FOX3

most developed and advanced vehicle tracking system with all options in one product
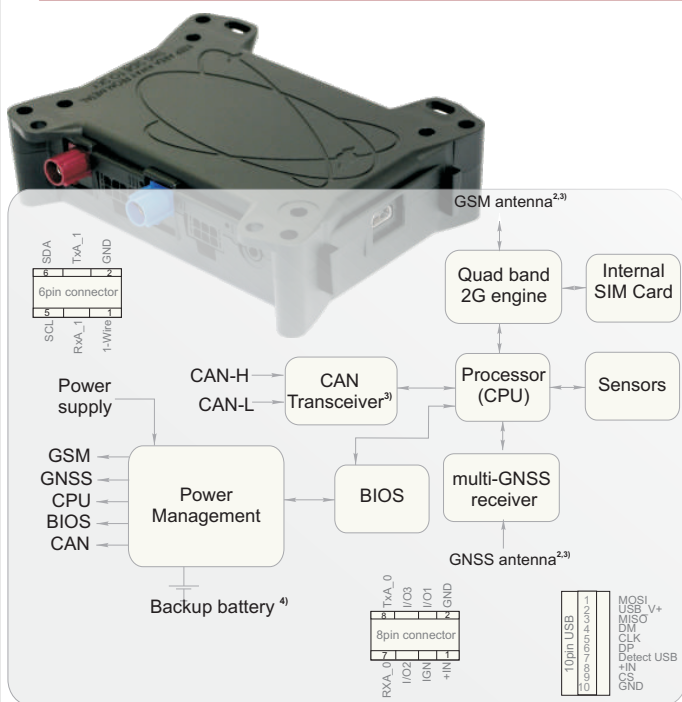
PRODUCT OVERVIEW

FOX3 is a compact, all-in-one device combining all features of the successful FOX-IN/EN family into one single unit. FOX3 is designed to operate with internal or external antennas. The built-in internal antennas are automatically turned off while external antennas are in use. This device will dramatically simplify your logistics as well as the installation process and the post-installation support. Newly developed FALCOM „PAID-Features" show the way to the future of mobile data logging, storing, processing and sending.

FOX3 is a configurable smart tracking / data logging device which can be fully adapted to user requirements.

FOX3 offers new features like: DATA ENCRYPTION, several HISTORY MODES or ECO-DRIVE/BEHAVIOUR LOGGING beside standard items like status reports, alerts messaging, audio call, spy calls or geofencing.

FOX3 BLOCK DIAGRAM

PRODUCT HIGHLIGHTS

- State-of-the-art 2G and GNSS technology
- 3-axis acceleration, internal temperature sensors
- Gyro / Magnetic sensors (external only)
- Drop-in replacement of previous FOX-generation
- Sensor interfaces via RS-232 / RS-485 / 1-Wire / I²C / CAN
- FALCOM PFAL programming language
- Delivers high performance and very flexible applications
- Customizable firmware configuration
- Multi-function I/Os
- Optional battery back-up[4]
- Display connectivity (JAZZ2)
- Audio interface (SPK+MIC)
- Data-Logger functionality
- CAN/FMS interface[3], CAN-OBDII (On-Board Diagnostics)[3]
- Hardware expandable via IOBOX-MINI [4]
- Internal and external GSM/GNSS antennas[3]
- Communication via USB 2.0 interface
- Support connection with Garmin devices
- E1/CE approved; FCC/PTCRB in preparation

[1] Optional
[2] Internal/External GSM/GNSS antennas
[3] Activation with PFAL-Command
[4] Accessory

FALCOM

FIRMWARE FEATURES

- Embedded TCP/IP stack for client-server application
- FALCOM protocols: IOP, GSM, AREA, 3DP, BIN
- Supports SMS/USSD/Voice call/TCP/IP/UDP/SMTP/HTTP
- Local and remote firmware update and configuration
- Multi power-saving modes and wake up conditions
- 20 programmable Timers, Triggers, Counters, nvCounters
- 3000 programmable Geofences, 32 Areas, 2000 Waypoints
- Report by distance, time, bearing and on demand
- Drivers Logbook / History / Trip management
- Intelligent and flexible configuration alarms
- RFID and sensor-based application
- FALCOM PAID feature supported
- Over-the air-access (OTA)

