



Combo Module

SIM928A



SIM928A module is a compact Quad-Band GSM/GPRS-enable module base on PN4851 platform which is also equipped with GPS 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:
 - GPRS: 3.2 ~ 4.8 V
 - 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

- Tricodex
- 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 GPS

- 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 GPS receiver
- Max. update rate: 10Hz
- Sensitivity¹

Tracking:	-167 dBm
Reacquisition:	-157 dBm
Cold starts:	-148 dBm
- Time-To-First-Fix^{1,2}

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

Automatic Position ³ :	<2.5m CEP
Speed ⁴ :	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 GPS
- charge input

1. Demonstrated in lab

2. All SV @ -130 dBm

3. 50% 24 hr static, -130dBm

4. 50% @ 30m/s

More about SIMCom SIM928A

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All specifications are subject to change without prior notice.