

BOLERO-LT2

The Advanced Vehicle Tracking System

PRODUCT OVERVIEW

BOLERO-LT2 is a free configurable smart tracking device which can be fully adapted to user requirements. Its main purpose is to act as a mobile client for various system solutions like AVL, fleet management, vehicle security and recovery.

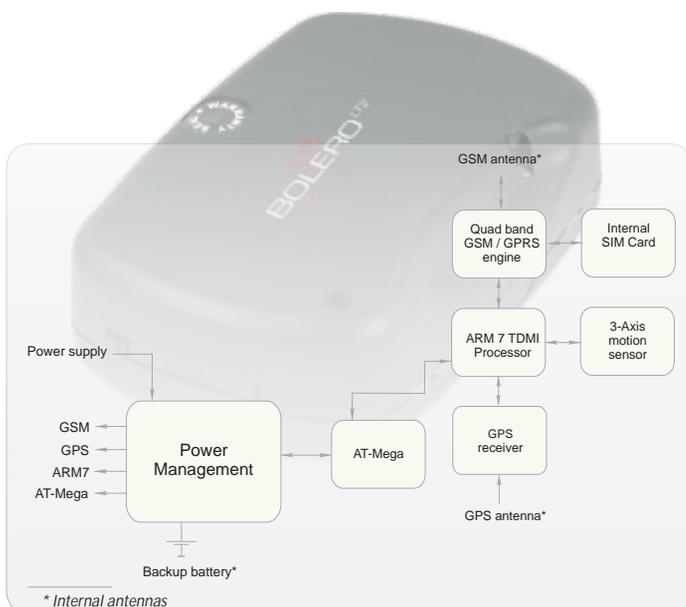
It can be adapted to existing tracking solutions and can be easily configured to gather or exchange relevant information with servers or users directly. An often used example is to send status reports or verbose alert messages directly via SMS to users and/or via TCP to tracking servers. Drivers logbook and data logging functionalities are combined in the history feature.

Geofencing can be used to report violations of predefined routes or areas (*for example if a car enters or leaves a specific Area/Geofence*).

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



BOLERO-LT2 BLOCK DIAGRAM



PRODUCT HIGHLIGHTS

- GSM/GPRS technology for 2-way communication
- Latest GPS technology for positioning
- Compact, low-cost and light-weight unit
- Delivers high performance and very flexible applications
- Customized firmware configuration
- Different communication channels
- 3-axis motion sensor for detecting movements of assets
- Wide variety of events and states for sending reports
- Allows to create customized protocols
- Data-Logger functionality
- Powered from vehicle main battery
- Backup battery to back up the main power supply
- Custom housing and packaging design possible
- Internal GSM/GPS antennas
- E1/CE approved

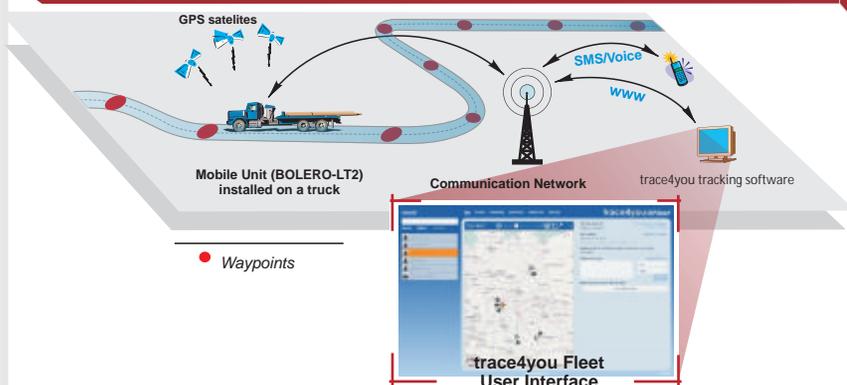
FIRMWARE FEATURES

- 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
- 2000 waypoints for accurate route management
- Programmable Geo-fencing and Parking alerts
- Detect changes of digital inputs
- Forward messages from one channel to another
- Customized reports, sending intervals
- Report by distance, time, bearing and on demand
- Drivers Logbook / History / Trip management
- Locally/Remotely accessible via PFAL-Commands
- Device configuration via Serial port, TCP and SMS
- Intelligent and flexible configuration alarms
- Connection with external alarm systems

