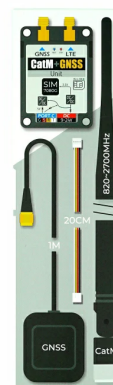


Unit CatM GNSS

SKU:U137



Description

Unit CatM GNSS is an international version wireless communication module that supports **CatM & NB-IoT** dual modes and **GNSS** global positioning. It is built with the **SIM7080G** module solution, covering most CatM & NB-IoT frequency bands worldwide, suitable for different data communication speed / throughput requirements. The module uses serial communication, **AT command control**, and supports **multiple communication protocols**. It integrates dual **SMA** external antenna interfaces to improve communication quality and signal stability. It is ideal for IoT applications such as remote control, remote monitoring, telemedicine, and mobile logistics positioning.

Features

- Integrated "Communication + Positioning" with **dual SMA antenna** interface design
 - Communication supports **CatM** and **NB-IoT** modes, covering most CatM & NB-IoT frequency bands worldwide
 - Uplink/Downlink Speed:
 - Cat-M: Uplink: 1119Kbps Downlink: 589Kbps
 - NB-IoT: Uplink: 150Kbps Downlink: 136Kbps
 - Supported Protocols:
 - TCP/UDP/HTTP/HTTPS/TLS/DTLS/PING/LWM2M/COAP/MQTT and more
 - Module Certifications:
 - Softbank/Telec/RoHS/REACH/JATE/Docomo/KDDI/RCM/CE (RED)/GCF/Deutsche Telekom/FCC/PTCRB/AT&T/Verizon/T-Mobile/US Cellular/IC
 - Positioning supports: **GPS / GLONASS / BeiDou / Galileo**
 - Built-in MicroSIM card slot
- Supports two power supply methods:
 - External DC 9 ~ 24V (5.5/2.1mm DC jack) power input, built-in DC-DC conversion circuit to convert DC 9 ~ 24V to DC 5V, and can simultaneously provide 5V power supply to the host
 - External 5V power through HY2.0-4P cable
- Communication interface: UART (3.3V TTL), AT Command control
- Development Platforms: **Arduino, UIFlow**
- Four reserved mounting holes for various fixing methods

Includes

- 1 x Unit CatM GNSS
- 1 x 4G Adhesive Antenna
- 1 x GPS Antenna
- 1 x HY2.0-4P Grove Cable (20cm)

Applications

- Remote control
- Remote monitoring
- Remote medical care
- Mobile logistics positioning