APPLICATIONS

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

TECHNICAL SPECIFICATION

General

Quad-Band 2G

2G bands: 850/900/1800/1900 MHz

Internet (TCP/UDP/HTTP/SMTP)

Multi channel GNSS (GPS+Galileo/GLONASS [2]) receiver

A-GPS (online / offline / autonomous)

Protocols: NMEA, FALCOM (binary)

Accuracy:	**GPS**	/ GLONASS
Position:	2.5 m	/ 4.0 m
Acquisition / Sensitivity:		
Cold Start:	29 s	/ 30 s
Tracking:	-161 dBm	/ -158 dBm
Sensitvity:	-148 dBm	/ -145 dBm
GPS Operational limits:		
Velocity:	500 m/s (972 knots)	
Altitude:	50.000 m	
Update rate:	1 Hz	

Electrical characteristics

Power supply: +10,8 V to +32,0 V DC

Internal Li-Polymer 1000 mAh rechargeable battery[1]

Average Power Consumption

Normal operation:	50mA @ 12 VDC
Sleep mode:	< 1mA @ 12 VDC

Environmental data

Operating temp.:	-40 °C to +85 °C
Storage temp.:	-40 °C to +85 °C
GSM[3]:	-40 °C to +85 °C
Battery[4] discharging temp. :	-20 °C to +60 °C
Battery[4] charging temp.:	0 °C to +45 °C

Physical characteristics

Dimensions (LxWxH): 105 mm x 83 mm x 28 mm

Weight: approx. 130 g

Air humidity

5% up to 95% non-condensing

Interfaces

3 x Digital/analog IO ports programmable

1 x Predefined digital input (Ignition)

3 x LED indicators programmable

2 x RS-232 Ports (**1** x V.24 level; **1** x RS-232/RS-485 [2][5])

1 x 10pin Mini-USB connector (for IOBOX-MINI [1])

1 x 1-Wire interface (incl. 5V Phantom Power)

1 x I²C interface

1 x 4pin audio jack interface (2.5mm)

1 x CAN-Bus Interface[2][5] (uses 2 of 3 I/Os)

1 x Inside SIM card holder for 1,8/3 V SIM cards

1 x USB 2.0 interface

Serial Data Rates

Serial Ports: 4800...115200 bps (default = 115200 bps)

GSM / GNSS Antennas

Internal and external [2] with automatic/manual switch

Sensor / Measurement range

3-axis Acceleration/Temperature

- **3DG**: ± 8g (programmable)
- **Temperature**: - 50 to + 120 °C (programmable)

Processor core

RTC + Calendar

8 MB Flash (History / Firmware / Configuration)

[1] Optional / Accessory
[2] Activation with PFAL-Command.
[3] The GSM/GPRS module is fully functional (-20 °C to + 55 °C meets the 3GPP specifications) .
[4] Applicable with backup battery
[5] Hardware Paid Features: CAN interface, RS-485 port
Storage and using conditions of the device with battery option are limited to the battery temperature range.

FOX3 EVALKIT CONTENT

EVALKIT provides all the necessary hardware, software and documentation (online) to effectively evaluate the FOX3 device. This plug & play starter kit consists of:

1 - FOX3 unit (pre-configured)
2 - EVALBOARD + cable
3 - Backup battery
4 - KA68 installation cable
5 - AC/DC Power adapter 12V-1A
6 - UK/US Plug travel adapter
7 - All PAID features enabled
8 - RS-232/RS-485 serial cable
9 - Headset-uwt
10 - Info-sheet
11 - trace4you server account
12 - Pre-paid SIM card
13 - Technical support hotline

trace4you evaluation platform (accessible via FALCOM Evaluation Kit)

GNSS satelites
SMS/Voice
Internet
GSM/GPRS Network
Mobile Unit (FOX3) installed on a truck
Falcom trace4you tracking software
trace4you Fleet User Interface

CONTACT

FALCOM GmbH
Gewerbering 6
98704 Langewiesen
GERMANY

Phone: +49 (0)3677 8042 0 (no support)
Fax : +49 (0)3677 8042 256
e-Mail: info1@falcom.de

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