APPLICATIONS

- Real time online tracking
- Fleet management / monitoring
- Security / emergency services
- Real time satellite navigation
- Territory management
- Personalized drivers logbook
- Route verification
- Trip management / distance calculations
- Theft protection
- Toll collection / pay as you drive (PAYD)
- Compatible with FALCOM trace4you server
(also configurable for most of TCP/IP server-based tracking applications)

trace4you - online tracking server



TECHNICAL SPECIFICATION

General	Average Power Consumption
Quad-Band GSM/GPRS engine	Normal operation: 78mA @ 12 VDC
GSM frequency bands: 850/900/1800/1900 MHz	Power saving (IGN): 0.8 mA @ 12 VDC
GPRS class 10, Class B	Physical characteristics
Internet (TCP/IP/UDP/HTTP/SMTP)	Dimensions (LxWxH): 85 mm x 56 mm x 24 mm
50 channel GPS engine	Weight: ca. 90 g
A-GPS offline / Autonomous	Air humidity
Protocols: NMEA, FALCOM (binary)	5% up to 95% non-condensing
Accuracy: Position: 2.5 m	Interfaces
Acquisition: Cold starts: 26 sec.	1 x Digital input (Ignition)
Sensitivity: Tracking: -162 dBm	4 x LED indicators free-programmable
Cold starts: -148 dBm	1 x Button free-programmable
GPS Operational limits:	1 X RS232 port V.24 level (RX, TX and GND - only for device configuration, not for connecting external devices.)
Velocity: 500 m/s (972 knots)	Inside SIM card holder for 1,8/3 V SIM cards
Altitude: 50.000 m	Serial Data Rates
Update rate: 1 Hz	4800 bps ... 115200 bps
Electrical characteristics	GPS/GSM Antennas
Power supply: +10,8 V to +32 V DC	Internal GPS and GSM antennas
Li-Polymer 1000 mAh rechargeable battery ^{1)*}	Motion sensor
Environmental data	3-axis motion sensor**
Operating temp.: -40 °C to +85 °C	Processor core
Storage temp.: -40 °C to +85 °C	ARM7/TDMI
GSM** : -40 °C to +85 °C	8 MB Flash (History / Firmware / Configuration)
Battery ¹⁾ discharging temp.: -20 °C to +60 °C	
Battery ¹⁾ charging temp.: 0 °C to +45 °C	

* Optional

** The GSM/GPRS module is fully functional (-20 °C to + 55 °C meets the 3GPP specifications)

¹⁾ Storage and using conditions of the device with battery option are limited to the battery temperature range.

BOLERO-LT2 EVALKIT CONTENTS

EVALKIT offered by FALCOM provides all the necessary hardware, software, and documentation to effectively operate and evaluate the performance and suitability of the BOLERO-LT2 device. The EVALKIT is shipped pre-configured allowing system integrators and developers to test the device and see how it works. The KIT contains:

- | | |
|--------------------------------|--|
| 1 - BOLERO-LT2-MS-B1 | 7 - RS232 serial cable |
| 2 - FOX-EVALBOARD | 8 - Double-sided adhesive pad |
| 3 - BOLERO-LT2-FOX-EVAL cable | 9 - Info-sheet (incl. t4yserver login, SIM-Card information) |
| 4 - Installation cable | 10 - Pre-paid SIM card |
| 5 - AC/DC Power adapter 12V-1A | 11 - Documentation |
| 6 - UK/US adaptor | |

CONTACT

FALCOM GmbH
Gewerbering 6
98704 Langewiesen
GERMANY

Phone: +49 (0)3677 8042 0 (no support)
Fax: +49 (0)3677 8042 256
e-Mail: contact@falcom.de

Internet: <http://www.falcom.de/>