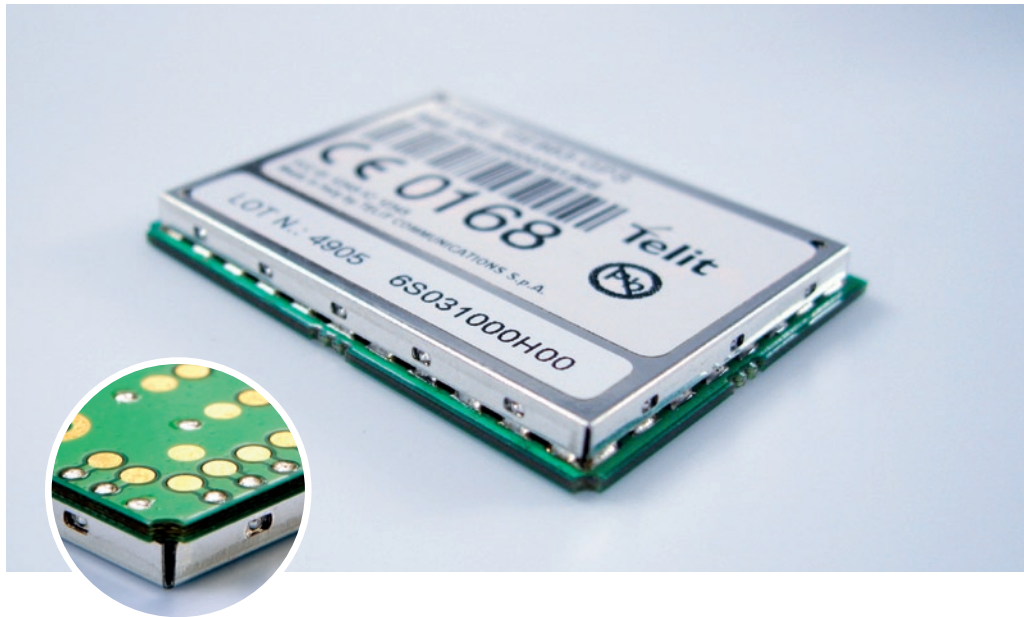# GSM | GPRS

Telit wireless solutions

GE 863-GPS
Embedded

Features icons

- Telit Unified AT Command Set
- SiRF® Powered
- 20 Channel GPS Receiver
- BGA Package
- Quad Band GPRS
- GPRS Class 10
- RoHS Compliant
- PYTHON* Script Interpreter
- High Sensitivity
- Embedded FTP and SMTP Client
- Extended Temperature Range
- Extended RF Sensitivity
- Embedded TCP/IP Stack

TELIT INFINITA SERVICES

- Premium FOTA Management

The new GE863-GPS is the smallest GSM/GPRS module in the market integrating full 20-channel GPS functionality. It combines the high performance from Telit's proven GSM/GPRS core technology with the latest SiRFstarIII™ high sensitivity single-chip GPS receiver.

The Ball-Grid-Array (BGA) package allows the end application to have a very low profile and small overall dimensions, making it possible for the design of extremely compact location-based-services solutions. Since connectors are eliminated, the solution cost is significantly reduced as compared to conventional mounting.

With its ultra low profile design, the Telit GE863-GPS is the ideal platform for mobile size-sensitive and high-volume applications in areas such as telematics, fleet management, tracking, security, and vehicle navigation. The new GPS receiver features low power con-sumption with position resolution accuracy of less than 2.5m, SBAS (WAAS and EGNOS) as well as high sensitivity for indoor fixes. These features combined with the available Python™ application development environment translate into a very cost effective and feature rich platform quite capable of becoming the total solution for the complete customer application.

Additional features including jamming detection, integrated TCP/IP protocol stack, and Easy Scan® offer unmatched benefits to the application developer without adding cost.

All Telit modules, support Over-the-Air firmware update by means Premium FOTA Management. By embedding RedBend's vCurrent® agent, a proven and battle-tested technology powering hundreds of millions of cellular handsets world-wide Telit is able to update its products by transmitting only a delta file, which represents the difference between one firmware version and another.

