

# FOX3-3G

most developed and advanced tracking and data logging system with all options in one product

## PRODUCT OVERVIEW

FOX3-3G is a compact, all-in-one device combining 2G/UMTS/HSPA high-speed data communication with the latest GNSS technology to completely satisfy customer's need. Depending on the requirements of the respective customer, the needed hardware options can be decided shortly before installation. FOX3-3G is designed to operate with internal or external antennas. The built-in internal antennas can be turned off while external antennas are in use. Based on its features, this device will dramatically simplify your logistics as well as the installation process and the post-installation support. Newly developed FALCOM „PREMIUM-Features“ show the way to the future of mobile data logging, storing, processing and sending.

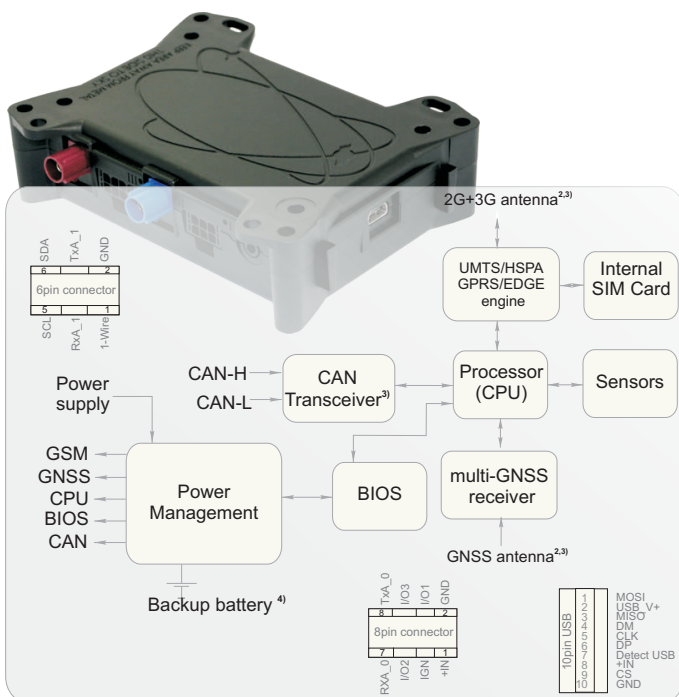
FOX3-3G is a configurable smart tracking / data logging device which can be fully adapted to user requirements.

There are two models of FOX3-3G available: **FOX3-3G** without audio interface and **FOX3-3G-AUDIO** with audio interface.

FOX3-3G 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.



## FOX3-3G BLOCK DIAGRAM



## PRODUCT HIGHLIGHTS

- State-of-the-art 3G/2G and GNSS technology
- 3-axis acceleration, internal temperature sensors
- Gyro / Magnetic sensors (external only)
- Drop-in replacement of previous FOX-generation
- Sensor interface via RS-232 / RS-485 / 1-Wire / I<sup>2</sup>C / CAN
- FALCOM PFAL programming language
- Passive / active RFID connectivity via RS-232
- Customizable firmware configuration
- Multi-function I/Os
- Optional battery back-up<sup>4)</sup>
- Display connectivity (JAZZ2)
- Audio interface (SPK+MIC)<sup>5)</sup>
- Data-Logger functionality
- CAN/FMS interface<sup>3)</sup>, CAN-OBDDII (On-Board Diagnostics)<sup>3)</sup>
- Hardware expandable via IOBOX-MINI<sup>4)</sup> and IOBOX-CAN<sup>4)</sup>
- Internal 2G+3G/GNSS antennas and external antenna ports<sup>3)</sup>
- Communication via USB 2.0 interface
- Support connection with Garmin devices
- CE pending

<sup>1)</sup> Optional  
<sup>2)</sup> Internal/External 2G+3G/GNSS antennas  
<sup>3)</sup> Activation with PFAL-Command  
<sup>4)</sup> Accessory  
<sup>5)</sup> FOX3-3G-AUDIO only.

