

**PRODUCT OVERVIEW**

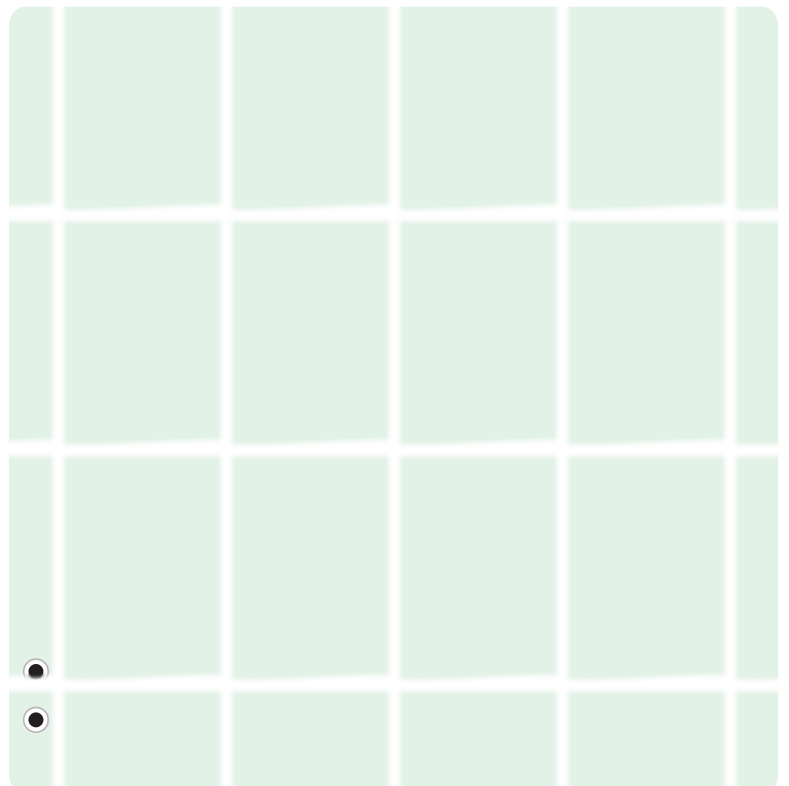
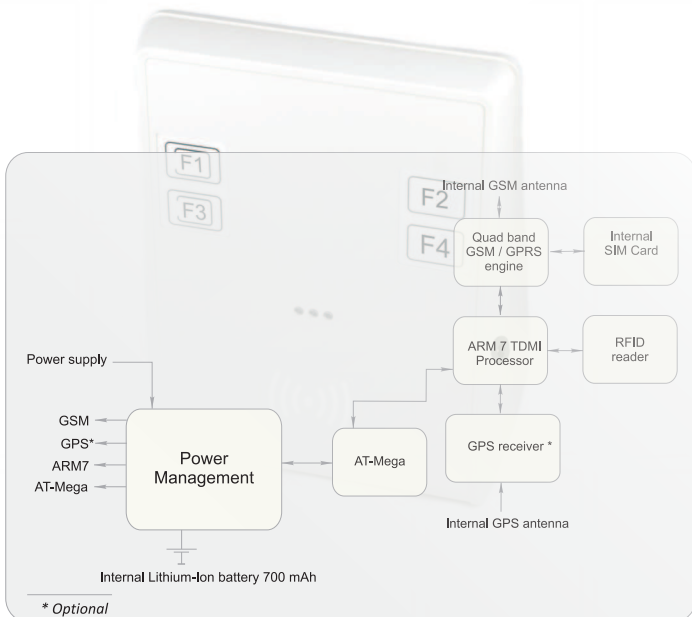
The FALCOM MTR-1-RF extends the application range of successful FALCOM AVL based devices into the field of time registration systems. With this unit it is possible to document and keep track of daily arrival and leaving times of the employees anytime and anywhere as well as with the help of optional GPS receiver it allows you to know the place of the device where it is installed.

This efficient and compact time registration system is a perfect solution for any type of organizations, and can be installed very easy and super fast. Employees simply clock in and out by holding their RFID card next to the device. This data is transmitted through TCP/IP over GPRS to a remote server, and you will have the essential details allowing you to optimally structure your business processes.

All of these features are perfectly integrated in a device concept which significantly reduces time-to-market and provides low cost time attendance and security solutions.



