SIM548 GSM/GPRS+GPS Module

Sept. 2007

Powered by OGO Electronics

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Product Technical Specification

Reference: OGO_PRJ_JS07082007-1
Date: August, 2007

Cautions

This platform contains a modular transmitter. This device is used for wireless applications. Note that all electronics parts and elements are ESD sensitive. Information provided herein by SIMCOM is accurate and reliable. However no responsibility is assumed for its use and any of such SIMCOM information is herein provided “as is” without any warranty of any kind, whether express or implied.

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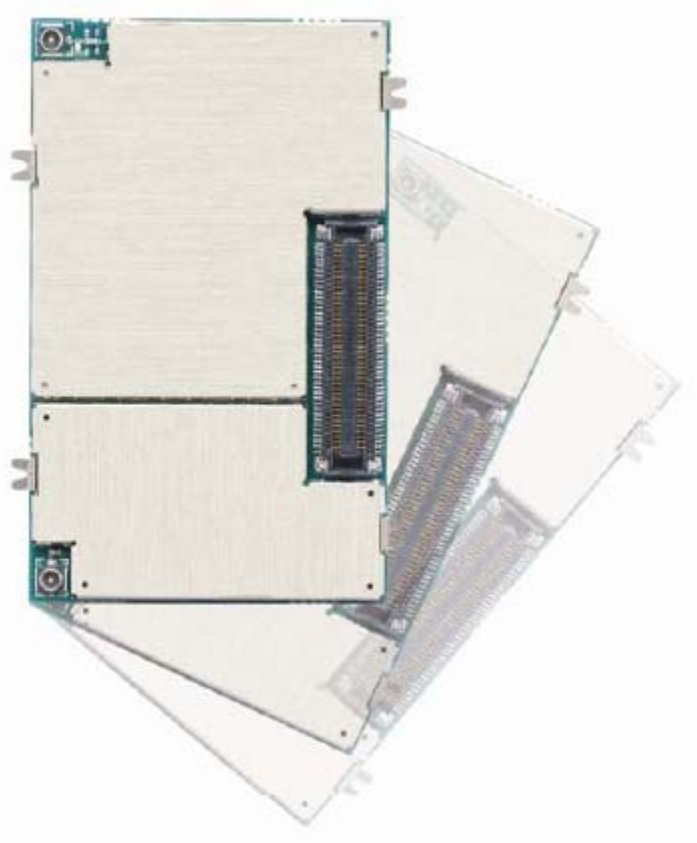
SIM548 Quad-Band GSM/GPRS+GPS Module Solution

SIM548 module is a Quad-Band GSM/GPRS-enabled module that is also equipped with GPS technology for satellite navigation. The compact design of the SIM548 makes it easy to integrate GSM/GPRS & GPS as an all-in-one solution. You will save significantly both time and cost for the integration of additional hardware components.



The combination of both technologies can fit almost all the space requirement in your application, such as PDA phone, GPS hand-held device and other mobile device, it allows vehicles and people to be tracked seamlessly at any location and anytime.

Physical features

- Overall dimensions: 34mm x 55mm x 3 mm
- Weight: approx. 12g
- Normal operation temperature: -20°C to +55°C
- Restricted operation temperature:-30°C to -20°Cand +55°C to +80°C
- Storage temperature: -40°C to +85°C

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Physical Feature

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  34 x 55 x 3mm
- Weight: approx. 12g
- Normal operation temperature:
  -20 °C ~ +55 °C
- Restricted operation temperature:
  -30 °C ~ -20°C and +55 °C ~ +80 °C
- Storage temperature
  -40 °C ~ +80 °C

General Features:

- Quad-Band GSM/GPRS
  850/900/1800/1900MHz
- GPRS multi-slot class 10/8
- GPRS mobile station class B
- Compliant to GSM phase 2/2+
  - Class 4 (2W @ 850/900MHz)
  - Class 1 (1W @ 1800/1900MHz)
- Control via AT commands
  - GSM 07.07, 07.05
  - SIMCOM enhanced AT Commands
- SIM application toolkit
- Supply voltage range 3.4 ~ 4.5 V
- Low power consumption

Specifications for Voice:

- Tricodec
  - Half Rate (HR)
  - Full Rate (FR)
  - Enhanced Full Rate (EFR)
- Echo suppression
- Hands-free operation

Specifications for fax:

- Group 3, class1

Specifications for SMS:

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

Approval:

- FCC

Specifications for Data Transmission:

- GPRS class 10: max. 85.6kbps(downlink)
- PBCCH support
- Coding schemes: CS 1, 2, 3, 4
- CSD up to 14.4kbps
- USSD
- Non transparent mode
- PPP-Stack
- Integrated TCP/IP stack

Interfaces:

- Interface to external SIM 3V 1.8V
- 80 pins DIP Board-to-board connector
- Dual analog audio interface
- Keyboard interface
- LCD interface
- Charge interface
- RTC backup
- AT commands via GSM/GPRS serial interface
- A serical interface and a debug interface
  for GSM/GPRS
- Dual - Serial interfaces for GPS
- Two separate Antenna connectors for GSM/GPRS
  & GPS and an antenna pad for GSM/GPRS

Specifications:

- Receiver 20 channels, L1 1575.42MHz, C/A code
  1.023MHz chip rate
- Accuracy Position 10m CEP,
  without SA/Velocity 0.1m/s
  without SA/Time 1us synchronized to GPS time
- DGPS accuracy 1 to 5m, typical, 0.05m/s, typical
- Date WGS-84
- Acquisition rate
  (TTFF defined at 95% of first position laocal station)
  - Hot start<1s. average, open sky
  - Warm start<38s, average, open sky
  - Cold start<42s, average, open sky
- Operating voltage 3.3V DC±5%
- Low power consumption about 200mW at 3.3V
- Protocols
  - NMEA-0183
  - SiRF binary
  - RTCM SC-104
- Crystal oscillator (TCXO), temperature compensated
  with frequency stability of ±0.5ppm
- Memory: On-chip 4Mbit FLASH and 1Mbit SDRAM

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