



# Combo Module

## SIM968



SIM968 module is a compact Quad-Band GSM/GPRS-enable module base on PNX4851 platform which is also equipped with GNSS technology for satellite navigation. The complete design in a SMT type makes it easy to integrate GSM/GPRS&GPS as an all-in-one solution.

## Smart Machine Smart Decision

### General features

- Quad-Band GSM 850/900/1800/1900MHz
- GPRS multi-slot class 10
- GPRS mobile station class B
- Compliant to GSM phase 2/2+
  - Class 4 (2 W @ 850/900 MHz)
  - Class 1 (1 W @ 1800/1900MHz)
- Control via AT commands (3GPP TS 27.007 and SIMCom enhanced AT Commands)
- SIM application toolkit
- Supply voltage range:
  - VBAT: 3.2 ~ 4.8
  - V-GPS: 2.8 ~ 4.3V
  - VCHG: 5V
- Low power consumption
- Dimensions: 30\*30\*3.0mm
- Weight: 5.3g
- Operation temperature:-40°C to +85 °C

### Specifications for SMS via GSM / GPRS

- Point-to-point MO and MT
- SMS cell broadcast
- Text and PDU mode

### Specifications for audio

- Tricodec
  - Half rate (HR)
  - Full rate (FR)
  - Enhanced Full rate (EFR)
- Hands-free operation
- Echo cancellation

### Specifications for data transfer

- GPRS class 8/10: max. 85.6 kbps (downlink)
- PBCCH support
- Coding schemes CS 1, 2, 3, 4
- PPP-stack
- Integrated TCP/IP stack

### Specifications for CSD data

- CSD up to 14.4 kbps
- USSD
- Non transparent mode

### Compatibility

- AT cellular command interface

### Specification for GNSS

- Support GPS/GLONASS/Galileo/QZSS
- Support EASY™ self-generated orbit prediction
- Support EPO™ orbit prediction
- Support SBAS ranging (WAAS, EGNOS, GAGAN, MSAS)
- Support Jamming Removing
- Integrated Low-noise amplifier
- Receiver type
  - 33tracking/99 acquisition-channel GNSS receiver
- Max. update rate: 10Hz
- Sensitivity<sup>1</sup>

Tracking:	-167 dBm
Reacquisition:	-160 dBm
Cold starts:	-148 dBm
- Time-To-First-Fix<sup>1,2</sup>

Cold start:	28s
Warm start:	26s
Hot start:	<1s
EPO Assist:	13s (CTTFF)
- Accuracy
 

Automatic Position <sup>3</sup> :	<2.5m CEP
Speed <sup>4</sup> :	0.1m/s

### Interfaces

- 80-pad with SMT type
- one Interface for external SIM card :3V/ 1.8V
- two analog audio interfaces
- SPI interface
- RTC backup
- a serial interface and a debug interface for GSM/GPRS
- two serial interfaces for GNSS
- charge input

1.Demonstrated in lab

2.All SV @ -130 dBm

3.50% 24 hr static, -130dBm

4. 50%@ 30m/s

More about SIMCom SIM968

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