KCS TraceME Micro GPS / GPRS / SMS module

The KCS TraceME GPRS/GPS range of modules enable you to remotely track & trace a variety of objects, e.g. cars, trucks, containers, (motor)cycles. TraceME Micro is the latest addition, targeted for personal use and any other application that need a minimum size while maintaining the exact same options and server connection the full-size units have.

Key Features

- Extremely small and lightweight. Housing without silicone cover: 68 x 32 x 17 mm. Including silicone cover: 68 x 32 x 19 mm.
- Weight ~40 grams, including housing, antennas and battery.
- Also available as OEM unit without housing. Hardware measures only 49.3 x 27.6 x 12.3 mm, including 550 mAh battery.
- Wide operating temperature range
- Quad-band for worldwide coverage
- Ultra low power consumption
- Excellent GPS accuracy including full-size GPS antenna
- Multiple watchdog levels for maximum stability
- Dual charge protection for voltages and temperature range.
- SOS-Button, user configurable
- Remote configurable to fit any job
- Configuration can be both Server and Event driven, 300+ different events, over 4000 geozones.
- Runs local user scripts via .src files.
- Field upgradeable firmware via GPRS
- Supports backup server configuration
- User definable SMS commands
- Charge via any standard USB connection
- Audio options with onboard microphone and handsfree amplifier.

Applications

- Personal tracking with SOS
- Object protection and tracking
- Logistics
- M2M
- Security and surveillance
- Remote control and diagnostics
- Vehicle immobilization

Product Summary

Equipped with a state-of-the-art GPS receiver, the KCS TraceME Module provides reliable and accurate navigational data.

All communication is handled rapidly and effectively by a GPRS/GSM modem (QUAD band version) through GPRS or SMS. In areas without network coverage, position-data and events are stored in memory (up to 55,000 positions). As soon as communication is restored, all information can be transmitted.

A unique feature is the user-configuration menu, which controls all actions like sending position-information, depending on all possible events. All of the necessary server-side scripts to process and store data from the TraceME units are available, free of charge.

If you do not want to host data and maps yourself, you can use the hosting services of one of our many partner companies.

About KCS BV

KCS BV, founded in The Netherlands in 1984, develops and manufactures electronics in-house for industrial applications, medical purposes, broadcasting solutions, etc. Since 1999 KCS is ISO 9001-2008 and ISO 14001-2008 certified.

Support

Please visit our support page at
http://www.trace.me

Specifications KCS TraceME Micro Rev8

Data communication

GPRS Modem	Telit GE865 QUAD band	
Frequency	850 / 900 / 1800 / 1900 Mhz	
RF Power	Class 4 (2W) @ 850 / 900 MHz Class 1 (1W) @ 1800 /1900 MHz	
Sensitivity	850/900 MHz GPRS 1800/1900 MHz GPRS	-107 dBm (typical) -106 dBm (typical)
Data	GPRS	Class 10
	Coding schemes	CS1 to CS4
SMS	Point-to-Point mobile originated & mobile terminated	
	Cell Broadcast	

Navigation

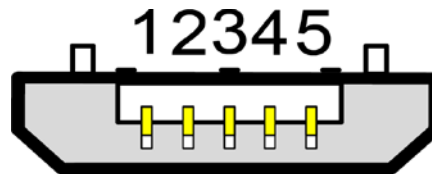|		
GPS Receiver	65 channel Venus634LPx	
Frequency	L1 1574.42 MHz	
Acquisition Time (TTFF)	Hot start	< 1 sec
	Cold start	29 sec
Position Accuracy	2.5 meter (CEP) 2 meter (CEP with WAAS, EGNOS)	
Sensitivity	Cold start	-148 dBm
	Reacquisition	-155 dBm
	Tracking	-161 dBm
Antenna	Passive patch antenna 20x20mm	

Electrical

Charging Voltage	Maximum range: +4.3...+10 VDC Preferred power supply for charging: 5V+-10%, 500mA or up.
Charging Current	Max 450mA. Higher charging currents (for batteries with higher capacity) on request.
Power Consumption	500µW standby (typical): GPS off, hot start possible. GSM off. Processor monitors timer + pushbutton + vibration sensor. No accel sensor. Maximum standby time with 550mAh battery: ~ 5 months. 175 mW tracking: GPS always on, gprs active, gprs session open. Approx. 9 W peak during data transmission. Tracking time with GPS full power + 1 update via gprs per 15 minutes: ~12 hours. Power consumption depends on amount of GPRS traffic and navigation parameters

