

# **GSM | GPRS**

# **GE**864-QUAD V2 Embedded









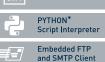


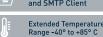
















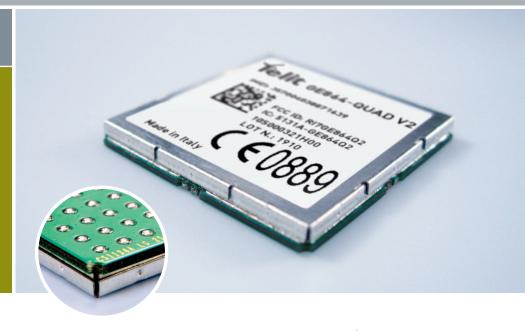




TELIT INFINITA SERVICES







The V2 family is the new generation of Telit modules which offers a GSM/GPRS protocol stack 3GPP Release 4, the Downlink Advance Receiver Performance (DARP) feature for Single Antenna Interference Cancellation (SAIC), the Enhanced Measurement Report, GERAN Feature package 1, which assists in supporting the Extended Uplink TBF and Network Assisted Cell Change (NACC), the control via remote AT Commands and Event Monitor.

According to Telit philosohy of providing compatibility and easy migration to his customers, the V2 modules have a subset of interfaces pin-to-pin compatible with the previous versions, allowing easy scalability and shorter time-to-market for new design.

The new GE864-QUAD V2 product introduces one of the smallest GSM/GPRS Ball-Grid-Array (BGA) modules in the market. The low profile and small size of the unique BGA package of the GE864-QUAD V2 enables 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 functionality of the application at no additional cost.

The GE864-QUAD V2 makes it possible to run the customer's application inside the module, thus making it the smallest, complete platform for m2m solutions.

All Telit modules, support Over-the-Air firmware update by means Premium FOTA Management. By embedding Red Bend Software 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
- 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

# **GE**864-QUAD V2









actual size



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#### **Product features**

- 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

### 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

#### **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 <sup>®</sup> 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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