As part of Telit's corporate policy of environmental protection, all products comply to the RoHS (Restriction of Hazardous Substances) directive of the European Union (EU Directive 2002/95/EG).
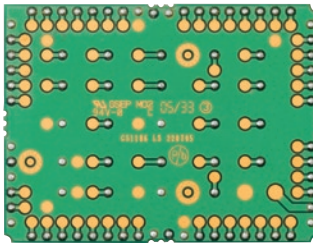
Product features

- Quad-band EGSM 850 / 900 / 1800 / 1900 MHz
- Output power
  - Class 4 (2W) @ 850 / 900 MHz
  - Class 1 (1W) @ 1800 / 1900 MHz
- Control via AT commands according to GSM 07.05, 07.07 and Telit enhancements
- Supply voltage range: 3.22–4.5 V DC (3.8 V DC recommended)
- Power consumption (typical values)
  - Power off: ‹ 26 uA
  - Idle (registered, power saving): 2.6 mA
  - Dedicated mode: 200 mA
  - GPRS cl.10: 370 mA

- Serial port multiplexer GSM 7.10
- SIM access profile
- Sensitivity:
  -107 dBm (typ.) @ 850 / 900 MHz
  -106 dBm (typ.) @ 1800 / 1900 MHz
- Dimensions: 41.4 x 31.4 x 3.6 mm
- Weight: 9 grams
- Extended temperature range
  - 40°C to +85°C (operational)
  - 40°C to +85°C (storage temperature)
- RoHS compliant
- TCP/IP stack access via AT commands

Making machines talk.®

GE863-GPS
Embedded

Telit
is in it.

actual size

Telit
wireless
solutions

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E-Mail: APAC@telit.com

www.telit.com

Distributed by:

GPS receiver
- GPS power consumption:
  operating current: 75 mA,
  (including 20 mA for the antenna LNA)
- High sensitivity for indoor reception,
  up to -159 dBm (with active antenna)
- Accuracy < 2.5 m
- Extremely fast TTFF's at low signal levels
- Hot start < 3 s
- Warm start < 35 s
- Cold start < 35 s
- 200,000+ effective correlators
- Supports 20-channel GPS,
  L1 1575.42 MHz
- GPS NMEA 0183 output format
- Date WGS-84
- Dedicated GPS AT commands
- SBAS (WAAS and EGNOS) support
- Low power consumption

Interfaces
- 18 I/O ports maximum
- Analog audio (balanced and unbalanced)
- 1 A/D plus 1 D/A converters
- Buzzer output
- ITU-T V.24 serial link through CMOS UART:
  - Baud rate from 300 to 115,200 bps
  - Autobauding from 2,400 to 57,600 bps

Audio
- Telephony, emergency call
- Half rate, full rate, enhanced full rate
  and adaptive multi rate voice codecs
  (HR, FR, EFR, AMR)
- Superior echo cancellation &
  noise reduction
- Handset & hands-free operations
- DTMF

Approvals
- Fully type approved conforming with
  R&TTE
- CE, GCF, FCC, PTCRB, IC, Anatel

SMS
- Point-to-point mobile originated and
  mobile terminated SMS
- Concatenated SMS supported
- SMS cell broadcast
- Text and PDU mode

Circuit switched data transmission
- Asynchronous transparent circuit switched
  data (CSD) up to 14.4 kbps
- Asynchronous non-transparent CSD
  up to 9.6 kbps
- V.110

GPRS data
- GPRS class 10
- Mobile station class B
- Coding scheme 1 to 4
- PBCCH support

Fax
- Group 3, class 1

GSM supplementary
- Call forwarding
- Call barring
- Call waiting & call hold
- Advice of charge
- Calling line identification presentation (CLIP)
- Calling line identification restriction (CLIR)
- Unstructured supplementary services
  mobile originated data (USSD)
- Closed user group

Additional features
- SIM phonebook
- Fixed dialing number (FDN)
- Real-time clock
- Alarm management
- Battery management
- Network LED support
- IRA character set
- Jamming detection & report
- Embedded TCP/IP stack, including TCP,
  IP, UDP, SMTP and FTP protocols
- TFMS (Telit Firmware Management
  Services) Over-the-Air update

Python* application resources
- Python* script interpreter (module
  takes the application code directly in the
  Python* language)
- Memory: 1.9 MB of NV memory for the
  user scripts and 1.2 MB RAM for the
  Python* engine usage
- Over-the-air application SW update
- IIC Bus and SPI Bus controlled in Python*

python

Telit's EASY features
- EASY SCAN ® automatic scan over GSM
  frequencies (with or without SIM card)

Order-No.
Please contact your Telit representative
for order codes and all further information

[01.2009]