Physical

Outside dimensions ABS Casing	Size	68 x 32 mm
	Height	17 mm
	Weight	~35 gram
Outside dimensions ABS Casing with silicone cover	Size	68 x 34 mm
	Height	19 mm
	Weight	~40 gram

External connections KCS TraceME (MICRO-USB)

Pin	Signal	Type	Description
1	USB VCC	VCC	+4.5...+10VDC Charge input
2	Serial IN	I	Serial input or digital input (2..31V for active high), ~ 50K pulldown
3	Serial OUT	O	Serial or digital output, open collector (max 31V / 10 mA / 100mW)
4	N/C	-	
5	GND	GND	GND for charge and I/O

Environmental

Enclosure	ABS plastic
Operating Temperature	Without Li-Ion battery: -25ºC to +85ºC (-13ºF to +185ºF) non-condensing With Li-Ion battery: -20ºC to +60ºC (-4ºF to +140ºF) non-condensing Li-Ion battery cannot charge outside 0ºC to +45ºC (+32ºF to +113ºF).
Storage Temperature	Without Li-Ion battery: -40ºC to +85ºC (-40ºF to +185ºF) non-condensing With Li-Ion battery: -20ºC to +60ºC (-4ºF to +140ºF) non-condensing

Comparison table TraceME

	TraceME Rev8-B / TM171	TraceME Micro Rev8
Introduction date	May-2009	May-2010
Outside Dimensions	100 x 67 x 20 mm Aluminum housing	68 x 32 x 17 mm ABS housing

GPRS / SMS

	TraceME Rev8-B / TM171	TraceME Micro Rev8
QUADBAND 850/900/ 1800/1900 Mhz	•	•
Antenna connection	SMA or micro-coax	micro-coax
GPRS antenna included	• / optional	•

GPS

	TraceME Rev8-B / TM171	TraceME Micro Rev8
Tracking sensitivity / channels	-161 dBm / 65 ch	-161 dBm / 65 ch
Antenna sensing circuitry	•	-
Antenna connection	SMA / microcoax / Onboard	Onboard patch
GPS antenna included	• / optional	•

Power

	TraceME Rev8-B / TM171	TraceME Micro Rev8
Internal Backup battery	Li-Polymer 550-2400 mAh (optional)	Li-Polymer 550mAh
Average tracking power (GPS full power, GPRS connected)	200 mW	175 mW
Minimum power consumption	<5 mW at 6..31V / <0.1mW at 4..9V (optional Alkaline version)	<0.5 mW (internal battery)
Power cable + fuse included	• / optional	-

IN / OUT

	TraceME Rev8-B / TM171	TraceME Micro Rev8
Connector	8 pins / 4 + 24 pins	Micro-usb
Digital / Analog Inputs	3 / 5	1 (digital)
Digital outputs (max. 31 Volt)	2 / 4	1
Camera interface	- / •	-
RS-232 connections	- / •	-
3V serial connections	1 combined RXD-TXD / 4	1 RXD+TXD
1-Wire / iButton interface	•	-
Handsfree audio	-	Microphone (optional) 8 Ohm speaker amplifier (optional)

Miscellaneous

	TraceME Rev8-B / TM171	TraceME Micro Rev8
Internal 3 axis acceleration / G-force sensor	optional	optional
Internal Vibration sensor	• / optional	•
Maximum items in log	6,000/ 55,000 (optional) / 500,000+ (optional)	6,000/ 55,000 (optional)

We certify that Kolff Computer Supplies BV, Dordrecht, The Netherlands does not make any hardware or IMEI modifications to the Telit GE864/865 devices as used in the TraceME track&trace device. All software modifications are restricted to official firmware upgrades as provided by Telit Communications PLC.

KCS is ISO 9001-2008 and ISO-14001 certified since 1999.

WARNING:
• The device should be turned off in vicinity of petrol pumps, chemical, flammable or hazardous environments where ignition of flammable atmospheres is possible.
• The GSM unit and antenna shall be operated at a distance greater than 20 cm from the human body.
• The device is to be operated in accordance with the user instructions or manufactured recommendations.

Disclaimer:

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