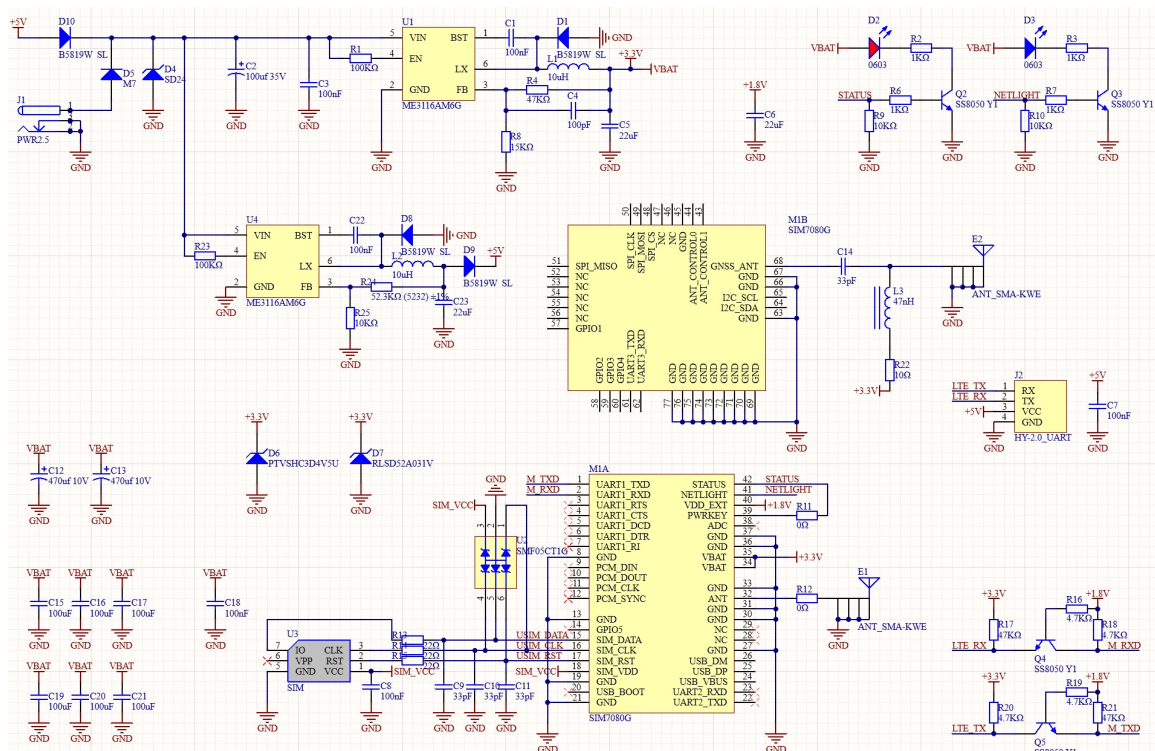
Specifications

Specification	Parameter
Module Model	SIM7080G
Supported CAT-M Bands	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85
Supported CAT-NB Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85
Supported GNSS Types	GPS/GLONASS/BeiDou/Galileo
Cat-M Uplink/Downlink	Uplink: 1119Kbps Downlink: 589Kbps
NB-IoT Uplink/Downlink	Uplink: 150Kbps Downlink: 136Kbps
RF Power Class	Class 5 (Typ. 21dbm)
Standby Current	DC 12V@13mA
Communication Interface	UART: baud 115200 8N1
Product Size	61.6 x 40.0 x 14.8mm
Product Weight	84.0g
Package Size	189.0 x 55.0 x 26.0mm
Gross Weight	97.3g

Certifications

- [SIM7080G_AT&T_Certificate_2020](#)
- [SIM7080G_GCF_Certificate_2020](#)
- [SIM7080G_NCC_2020](#)
- [SIM7080G_PTCRB_Certificate_2020](#)
- [SIM7080G_RCM_Compliance Certificate_2020](#)
- [SIM7080G_T-mobile_Certificate_2021](#)
- [SIM7080G_US Cellular_Certificate_2021](#)

