

FOX4 Series

Telematics Gateway



LANTRONIX
Connectivity Services



ADVANCED TELEMATICS GATEWAY WITH GNSS

Welcome to the future of tracking with the Lantronix FOX4 advanced telematics gateway. It is pre-configured with Lantronix PercepXion software for comprehensive device life cycle management, seamless application integration, and analytics. The FOX4 advanced telematics gateway sets a new standard for data logging, processing, and transmission, paving the way for unparalleled efficiency in fleet management.

The Complete Package to Successfully Deploy Your Telematics Projects

Many projects fail due to the lack of integration between hardware, connectivity from service providers, critical accessories such as antennas, and the lack of adaptation to the field. Lantronix provides a versatile telematics gateway that connects the featured scenarios, connectivity, advanced support, and a device management platform, PercepXion™, which provides life cycle, certificate management, real-time notifications of critical events, and APIs for easy integration.

Multiple Hardware Interfaces to Connect Your Fleet

The FOX4 Series gateways are versatile, sleek, all-encompassing devices that merge cellular connectivity with cutting-edge GNSS technology and diverse inputs and outputs. Designed for deployment in intricate industrial settings or challenging urban landscapes, the FOX4 operates seamlessly with either internal or external antennas, significantly streamlining logistics, installation, and ongoing support.

Protect and Process Data at the Edge

Connect the FOX4 gateway to any telematics platform with powerful PFAL scripting language or the highly popular LUA. The FOX4 also supports MQTT, Azure, and REST API to ease your hardware integration and shorten your time to market.

PercepXion™ Centralized Device Management Platform

Monitor, manage, and control your devices from anywhere, anytime, with the ready-to-use software platform. The PercepXion platform provides software-defined automation across all your devices and the capture of device telemetry data for event management and analytics.

Connectivity Services – Global Connectivity with SIM and VPN management

Lantronix's cloud-based Connectivity Services platform allows users to activate, monitor and manage SIMs for all devices. The easy-to-use dashboard and analytics tools provide critical insights into connectivity solution operations. In addition, extensive diagnostics help troubleshoot any connectivity issues that may arise.

Perfect For



Fleet
Management

Car-sharing

Commercial
Vehicle



Asset &
Workforce
Tracking

Precision
Farming

Logistics

FOX4 Highlights

- Send to the cloud only what you need with the FOX4 edge processing and local data storage to reduce your recurring cost and ensure the fastest response time from your device.
- Keep critical data safe from cyber-attacks using advanced encryption such as AES, SSL/TLS.
- Collect vehicle information such as tachograph (FMS), RPM (x1000), temperature, and fuel levels with high accuracy
- Collect ID, buzz, magnetic detection, movement, and temperature using Lantronix BLE sensors, or bring your own!

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General

4G LTE, with 2G fallback: (refer to the table below)		
Internet (TCP/UDP/HTTP/SMTP)		
Multi channel GNSS		
(GPS/Galileo/GLONASS)		
A-GPS (online / offline /autonomous)		
Protocols:	NMEA, PFAL (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	
GSM / GNSS Antennas		
Internal and external ²⁾ with automatic/manual		
Wi-Fi 2.4, BLE 5.2		

Electrical Characteristics

Power supply:	+10.8 V~ 60 V DC
Internal 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
Charging temp.:	0°C to +45°C

Physical Characteristics

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

Security Features

Secure Boot
ATEC608 secure element

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 or RS-485
1 x 10pin Mini-USB connector (for IOBOX-MINI ¹⁾ , IOBOX-CAN ¹⁾)
1 x 1-Wire interface (incl. 5V Phantom Power)
1 x I ² C interface
1 x CAN-Bus Interface ²⁾⁵⁾ (uses 2 of 3 I/Os)
1 x 2FF SIM Card Holder
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
8 MB Flash (History / Firmware / Configuration)

1) Optional / Accessory.

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

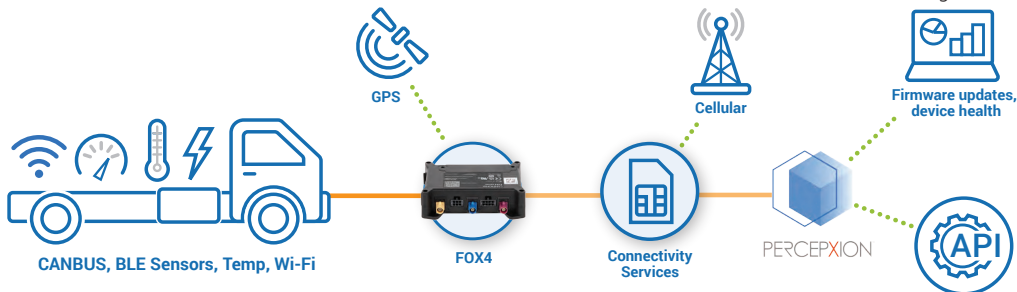
5) Hardware Premium Features: CAN-interface.

2) Activation with PFAL-Command.

4) Applicable with backup battery.
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 antennas¹⁾
- Hardware expandable via IOBOX-MINI¹⁾, IOBOX-CAN¹⁾
- PROMOTION KIT providing all necessary hardware, software, documentation, SIM Card and trial access to the PercepXion™ centralized management platform including 8h technical training support.
- PercepXion device management platform to monitor, diagnose, control, and update your 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 behavior / Eco-Drive monitoring
- Security / Emergency / Insurance services (UBI)
- Toll collection / Pay-As-You-Drive (PAYD)
- Compatible with PercepXion centralized management and easily adaptable to other tracking servers



Part Number	Description
F43H102S	WORLDWIDE LTE-M, with BLE, Wi-Fi and GNSS. Also supports; NB2 and 2G fallback.
F43H207S	JAPAN LTE-M, with BLE, Wi-Fi and GNSS. Also supports; NB2 and 2G fallback.
F43H20FS	WORLDWIDE LTE-M, with BLE, Wi-Fi and GNSS. Also supports; NB2 and 2G fallback.
F44H102S	EUROPE LTE CAT-1, with BLE, Wi-Fi and GNSS. Also supports 2G fallback.
F44H10AS	NORTH AMERICA LTE CAT-1, with BLE, Wi-Fi and GNSS.
F44H104S	LATIN AMERICA, AUSTRALIA, NEW ZEALAND LTE CAT-1, with BLE, Wi-Fi and GNSS. Also supports 2G, 3G fallback.

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