

## GSM/GPRS Module GE863-GPS

with integrated GPS, 850/900/1800/1900 with EASY GPRS Embedded (TCP/IP stack inside), EASY CAMERA, EASY SCAN and EASY SCRIPT Support.



GE863 wireless data modules are the ready solution for all your M2M wireless applications using GSM and GPRS all over the world.

- Designed for Industrial Applications
- Rugged design
- Small, lightweight and easy to integrate
- Low power consumption
- Extended temperature range
- EASY GPRS Embedded:
  - Embedded TCP-IP stack and DNS query protocol
  - Versatile internet connections and protocols by means of simple AT commands: sockets, SMTP, HTTP, FTP
- EASY CAMERA: take pictures and e-mail.
- EASY SCAN: all GSM channels for parameters
- EASY SCRIPT: run your own scripts (Python) with AT commands. 3.0 MB FLASH memory available.
- GSM Jamming detection
- Full ETSI/R&TTE type approval
- Integrated SIM card reader
- ROHS compliant

**Excellent technical support** to help you in the integration of your solution:

- Exhaustive product documentation
- Starter Kit and reference design
- Quick technical assistance by dedicated e-mail services and a dedicated technical forum provided by Round Solutions

### Product Features

- Quad band 850/900/1800/1900 MHz
- Output Power: Class 4 (2W) at 850/900 MHz Class 1 (1W) at 1800/1900 MHz
- Control via AT commands (ITU, GSM, GPRS and Telit Supplementary)
- Supply Voltage: 3.4 V ÷ 4.2 V , Nominal: 3.8 V
- Power consumption:
  - Power off: < 26uA
  - Idle mode: < 4 mA
  - Dedicated mode: 270 mA (average typ)
  - GPRS cl. 10: 500 mA
- Serial Port Multiplexer GSM 7.10
- SIM Access Profile

- GPS Power Consumption:
  - Stand-by current: 1mA
  - Operating current: 70 mA, including 20 mA for antenna LNA
- GSM Sensitivity:
  - 107 dBm (typ) at 850/900 MHz
  - 106 dBm (typ) at 1800/1900 MHz
- Dimensions (mm): 41.4 x 31.4 x 6.6 mm
- Weight (g): 9

**Temp range: -30 to +80 °C**

### Interfaces

- 18 I/O ports max.
- Analog audio (balanced and unbalanced)
- 1 A/D converter + 1 D/A converter
- Buzzer output
- Camera direct support mode on I/O ports
- ITU-T V.24 Serial link
  - Baud rate from 300 to 115.2 kbps
  - Autobauding from 2400 to 57.600 bps
- SPI-Bus
- IIC-Bus

### Audio

- Telephony, Emergency calls
- Half/Full/Enhanced Full rates and Adaptive Multi Rate voice codecs (HR, FR, EFR, AMR)
- Superior echo cancellation & Noise reduction
- DTMF
- Handset and hands free operations

### SMS

- Point-to-Point mobile originated and mobile terminated SMS
- Concatenated SMS supported
- SMS Cell Broadcast (CB – DRX)
- Text and PDU mode

### Circuit Switched Data

- Asynchronous Transparent Circuit Switched Data (CSD) up to 14.4 kbps
- Asynchronous Non-transparent CSD up to 9.6 kbps

### GPRS Data

- GPRS Class 10
- Mobile station class B
- Coding scheme 1 to 4
- PBCCh support

### Fax

- Group 3, Class 1

### **GSM Supplementary Services**

- Call Barring
- Call Forwarding
- Call Waiting & Call Hold
- Advice of Charge
- Calling Line Identification Presentation (CLIP)
- Calling Line Identification Restriction (CLIR)
- Unstructured SS Mobile Originated Data (USSD)
- Closed User Group

### **Other Features**

- SIM Phonebook management
- Fixed Dialling Number (FDN)
- Real Time Clock
- Alarm Management
- Battery Management
- Network LED support
- IRA character set
- GSM Jamming detection and report
- SIM Toolkit Class 2
- Embedded TCP/IP stack, including SMTP and FTP protocol
- Internal Python script interpreter allows driving the module with its own power, implementing the application logic directly in the Python language  
3 MB of NV memory for user scripts (aprox)  
1.5 MB RAM for interpreter usage
- EASY features: EASY CAMERA; EASY SCAN

### **GPS Receiver**

- SiRFstarIII™ single chip GPS receiver
- High sensitivity for indoor fixes, up to -159 dBm
- Extremely fast TTFF's at low signal levels
- Hot starts < 2 seconds
- 200,000+ effective correlators
- Supports 20-Channel GPS
- GPS NMEA 0183 output format
- NMEA sequences: GGA, VTG, GSA, GSV, RMC, GLL

### **Approvals**

- Full type approved according to R&TTE
- CE, GCF, FCC, PCTRB, IC