Schematics

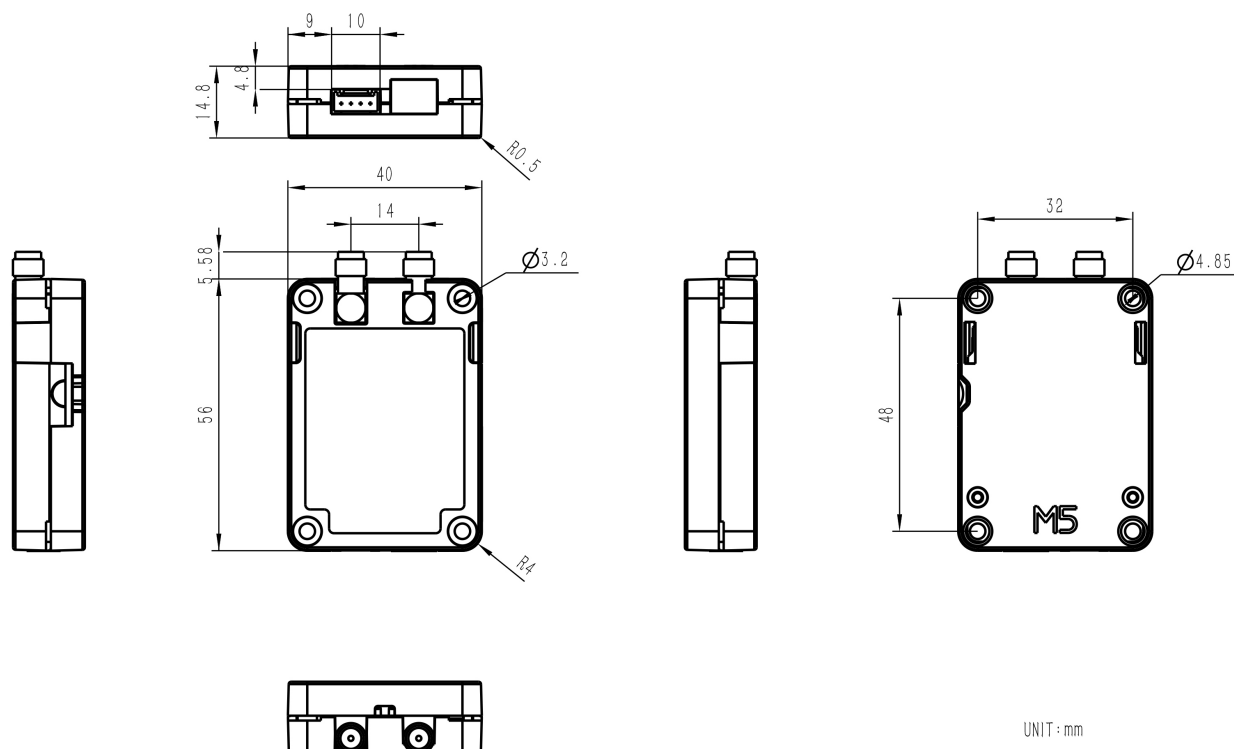


PinMap

Unit CatM GNSS

HY2.0-4P	Black	Red	Yellow	White
PORT.C	GND	5V	UART_RX	UART_TX

Model Size



Structure

- Unit CatM GNSS Structure Files

Datasheets

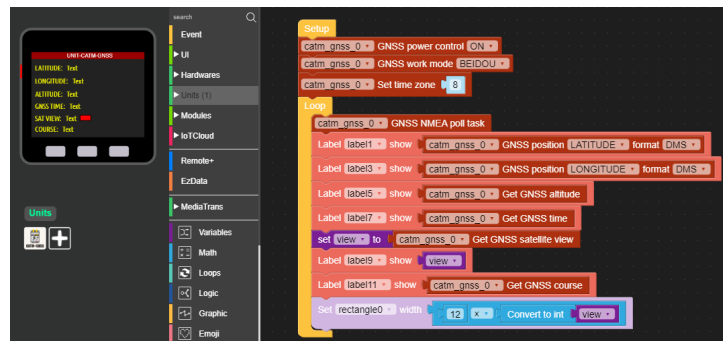
- SIM7070_SIM7080_SIM7090 Series_CTBURST_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_CoAP(S)_Application Note_V1.03
- SIM7070_SIM7080_SIM7090 Series_Email_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_FOTA_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_FS_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_FTP(S)_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_GNSS_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_HTTP(S)_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_Linux_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_Low Power Mode_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_LwM2M_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_MQTT(S)_Application Note_V1.03
- SIM7070_SIM7080_SIM7090 Series_PING_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_SAT_Application Note_V1.02
- SIM7070_SIM7080_SIM7090 Series_SSL_Application Note_V1.00
- SIM7070_SIM7080_SIM7090 Series_TCPUDP(S)_Application Note_V1.03
- SIM7080_Series_SPEC_20200427

Softwares

Arduino

- [Unit CatM GNSS Test Program](#)

UiFlow1



Protocol

- AT Command
 - [SIM7070_SIM7080_SIM7090 Series_AT Command Manual_V1.04](#)