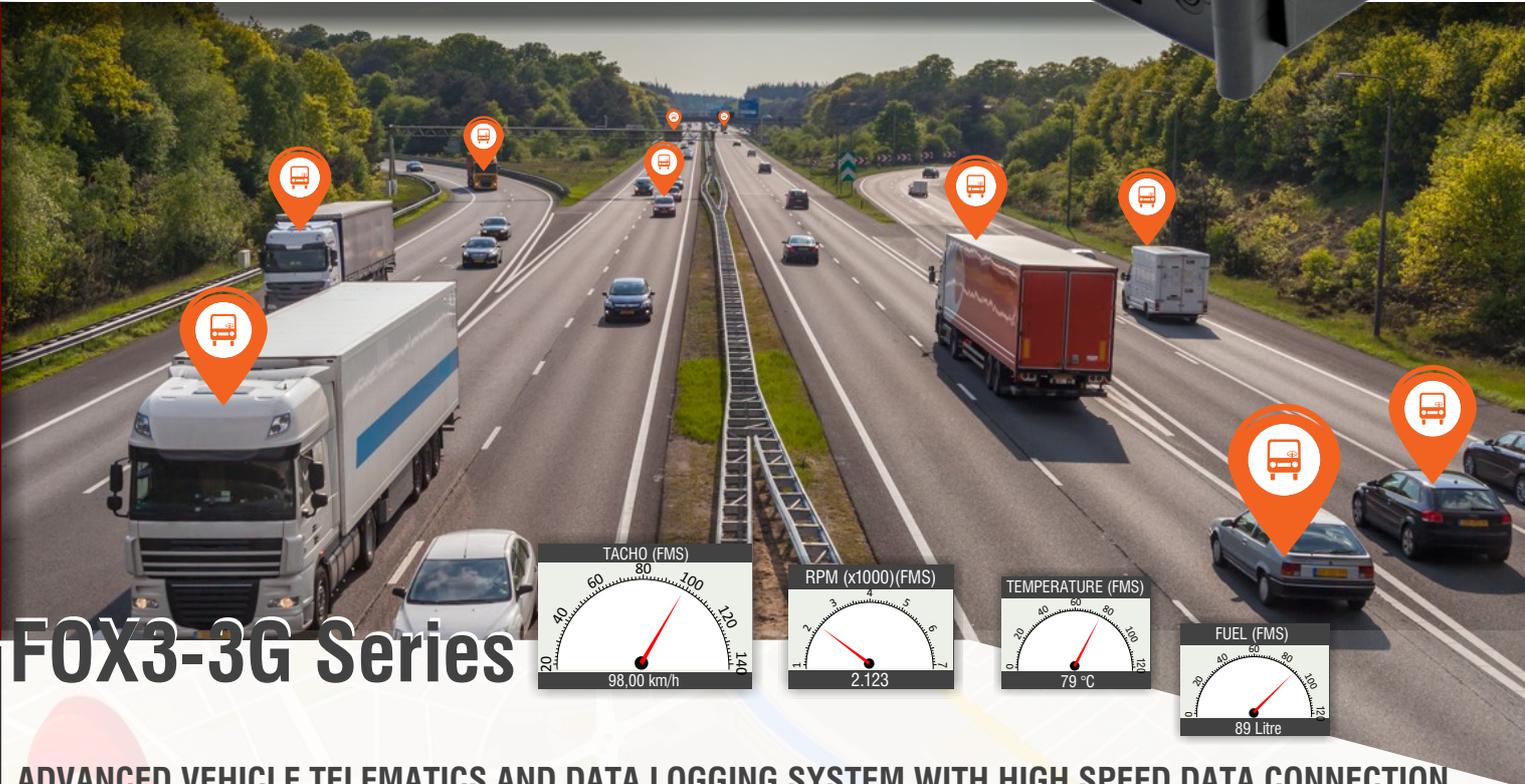




FALCOM, a storied M2M and IoT specialist from Germany, designs, manufactures and sells world-wide state-of-the-art devices, services and solutions ideally suited to numerous applications: fleet management, car sharing, usage-based insurance, asset and workforce tracking and security, precision farming.

