ML-941 – energy saving GPS/GPRS location module

- Specialized module for localization and monitoring of animals living under supervision
- The smallest module in the offer
- Integral, 50 channels GPS receiver with highest sensitivity (-162 dBm) SuperSense® technology
- Integral, quad-band GSM modem (on request 2G/NB-IoT/Cat. M1)
- 1 binary/supply output *
- Large 30k records data logger
- Serial port (1,8 V)
- Configuration via SMS
- 3 axis accelerometer

* option

WARRANTY 3 YEARS

energy efficient

SMS

GPS

Energy saving location module ML-941 is a specialized telemetry module dedicated to monitor wild animals, farm animals and other mobile objects.

Module's design is based on latest GPS/GSM technologies securing precise location and reliable operation in changing GSM propagation conditions.

The module is manufactured as OEM without dedicated housing.

Resources:

- 1 binary/supply output
- Main supply input with voltage monitoring
- Real Time Clock
- 30k records logger with option of expanding to 60k

Functionality:

- Cyclical location computing based on received GPS signals
- Detection of missing GPS signal
- Reporting according to defined criteria of time, motion, activity
- Logging of information when GSM communication is not available

- Transmission modes
  » GPRS – packet transmission
  » SMS
- Transmitting information according to time schedule
- Configurable home and roaming transmission parameters
- Dynamic SMS compilation allowing sending current measurement data
- Adjustable SMS transmission limit
- Remote configuration via GPRS/SMS – the module is preconfigured by manufacturer
- Configurable access security list for IP addresses and phone numbers
- Monitoring of power supply voltage
- Monitoring of internal parameters state
- 3-axis accelerometer
  » motion detection
  » activity detection
- Optional silicone rubber molding to achieve IP 65 ingress protection
- Reed-switch activated storage mode
- LED module's status indicator
- Serial port for configuration. Optionally it can be used to communicate with external devices.

General

Dimensions (length x width x height)	62,5 x 33 x 11 mm
Weight	25 g
Mounting mode	user defined
Operating temperature	-40 to +50 °C
Protection class	none (IP 65 optional)

GSM/GPRS Modem

Modem type	uBlox SARA-G350
GSM	GSM Quad Band (850/900/1800/1900)
GPRS class	10
Antenna	built in antenna

GPS Receiver

Receiver type	μblox SAM-M8Q
Sensitivity (GPS tracking)	-164 dBm
Channel number	72
Antenna	built in passive antenna

Power Supply

DC voltage	2 – 5 V
Current in active state (mA)	50 mA (average) 400 mA (max.)
Current in sleep state (μA)	< 50 μA (activity control off) < 200 μA (activity control on)

Serial ports

Standard	RS-TTL (1,8 V)
Application	external sensors

Binary output/power supply
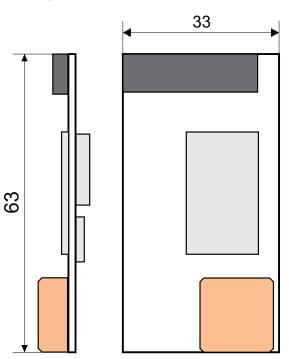
Maximum current	50 mA
Logic level "0"	0,0 – 0,3 V
Logic level "1"	3,5 – 3,8 V
Application	external power supply (VHF)

Configuration environment

Drawings and dimensions (all dimensions in milimeters)

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ML-941