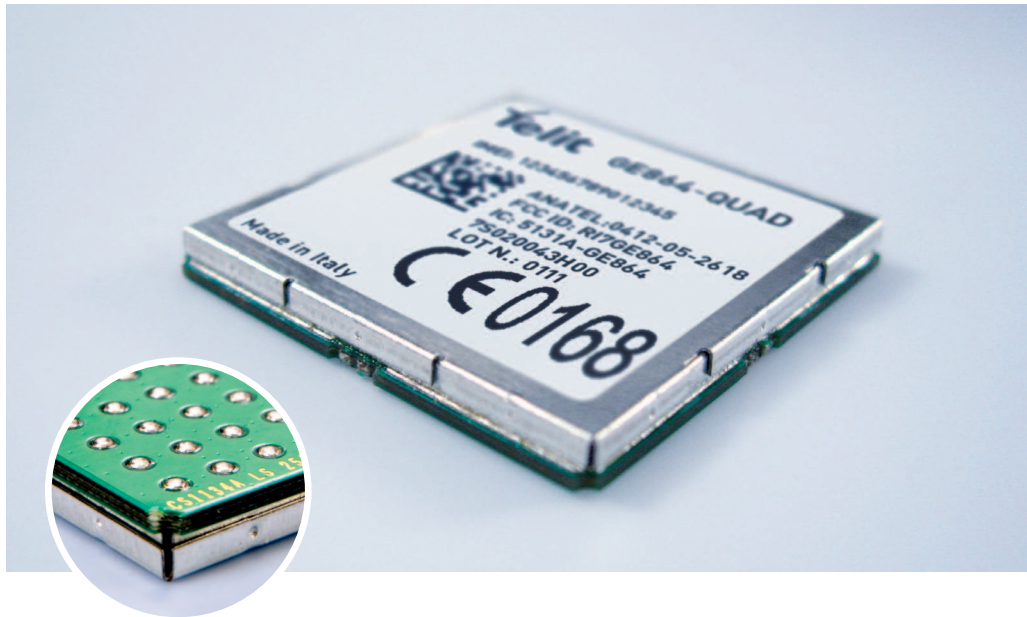


## GSM | GPRS

# GE864-QUAD

Embedded



|  |   |
|--|---|
|  | Ultra Compact                             |
|  | 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 -40° to +85° C |
|  | Extended RF Sensitivity                   |
|  | Serial Port Multiplexer (3GPP 27.010)     |
|  | Embedded TCP/IP Stack                     |



The new GE864-QUAD represents the next generation in the GE864 family. It brings in one integrated and low power consumption platform all the features of the previous GE864-QUAD and GE864-PY modules. Nevertheless, it benefits of the last technological developments: 3GPP Release 4 GSM/GPRS protocol stack, Downlink Advance Receiver Performance (DARF) feature for Single Antenna Interference Cancellation (SAIC), Enhanced Measurement Report, GERAN Feature package 1 which assists in supporting the Extended Uplink TBF and Network Assisted Cell Change (NACC), the ability to control via Remote AT Commands and Event Monitor feature.

The low profile and small size of the unique BGA package for the new GE864-QUAD enable the design of very compact applications. Since connectors are eliminated, the solution cost is significantly reduced compared to conventional mounting.

With its ultra-compact design and extended temperature range, the Telit GE864 product line is the perfect platform for high-volume m2m applications and mobile data devices. Additional features such as integrated TCP/IP protocol stack and serial multiplexer extend the functionality of the application at no additional cost.

The new GE864-QUAD makes it possible to run the customer's application inside the module by means of the embedded Python Script Interpreter, thus making it the smallest, complete platform for m2m solutions.

All Telit modules support Over-the-Air firmware update by means of Premium FOTA Management. By embedding Red Bend Software's vRapid Mobile® 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.

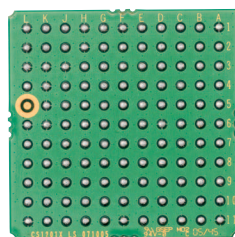
As a part of Telit's corporate policy of environmental protection, all products comply to the RoHS (Restriction of Hazardous Substances) directive of the European Union (EU Directive 2002/95/EG).

### 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 27.005, 27.007 and Telit enhancements
- Serial port multiplexer GSM 27.010
- SIM access profile
- SIM application Toolkit 3GPP TS 51.014
- Supply voltage range: 3.22-4.5 V DC (3.8 V DC recommended)
- TCP/IP stack access via AT commands
- GSM/GPRS protocol stack 3GPP Release 4 compliant

## GE864-QUAD

Embedded



actual size



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**Product features**

- Power consumption (typical values)
  - Power off: < 62 uA
  - Idle (registered, power saving): 1.8 mA
  - Dedicated mode: 230 mA
  - GPRS cl.10: 420 mA
- Sensitivity:
  - 107 dBm (typ.) @ 850 / 900 MHz
  - 106 dBm (typ.) @ 1800 / 1900 MHz
- Dimensions: 30 x 30 x 2.9 mm
- Weight: 6 grams
- Extended temperature range
  - 40°C to +85°C (operational)
  - 40°C to +85°C (storage temperature)
- RoHS compliant
  - DARP/SAIC

**Interfaces**

- 21 I/O ports maximum
- Analog audio (balanced and unbalanced), digital audio
- 3 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 from up to 115,200 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 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

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

**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, GSM, 8859-1 and UCS2 character set
- Remote AT
- Event Monitor
- Jamming detection & report
- Embedded TCP/IP stack, including TCP, IP, UDP, SMTP and FTP protocols
- PFM (Premium FOTA Management) 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
- SPI Bus controlled in Python\*

**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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