APPLICATION



## FOX3-3G Series

### ADVANCED VEHICLE TELEMATICS AND DATA LOGGING SYSTEM WITH HIGH SPEED DATA CONNECTION

OVERVIEW

FOX3-3G Series is a compact all-in-one device combining **HSPA+/2G high-speed data connection** with the latest **GNSS technology** to completely satisfy customer's need. It is a highly **customizable vehicle telematics device** and it offers a variety of inputs and outputs to satisfy the most demanding requirements. A box (**IOBOX-MINI, IOBOX-CAN or IOBOX-WLAN**) can be used to extend the functionality of the FOX3-3G Series for the most flexible expansion options in the industry. FOX3-3G Series is designed to operate with **internal or external antennas**. 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 „**Premium-Features**“ show the way to the future of mobile data logging, storing, processing and sending. FOX3-3G Series is an advanced and fully customizable vehicle tracking device. FOX3-3G Series offers new features like: Data Encryption, several History Modes, Eco-Drive/Behaviour, Data Logging GSM/GPS jamming detection beside standard items like status reports, alerts messaging, audio call, spy calls or geofencing.

KEY FEATURES

GSM/2G/3G	GNSS	TCP/UDP/HTTP	SMS/E-MAIL	LOGGING	MONITORING	SECURITY	ECO-DRIVE	INPUT/OUTPUT
CAN-FMS CAN-OBDDII 2 x CAN BUS	AES-TCP	GSM GPS Jamming detection	SPEED	DTCO D. TACHOGRAPH	REAL-TIME	ANTI-THEFT	DISTANCE	START-STOP
GEOFENCE	DIRECTION	CRASH Det.	ALERTS	Bluetooth Smart BLE	1-WIRE	RFID DRIVER-ID	RS-485	RS-232

**General**

3G bands: 800/850/900/1900/2100 MHz (global coverage)		
2G bands: 850/900/1800/1900 MHz		
Internet (TCP/UDP/HTTP/SMTP)		
Multi channel GNSS (GPS/Galileo/GLONASS/BeiDou)		
A-GPS (online / offline / autonomous)		
Protocols: NMEA, FALCOM (binary)		
Accuracy:	<b>GPS</b>	<b>GLONASS</b>
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	

**GSM / GNSS Antennas**

 Internal and external <sup>2)</sup> with automatic/manual switch

**Electrical characteristics**

Power supply: +10,8 V to +32,0 V DC	
Internal 1000 mAh rechargeable battery <sup>1)</sup>	
<b>Average Power Consumption</b>	
Normal operation:	50mA @ 12 VDC
Sleep mode:	< 1mA @ 12 VDC
<b>Environmental data</b>	
Operating temp.:	-40 °C to +85 °C
Storage temp.:	-40 °C to +85 °C
GSM <sup>3)</sup> :	-40 °C to +85 °C
Battery <sup>4)</sup> Discharging temp.:	-20 °C to +60 °C
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

**Serial Data Rates**

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

**Interfaces**

3 x Digital/analog IO ports (user-configurable)
1 x Predefined digital input (Ignition)
3 x LED indicators (user-configurable)
2 x RS-232 Ports (1xV.24 level; 1xRS-232/RS-485 <sup>5)7)</sup> )
1 x 10pin Mini-USB connector (for IOBOX-MINI <sup>1)</sup> , IOBOX-CAN <sup>1)</sup> or IOBOX-WLAN <sup>1)</sup> )
1 x 1-Wire interface (incl. 5V Phantom Power) <sup>7)</sup>
1 x I <sup>2</sup> C interface <sup>7)</sup>
1 x 4pin audio jack interface (2.5mm) <sup>6)</sup>
1 x CAN-Bus Interface <sup>2)3)</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

