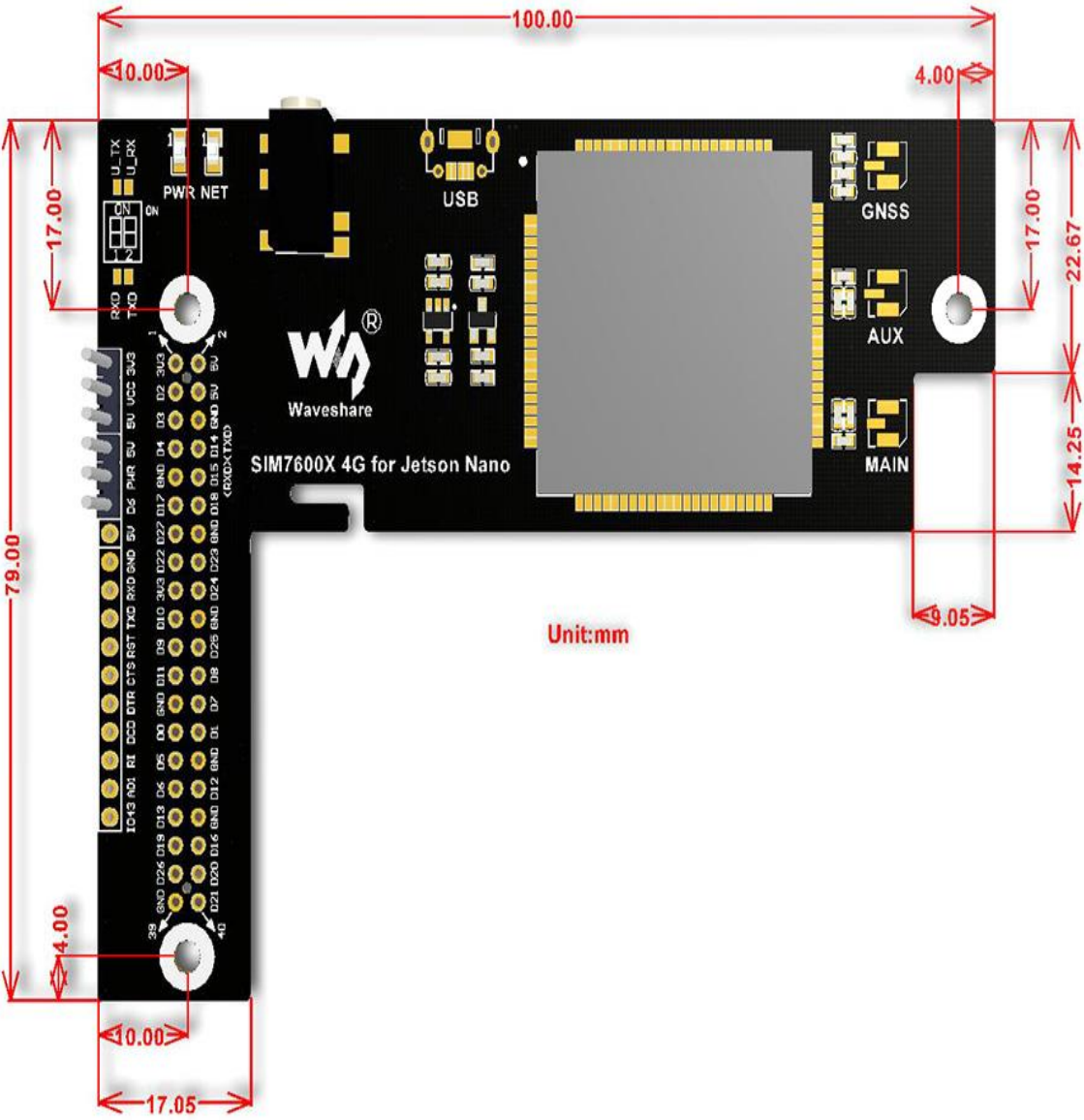
What's on Board



1. **SIM7600G-H**
2. **NAU8810 audio decoder**
3. **TXS0108EPWR voltage translator:** translates 3.3V/5V into 1.8V
4. **MP1482 power chip**

5. **RT9193-33 voltage translator:** translates 5V into 3.3V
6. **40PIN GPIO header:** for connecting with Jetson Nano Developer Kit
7. **SIM card slot:** supports 1.8V/3V SIM card
8. **USB interface:** for testing AT Commands, getting GPS positioning data, etc.
9. **3.5mm earphone/mic jack**
10. **MAIN antenna connector**
11. **AUX antenna connector**
12. **GNSS antenna connector**
13. **Network status indicator**
14. **Power indicator**
15. **UART enable switch:**
 - ON: connect UART ports of SIM7600 and Jetson Nano
 - OFF: disconnect UART ports of SIM7600 and Jetson Nano
16. **Operating voltage selection jumper:**
 - VCC - 3.3V: set operating voltage as 3.3V
 - VCC - 5V: set operating voltage as 5V
17. **PWR control config:**
 - PWR - 5V: SIM7600 auto startup on power-up
 - PWR - D6: SIM7600 will be turned on/off by D6 pin of Jetson Nano

Dimensions



Unit:mm

Part List

1. SIM7600G-H 4G for Jetson Nano x1
2. LTE Antenna x1
3. GPS External Antenna (B) x1
4. Jetson Nano USB Adapter x1
5. Screws pack (2pcs) x1