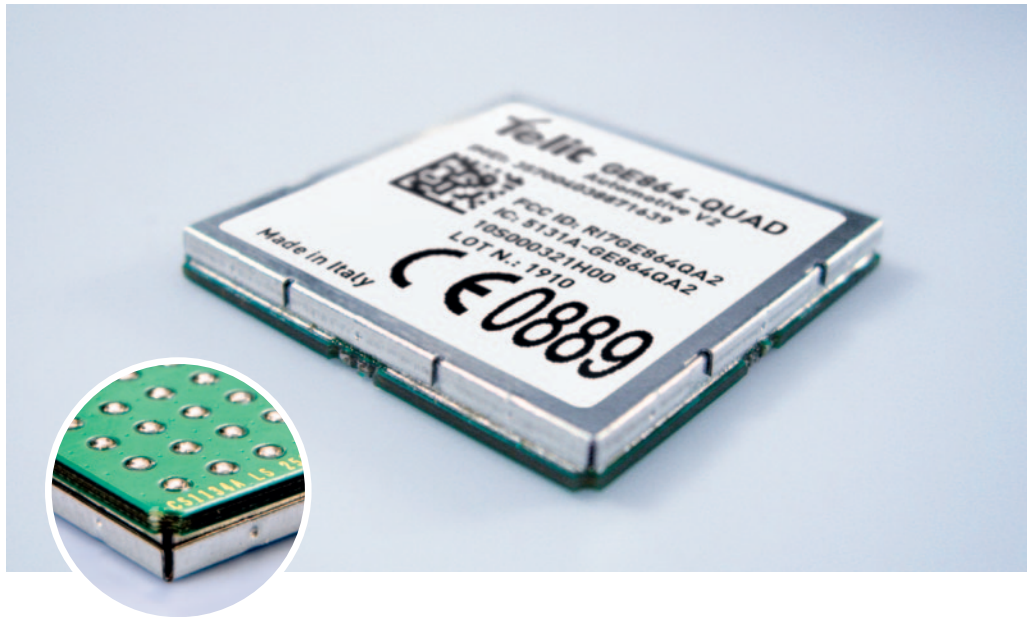


GSM | GPRS

# GE864-QUAD<sub>AUTOMOTIVE</sub> V2

Embedded



- Ultra Compact
- Telit Unified AT Command Set
- RUN AT Commands Remotely
- BGA Package
- Designed for Automotive Applications
- Useable Lifetime >10 YEARS
- Extended Supply Voltage Range 3.25 - 4.5 V
- Extended Temperature Range -40° to +85° C
- 4 GPRS Quad Band GPRS
- GPRS Class 10
- RoHS Compliant
- SIM Access Profile
- Embedded FTP and SMTP Client
- Extended RF Sensitivity
- Serial Port Multiplexer (3GPP TS 27.010)
- Embedded TCP/IP Stack

The GE864-QUAD Automotive V2 is the extra-rugged member of the GE864 product family incorporating quad-band, RoHS compliance, as well as very low power consumption.

The use of the GE864 sub-compact form factor allows the integration of automotive and other applications requiring assured extended operating temperature range and mechanical ruggedness within the ever-shrinking space inside electronics bays in trucks, automobiles, and other mobile platforms.

The Ball-Grid-Array (BGA) package provides for a very low profile in the integrated solution while at the same time enhancing the performance of mechanical resistance to shock and vibration typical in these applications. Since cost is a key element for automotive applications, the elimination of connectors afforded by the BGA concept also brings down the solution cost compared to conventional mounting methods.

With its low profile design, extended temperature range, ESD and EMC compliance, the GE864-QUAD Automotive V2 is the ideal and complete hardware platform for all automotive m2m markets, both OEM and aftermarket.

All Telit modules, support Over-the-Air firmware update by means Premium FOTA Management. By embedding RedBend's vCurrent<sup>®</sup> 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).

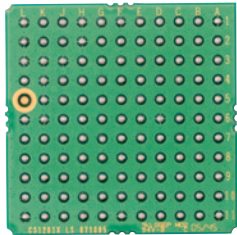
### Product features

- 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
- Supply voltage range: 3.25-4.5 V DC (3.8 V DC recommended)
- TCP/IP stack access via AT commands
- Unified Telit AT command interface
- Control via Remote AT commands
- Power consumption (typical values)
  - Power off: < 26 uA
  - Idle (registered, power saving): < 1.8 mA
  - Dedicated mode: < 270 mA @ max power level
  - GPRS cl.10: < 370 mA @ max power level
- Sensitivity:
  - 107 dBm @ 850 / 900 MHz
  - 106 dBm @ 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 +90°C (storage temperature)
- RoHS compliant
- DARP/SAIC support

**Making machines talk.<sup>®</sup>**

# GE864-QUAD AUTOMOTIVE V2

Embedded



actual size



Telit Communications S.p.A.  
Via Stazione di Prosecco, 5/B  
I-34010 Sgonico (Trieste), Italy  
Tel +39 040 4192 200  
Fax +39 040 4192 289  
E-Mail: EMEA@telit.com

Telit Wireless Solutions Inc.  
3131 RDU Center Drive, Suite 135  
Morrisville, NC 27560, USA  
Tel +1 888 846 9773 or +1 919 439 7977  
Fax +1 888 846 9774 or +1 919 840 0337  
E-Mail: NORTHAMERICA@telit.com

Telit Wireless Solutions Inc.  
Rua Cunha Gago, 700 - cj 81, Pinheiros  
São Paulo - SP, 05421001, Brazil  
Tel +55 11 2679 4654  
Fax +55 11 2679 4654  
E-Mail: LATINAMERICA@telit.com

Telit Wireless Solutions Co., Ltd.  
9th Fl., Daewoo Securities Bld.  
34-3 Yeouido-dong, Yeongdeungpo-gu  
Seoul 150-716, KOREA  
Tel +82 2 368 4600  
Fax +82 2 368 4606  
E-Mail: APAC@telit.com

www.telit.com

Distributed by:

## Interfaces

- 9 I/O ports maximum
- Analog audio (balanced and unbalanced)
- 2 A/D converters
- Digital audio interface
- 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
- DTMF

## Approvals

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

## Environmental tests

- ETSI EN 300 019 part 1-1(class1.2)
- ETSI EN 300 019 part 1-2(class 2.3)
- ETSI EN 300 019 part 1-5(class 5.1)

## 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
- Real-time AT message/warnings upon reaching temperature limits
- 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
- TFMS (Telit Firmware Management Services) Over-the-Air update

## PIN Protection

- ESD protection level 4
  - Contact up to +-4kV
  - Air up to +-8kV
  - Contact antenna pin up to +-15kV
- EMC protection
  - All pins have HBM filtering

## 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

