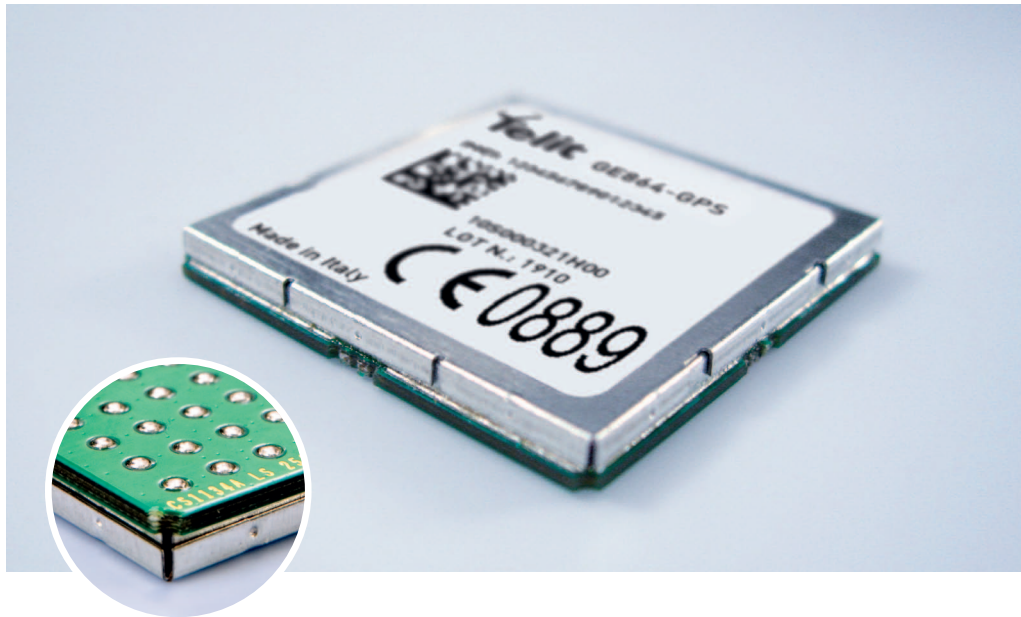


# GSM | GPRS

## GE864-GPS Embedded



- Ultra Compact
- 48 Channel GPS Architecture
- Telit Unified AT Command Set
- RUN AT Commands Remotely
- BGA Package
- Quad Band GPRS
- GPRS Class 10
- RoHS Compliant
- SIM Access Profile
- PYTHON\* Script Interpreter
- Embedded FTP and SMTP Client
- Extended Temperature Range
- Extended RF Sensitivity
- Serial Port Multiplexer (3GPP 27.010)
- Embedded TCP/IP Stack

TELIT INFINITA SERVICES

Premium FOTA Management

The new GE864-GPS is the smallest GSM/GPRS module in the market integrating full 48-channels A-GPS functionality. It combines the high performance from Telit's proven GSM/GPRS core technology with the latest SiRFstarIV™ high sensitivity single-chip A-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 GE864-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 A-GPS receiver features an extremely low power consumption adaptive micropower controller to maintain hot start capability, a position resolution accuracy of less than 2.5m, Satellite Based Augmentation System (WAAS, EGNOS, MSAS and GAGAN) as well as assisted GPS. 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 of 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).

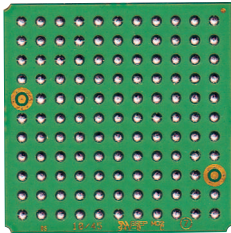
### Product features

- Quad-band EGSM 850 / 900 / 1800 / 1900 MHz
- GSM/GPRS protocol stack 3GPP Release 4 compliant
- Output power
  - Class 4 (2W) @ 850 / 900 MHz
  - Class 1 (1W) @ 1800 / 1900 MHz
- Control via AT commands according to 3GPP TS 27.005, 27.007 and Telit custom AT commands
- Serial port multiplexer 3GPP TS 27.010
- SIM access profile
- SIM application toolkit 3GPP TS 51.014
- Power consumption (typical values)
  - Power off: < 62 uA
  - Idle (registered, power saving): 1.5 mA @ DRX=9
  - Dedicated mode: < 240 mA @ max power level
  - GPRS cl.10: < 420 mA @ max power level
- Supply voltage range: 3.22-4.5 V DC (3.8 V DC recommended)
- TCP/IP stack access via AT commands
- Sensitivity:
  - 107 dBm (typ.) @ 850 / 900 MHz
  - 106 dBm (typ.) @ 1800 / 1900 MHz
- Dimensions: 30 x 30 x 2.8 mm
- Weight: 6 grams
- Extended temperature range
  - 40°C to +85°C (operational)
  - 40°C to +85°C (storage temperature)
- RoHS compliant
- DARP/SAIC support
- High sensitivity A-GPS receiver

**Making machines talk.®**

# GE864-GPS

Embedded



actual size

**Telit**® wireless solutions

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Distributed by:

### GPS receiver

- GPS power consumption:  
Acquisition: 81mW, Tracking : 58 mW
- Integrated LNA
- High sensitivity for indoor reception,  
up to -163 dBm
- Accuracy < 2.5 m
- Extremely fast TTFF's at low signal levels
- Hot start < 1s
- Warm start < 35 s
- Cold start < 35 s
- Active Jamming Remover
- Supports 48-channel GPS, L1 1575.42 MHz
- GPS NMEA 0183 output format
- Date WGS-84
- Dedicated GPS AT commands
- SBAS (WAAS , EGNOS, MSAS, GAGAN)  
support
- Optional Assisted GPS feature

### Interfaces

- 10 I/O ports maximum
- Analog audio (balanced)
- 2 A/D plus 1 D/A converter
- Buzzer output
- ITU-T V.24 serial link through CMOS UART:
  - Baud rate from 300 to 115,200 bps
  - Autobauding up to 115,200 bps
  - 2 GPS serial ports
  - PPS signal

### 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
- Multiple audio profiles pre-programmed and  
fully configurable by mean AT commands
- DTMF

### Approvals

- Fully type approved conforming with  
R&TTE directive
- 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
- SMS over GPRS

### Circuit switched data transmission

- 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
- GERAN Feature Package 1 support (NACC,  
Extended TBF)

### 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
- Network LED support
- IRA, GSM, 8859-1 and UCS2 character set
- Jamming detection
- Embedded TCP/IP stack, including TCP,  
IP, UDP, SMTP, ICMP and FTP protocols
- PFM (Premium FOTA Management)  
Over-The-Air Update service
- Remote AT commands
- Event monitor

### 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 MB RAM for the  
Python\* engine usage
- Over-the-air application SW update
- Script execution speed increased up to 4  
times compared to the GE864-QUAD



### Telit's EASY features

- EASY SCAN® automatic scan over GSM  
frequencies (also without SIM card)

### Order-No.

Please contact your Telit representative  
for order codes and all further information

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