

# erco & gener

L'esprit modem >>



Entirely dedicated to the geolocalisation and embedded information services, the GenLoc OEM AOB (Application On Board) modem combines GSM/GPRS and GPS functions on a compact Socket form factor.

The GPS information may be transmitted by either SMS or GSM/GPRS data communication.

The same product manages the 50 channel GPS function. The high sensitivity GPS solution ensures the reception of GPS data in difficult environmental conditions.

The modem is Quad-Band (850/900/1800/1900 MHz) and GSM/GPRS Class 10. The GenLoc OEM AOB is equipped with TCP / IP protocols. Also, the EGM (Ercos & Gener Middleware) development tool allows supplementary onboard personalised applications.

The GenLoc OEM AOB provides GPIOs allowing the development of onboard value-added telematic solutions.

## GenLoc OEM AOB

- **GPS LOCALISATION**
- **GSM / GPRS COMMUNICATION**
- **SOCKET FORM FACTOR**
- **EGM DEVELOPMENT TOOL**
- **TCP/IP STACK**

# TECHNICAL CHARACTERISTICS

# GenLoc OEM AOB

## GSM / GPRS FEATURES

- E-GSM Quad-band 850/900/1800/1900 MHz
- ETSI GSM Phase 2+
- Class 4 (2W @ 900 MHz)
- Class 1 (1W @ 1800 MHz)
- SIM Toolkit Release 99

## VOICE FEATURES

- Voice (GSM mode)
- Telephony, Emergency Numbers 112
- Full Rate, Enhanced Full Rate, Half Rate (FR/EFR/HF/AMR)
- Echo cancellation and noise reduction
- Full Duplex Hands Free

## DATA FEATURES

- GPRS Class 10 (Up to 4Rx / 2Tx)
- Supports PBCCH, coding schemes: CS1 to CS4
- Asynchronous data circuit, transparent and non-transparent up to 14400 bits/s
- TCP/IP libraries (PPP, TCP Socket, UDP Socket, SMTP, FTP)
- SMS point to point MT/MO and SMS CB

## GPS FEATURES

- 50 channel  $\mu$ blox receiver
- Precision:
  - 2,5 meters CEP
  - DGPS 2m CEP
  - A-GPS Compatible
  - GALILEO Compatible
- Acquisition time:
  - Hot start: < 1 sec
  - Cold start with A-GPS: 15 sec
  - Cold start without A-GPS: 29 sec
- Re-acquisition time after loss of signal < 1 s
- High Sensitivity: -160 dBm when Tracking
- Protocols:
  - NMEA-0183
  - UBX binary
- Integrated supply for active 3.3 V GPS antenna
- Antenna fault detection (absence or short-circuit)

## INTERFACES

- GSM and GPS Antenna: RF pads supporting coaxial cable
- 64 pin DIL connector (pitch: 2mm)
- Power supply: 5 Vdc +/-10%.
- Switchable GSM & GPS supplies
- AT Commands: GSM 07.05 and 07.07.
- Specific AT commands
- V24 logic level: 5V
- V24 GSM & GPS independently accessible
- SIM card reader internal (SIM 1.8V / 3V) or external
- 7 GPIOs (Logic 3.3V)
- GSM & GPS activity indicators and outputs
- Bus SPI
- Bus JTAG
- Buzzer output
- Watchdog

## AVERAGE POWER CONSUMPTION

- GSM 850/900 MHz:
  - 280 mA @ 5 V – (1.5 A pic) in communication
- GSM 1800/1900 MHz:
  - 260 mA @ 5 V – (1.2 A pic) in communication
- Idle mode: 50 mA @ 5 V (GPS off)
- GPS: 38 mA @ 5 V (antenna not connected)

## ENVIRONMENTAL & MECHANICAL

- Operating temperature: - 30°C to + 60°C
- Storage temperature: - 40°C to + 85°C
- Dimensions:
  - Socket form factor
  - 64,5 x 34 x 15 mm

1	BUZZER	64	
2	GND	63	
3	AUXV0	62	
4	+5V	61	
5	TIMEPULSE	60	
6	~ON/OFF GSM	59	
7	WDI	58	
8	SPI_IO	57	
9	SPI_CLK	56	
10	/RXD_GPS	55	
11	/TXD_GPS	54	
12	/BOOT	NC	53
13	CDE_GPS-RX	/RXD2	52
14	ON/OFF_GPS	/TXD2	51
15	GPIO_5	GPIO_6	50
16	GPIO_4	VCC_3V3	49
17	GPIO_3	+VBAT	48
18	GPIO_2	NC	47
19	GPIO_1	ADC_IN	46
20	GPIO_0	VCC_RTC	45
21	SPI_AUX	/INTR	44
22	MIC2+	SPK2+	43
23	MIC2-	SPK2-	42
24	/RESET	GND	41
25	WDO	/DTR1	40
26	GND	/DCD1	39
27	SIM_PRES	/CTS1	38
28	SIM_VCC	/DSR1	37
29	FLASH_LED	/RI	36
30	SIM_DATA	/TXD1	35
31	SIM_RST	/RXD1	34
32	SIM_CLK	/RTS1	33

## OPTIONS (consult us)

- Cables
- Antennas
- Starter Kit
- Software Development Kit: cdrom SDK EGM

**ercogener**

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