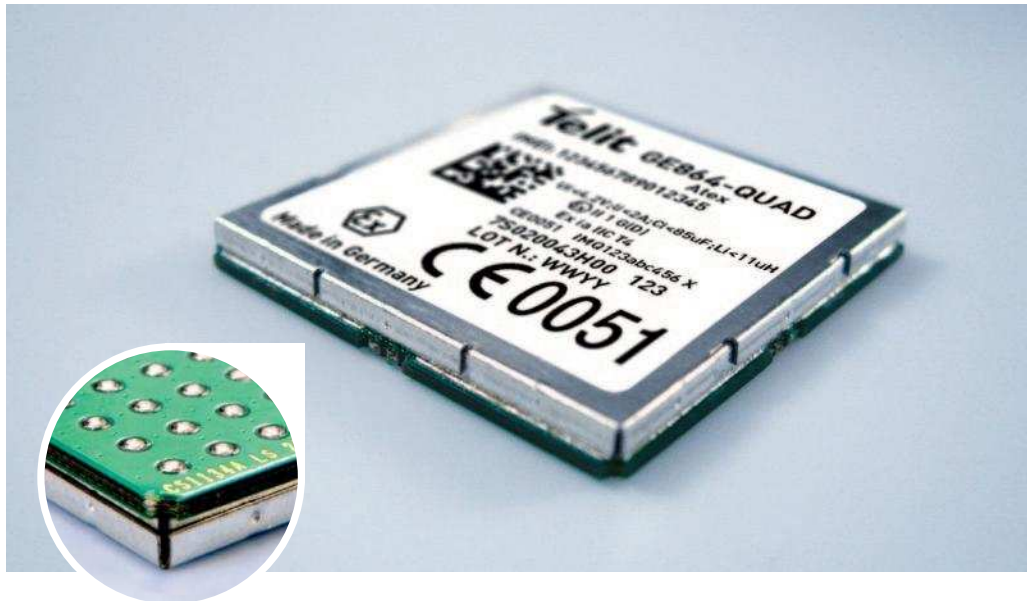


# GSM | GPRS

## GE 864-QUAD ATEX Embedded



- Ultra Compact
- Telit Unified AT Command Set
- BGA Package
- ATEX
- Useable Lifetime >10 years
- Extended Supply Voltage Range 3.25 - 4.2 V
- Extended Temperature Range -40° to +85° C
- Quad Band GPRS
- GPRS Class 10
- RoHS Compliant
- SIM Access Profile
- PYTHON\* Script Interpreter
- Embedded FTP and SMTP Client
- Extended RF Sensitivity
- Serial Port Multiplexer (GSM 7.10)
- Embedded TCP/IP Stack

The GE864-QUAD ATEX is the extra-rugged member of the GE864 product family incorporating quadri-band functionality, RoHS compliance, as well as featuring low power consumption.

The GE864-QUAD ATEX module has been designed for critical applications working in explosive environments and, as such, its architectural and engineering specifications followed the strict requirements of the ATEX directive. This means, for example, that every critical component in the whole production cycle is traceable and features specific ATEX rates. The highest level of intrinsic safety (ia) for this module makes its use suitable in the most critical environments (Group II, Category 1), and allows its integration into equipment to be used in potentially explosive atmospheres and/or in apparatus electrically connected to others located in such atmospheres.

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 increasing the safety of these applications. Since cost is a key element for all the applications, the elimination of connectors afforded by the BGA concept also brings down the solution cost compared to conventional mounting methods.

With his low profile design, extended temperature range, ESD and EMC compliance, the GE864-QUAD ATEX is the ideal and complete hardware platform for all atex 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® 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
- 07.05, 07.07 and Telit enhancements
- Serial port multiplexer GSM 7.10
- SIM access profile
- Supply voltage range: 3.25 - 4.2 V DC (3.7 V DC recommended)
- TCP/IP stack access via AT commands
- Unified Telit AT command interface
- Power consumption (typical values)
  - Power off: < 26 uA
  - Idle (registered, power saving): < 2.6 mA
  - Dedicated mode: 200 mA
  - GPRS cl.10: 370 mA
- 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 +60°C (operational)
  - 40°C to +90°C (storage temperature)
- RoHS compliant



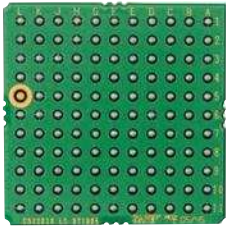
TELIT INFINITA SERVICES



Making machines talk.®

# GE 864-QUAD ATEX

Embedded



actual size

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## 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 from 1,200 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
- ATEX EC Type examination approval as intrinsic safe component "i" II 1G Ex ia IIC T4

## ATEX compliance with:

- IEC EN 60079-0
- IEC EN 60079-11
- IEC EN 60079-26
- CLC/TR50427

## 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 (Requires external Xtal)
- Alarm management
- Real-time AT message/warnings upon reaching temperature limits
- Network LED support
- IRA character SET, UCS2 and GSMDefault
- Jamming detection & report
- Embedded TCP/IP stack, including TCP, IP, UDP, SMTP and FTP protocols
- PFM (Premium FOTA Management) Over the Air Update
- MUX driver
- RIL Driver

## 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

## 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\*



## 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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