

ROCK

The Advanced Asset Tracking System

PRODUCT OVERVIEW

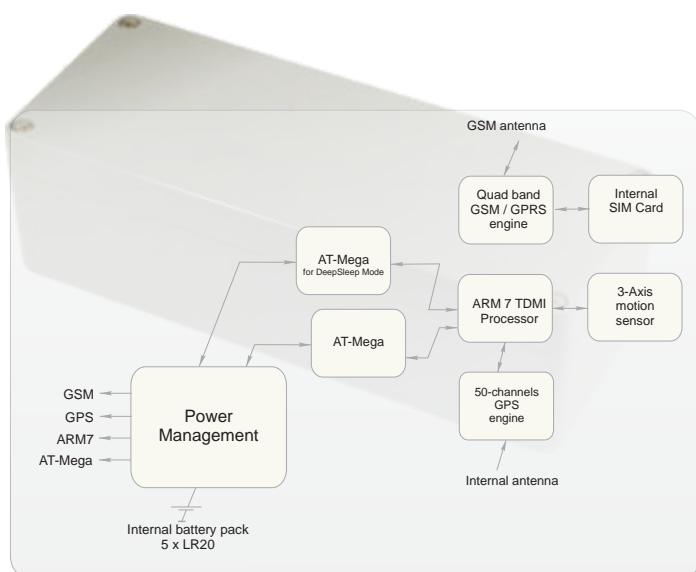
The FALCOM ROCK, an innovative, adaptable and stand-alone tracking device that can be used for both mobile and fixed asset management. The device concept combines the latest quad-band GSM/GPRS technology for communication, a high-sensitive GPS receiver for positioning, a waterproof compact case, and durable internal battery pack for long-life operation eliminating the need for an external power source. This is an ideal solution for managing and tracking containers, trailers and high-value assets where no power source is present. Many features of the device and the new firmware can be downloaded over-the-air helping you to manage your mobile and fixed assets, provide better customer service, reduce costs and increase profits. An energy harvesting version with solar panel option is currently under development and it will be available 4Q2012.



This system is shipped preconfigured and programmed with simple functions to report the device location periodically at a user configurable interval.

A detailed GPS report includes NMEA 0183 GPRMC, which shows position data in the form of UTC, Latitude, Longitude, Altitude. This integrated report also contains GSM net code and base station code, helping locate the position of the asset when a GPS signal is not available. After a user-predefined timeout, tracker reports current position and automatically shuts down, saving all battery power until next timeout. When the timer runs out, the unit wakes up and reports new GPS position within approx. 2 minutes (depending on network situation).

ROCK BLOCK DIAGRAM



PRODUCT HIGHLIGHTS

- Quad-Band GSM/GPRS technology for 2-way communication
- High-sensitivity GPS receiver for positioning
- Embedded TCP/IP stack for client-server application
- Stand-alone tracking device needing no external power supply
- Highly durable IP67 waterproof and shock-resistant case
- Easy installation
- Minimal maintenance
- Compact, low-cost and low power unit
- Very-efficient power saving modes
- 5xLR20 internal battery pack for long-life operation
- Up to 3* years operation without replacing the battery pack
- Up to 2500 wakeup cycles and position reports pro battery pack
- Provides exact reports about current asset location
- Remote activation, configuration and administration
- Over-the-air firmware upgrade
- Customized reports and sending intervals
- Custom housing and packaging design possible

* depending on power saving operation mode

FIRMWARE FEATURES

- Embedded TCP/IP stack for client-server application
- FALCOM protocols: IOP, GSM, AREA, BIN
- Supports SMS, CSD
- Remote firmware update
- Versatile power-saving modes and wake up conditions
- 20 programmable Timers, Triggers, Counters
- 100 programmable Geofences and 32 Areas
- Customized reports, sending intervals
- Report by distance, time, moving and on demand
- History functionality
- Remote access via PFAL commands
- Device configuration via TCP, SMS, CSD, Serial
- Intelligent and flexible configuration alarms

APPLICATIONS

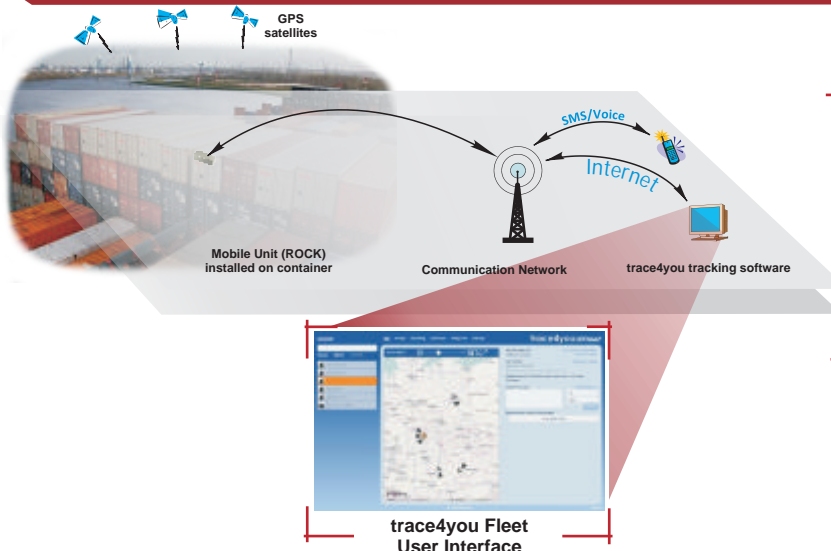
- Real time online tracking
- Cargo & Asset Tracking
- Stolen Vehicle Recovery
- Trailers Tracking
- Containers Tracking
- Trains Tracking
- Route verification
- Trip management / distance calculations
- Towing protection
- Solutions for both indoor and outdoor applications
- Compatible with FALCOM trace4you server (also configurable for most of TCP/IP server-based tracking)

TECHNICAL SPECIFICATION

General	Electrical characteristics
Quad-Band GSM/GPRS engine	5 x LR20 battery pack (non-rechargeable)
GSM frequency bands: 850/900/1800/1900 MHz	Average Power Consumption
GPRS class 10, Class B	Normal operation: 120 mAh @ 7,5 VDC
Internet (TCP/IP/UDP/HTTP/SMTP)	Power saving (DeepSleep): 15 µAh @ 7,5 VDC
50 channel GPS engine	Physical characteristics
GPS L1 C/A code	Dimensions: 75 mm x 190 mm x 55 mm
Protocols: NMEA, FALCOM (binary)	Weight: approx. 1220 gr
Accuracy:	Air humidity
Position: 2.5 m	5% up to 95% non-condensing
SBAS: 2 m	Interfaces
Acquisition:	Inside SIM card holder for 1,8/3 V SIM cards
TTF: 29 sec. typical	Housing
Sensitivity: Acquisition: -160dBm	Plastic case closed by 4 screws
Tracking: -160dBm	Protection class: IP67 proof (DIN EN60529) casing
Cold Starts: -144dBm	GSM/GPS Antennas
Supported vehicle dynamics:	Internal
Velocity: 500 m/s (972 knots)	Motion sensor
Altitude: 50.000 m	3-axis motion sensor* (software-controlled)
Update rate: 1 Hz	Processor core
Environmental data	ARM7/TDMI
Operating temp.: -20 °C to +54 °C	8 MB Flash (History / Firmware / Configuration)
Storage temp.: -40 °C to +90 °C	
Storage temp.: +10 °C to +25 °C **	

* Optional
** Recommended storage temperature range for long term storage to maximise battery shelf life

trace4you - online tracking server



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