**MTR-1-RF BLOCK DIAGRAM**



## FIRMWARE FEATURES

- Embedded TCP/IP stack for client-server application
- FALCOM protocols: IOP, GSM, AREA, 3DP, BIN
- Supports SMS, CSD
- Locally and remotely firmware update
- Multi power-saving modes and wake up conditions
- 20 programmable Timers, Triggers, Counters
- 100 programmable Geofences and 32 Areas
- Programmable Geo-fencing and Parking alerts
- Forward messages from one channel to another
- Customized reports, sending intervals
- Report by distance, time and on demand
- Drivers Logbook / History / Trip management
- Locally/Remotely accessible via PFAL-Commands
- Device configuration via TCP and SMS
- Intelligent and flexible configuration alarms
- RFID-based application
- and many others .....

## APPLICATIONS

- Mobile time registration system
- Manage user data and time records
- Reading of access control magnetic cards
- Fleet management / monitoring
- Real time satellite navigation
- Territory management / Theft protection
- Route verification
- Trip management / distance calculations
- Compatible with FALCOM trace4you server (also configurable for most of TCP/IP server-based tracking applications)

## TECHNICAL SPECIFICATION

### General

Quad-Band GSM/GPRS engine  
 GSM frequency bands: 850/900/1800/1900 MHz  
 GPRS class 10, Class B  
 Internet (TCP/IP/UDP/HTTP/SMTP)

### GPS receiver\*

A-GPS offline/ Autonomous  
 Protocols: NMEA, FALCOM (binary)  
 Accuracy: Position: 2.5 m  
 SBAS: 2 m  
 Acquisition: Cold starts: 26 sec.  
 Sensitivity: Tracking: -162 dBm  
 Cold starts: -148 dBm  
 GPS Operational limits:  
 Velocity: 500 m/s (972 knots)  
 Altitude: 50.000 m  
 Update rate: 1 Hz

### Electrical characteristics

Power supply: +12 VDC  
 Internal Lithium-Ion backup battery (700 mAh)<sup>1)</sup>

### Average Power Consumption

Normal operation: 86 mA  
 Power saving (IGN): 860 µA

### Air humidity

5% up to 95% non-condensing

### Environmental data

Operating temp.: -40 °C to +85 °C  
 Storage temp.: -40 °C to +85 °C  
 GSM\*\* operating temp.: -40 °C to +85 °C  
 Battery<sup>1)</sup> discharging temp.: -20 °C to +60 °C  
 Battery<sup>1)</sup> discharging temp.: 0 °C to +45 °C

### Physical characteristics

Dimensions (LxWxH): 125mm x 67mm x 167mm  
 Weight: approx. 318 g

### Interfaces

4 x Push buttons free-configurable  
 3 x LED indicators free-programmable  
 Inside SIM card holder for 1,8/3 V SIM cards  
 5.5 mm DC Power supply jack connector  
 RFID reader, ISO 14443, Type A/B

### GSM/GPS Antennas

Internal

### Processor core

ARM7/TDMI  
 8 MB Flash (History / Firmware / Configuration)

### Accessories

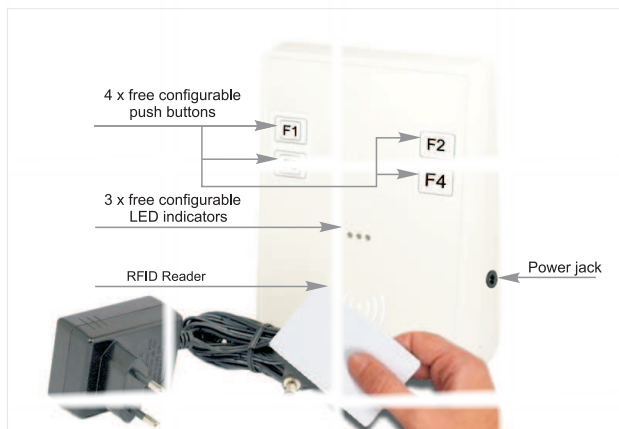
AC / DC Power Adapter (AC: 100-240 V; DC: 15V)

\* Optional

\*\* The GSM/GPRS module is fully functional (-30 °C to + 85 °C meets ETSI specification)

<sup>1)</sup> Storage and using conditions of the device with battery option are limited to the battery temperature range

## INTERFACES



## CONTACT

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