**Sensor / Measurement range**

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

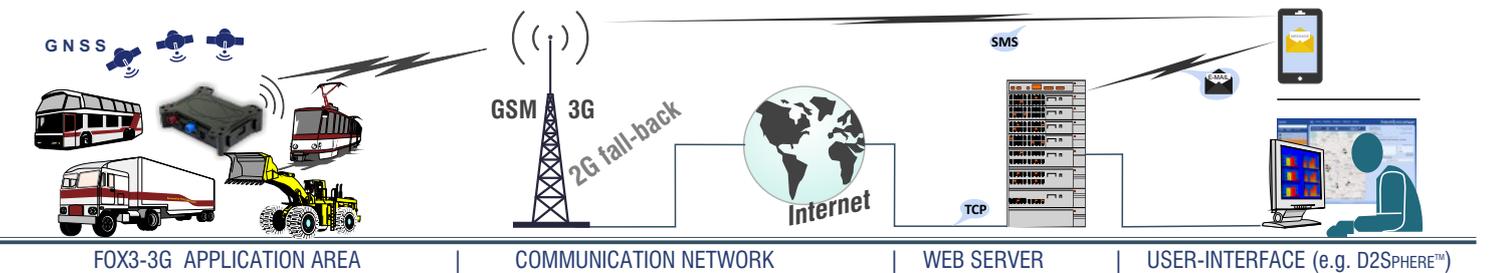
**Processor core**

 RTC<sup>7)</sup>  
 8 MB Flash(History / Firmware / Configuration)

- |                                                                                              |                                                          |                                 |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------|
| 1) Optional / Accessory                                                                      | 4) Applicable with backup battery                        | 6) Available on FOX3-3G-AU only |
| 2) Activation with PFAL-Command.                                                             | 5) Hardware Premium Features: CAN-interface, RS-485 port | 7) Not available on LITE model  |
| 3) The GSM/GPRS module is fully functional (-20 °C to + 55 °C meets the 3GPP specifications) |                                                          |                                 |
- Storage and using conditions of the device with battery option are limited to the battery temperature range.

- 3000 programmable Geofences
- 2000 programmable Waypoints
- 250 programmable Alarms
- ECO-Drive-GPS functions
- Customizable firmware configuration
- Passive/active RFID based applications
- NFC based applications
- Internal GSM/GNSS antennas & connectors for optional external antennas<sup>1)</sup>
- Hardware expandable via IOBOX-MINI<sup>1)</sup>, IOBOX-CAN<sup>1)</sup> or IOBOX-WLAN<sup>1)</sup>
- PROMOTION KIT providing all necessary hardware, software, documentation, SIM Card and 3 month access to the D2Sphere tracking platform including 8h technical training support
- D2SPHERE™ device management services to monitor, diagnose, control and update your FALCOM devices

- Real time online tracking
- Fleet management / monitoring
- Car sharing
- Waste management
- Theft protection
- Public transportation
- Real time satellite navigation
- Territory management
- Route verification
- Trip management / distance calculations
- Driving behaviour / Eco-Drive monitoring
- Security / Emergency / Insurance services (UBI)
- Toll collection / Pay-As-You-Drive (PAYD)
- Compatible with D2SPHERE™ tracking platform and configurable for using other TCP servers



PRODUCT NAME	4G <sup>a)</sup> BAND	3G <sup>b)</sup> BAND	2G BAND	CERTIFICATIONS	FEATURES	REGIONS
FOX3 (2G) Std.			Quad	CE, E1	Standard (with audio)	World
FOX3 (2G)-LITE			Quad		No Audio, RTC, 1-Wire and 2 <sup>nd</sup> serial port	World
FOX3-3G Std.		1/2/5/8/19	Quad	(CE,E1,ISED,FCC,BT) <sup>e)</sup>	Standard (no audio)	World
FOX3-3G-BLE		1/2/5/8/19	Quad		Bluetooth Low Energy	World
FOX3-3G-AU		1/2/5/8/19	Quad		Audio (Spk. + Micro.)	World
FOX3-3G-DR <sup>d)</sup>		1/2/5/8/19	Quad		Dead-Reckoning	World
FOX3-3G-BID <sup>d)</sup>		1/2/5/8/19	Quad		BlueID Technology	World
FOX3-3G-LITE		1/2/5/8/19	Quad		No RTC, 1-Wire and 2 <sup>nd</sup> serial port	World
FOX3-4G-NA	Cat 4: 2/4/5/7/17	1/2/4/8/5 <sup>c)</sup>	Quad	CE,E1,ISED,FCC, Australia, (NZ) <sup>g)</sup>	North America	4G North America, 3G & 2G World

<sup>a)</sup> Cat 4 : 150 Mb/s DL, 50 Mb/s UL    <sup>b)</sup> 5.76 Mb/s uplink, 7.2 Mb/s downlink    <sup>c)</sup> 42 Mb/s downlink, 5.76 Mb/s uplink    <sup>d)</sup> Planned for Q3/4 2017    <sup>e)</sup> Planned/In progress    <sup>f)</sup> Pending

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