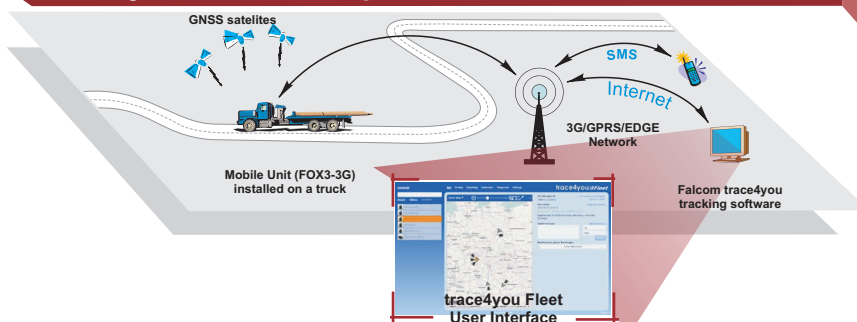
## FIRMWARE FEATURES

- Embedded TCP/IP stack for client-server application
- FALCOM protocols: IOP, GSM, AREA, 3DP, BIN
- Supports SMS/USSD/Voice call<sup>9)</sup>/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 and more
- Drivers Logbook / History / Trip management
- Intelligent and flexible configuration alarms
- RFID and 1-Wire sensor-based application
- FALCOM PREMIUM 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)

## trace4you evaluation platform



## TECHNICAL SPECIFICATION

### General

3G (UMTS/HSPA) and 2G (GSM/GPRS/EDGE) engine:

- 3G bands: 900/2100 MHz for Europe

850/1900 MHz for America

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

Internet (TCP/UDP/HTTP/SMTP)

Multi channel GNSS (GPS+Galileo/GLONASS<sup>2)</sup> 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

Sensitivity: -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

Optional Li-Polymer 1000 mAh rechargeable battery<sup>1)</sup>

### 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: -40 °C to +85 °C

Battery<sup>3)</sup> discharging temp.: -20 °C to +60 °C

Battery<sup>3)</sup> charging temp.: 0 °C to +45 °C

<sup>1)</sup> Optional / Accessory

<sup>2)</sup> Activation with PFAL-Command.

<sup>3)</sup> Applicable with backup battery

<sup>4)</sup> Hardware Premium Features: CAN-Bus-interface, RS-485 port

<sup>5)</sup> Supported by FOX3-3G-AUDIO only

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

### 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 (1xV.24 level; 1xRS-232/RS-485<sup>4)</sup>)

1 x 10pin Mini-USB connector (for IOBOX-MINI<sup>1)</sup>)

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

1 x I<sup>2</sup>C interface

1 x 4pin audio jack interface (2.5mm)<sup>5)</sup>

1 x CAN-Bus Interface<sup>2)4)</sup> (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)

### 2G-3G / GNSS Antennas

Internal and external<sup>2)</sup> 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)

## FOX3-3G PROMOTION KIT

PROMOTION KIT for FOX3/-3G devices provides all the necessary hardware, software, and access data to the online documentation and FALCOM trace4you server to easily and quickly evaluate these products and all their functionalities. This kit consists of:

- 1 - FOX3 unit, pre-configured
- 2 - PREMIUM-FEATURES (all activated)
- 3 - Control-Box
- 4 - Backup battery
- 5 - FAL-ANT-11 or FAL-ANT-12
- 8 - USB to Serial Converter
- 9 - CA31 - Main port installation cable + UCOM
- 10 - CA69 - Accessory port cable + UCOM

- 11 - AC/DC Power adapter 12V-1A
- 12 - UK/US Plug travel adapter
- 13 - Instruction sheet
- 14 - Info-sheet with access data to online documentation and FALCOM trace4you server
- 15 - Pre-paid SIM card. Service fee includes 10MB of data transfer and 3 months access to the trace4you server for evaluation purposes
- 16 - 8 hours free technical support

## CONTACT

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