

FOX4 Series

Telematics Gateway

LANTRONIX PERCEPTION | 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 Perception 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, Perception™, 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.

Perception™ Centralized Device Management Platform

Monitor, manage, and control your devices from anywhere, anytime, with the ready-to-use software platform. The Perception 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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TECHNICAL SPECIFICATIONS

| | | | | | |
|---|---------------------------|---|--|--|--|
| General | | Electrical Characteristics | | Interfaces | |
| 4G LTE, with 2G fallback: (refer to the table below) | | Power supply: +10.8 V~ 60 V DC | | 3 x Digital/analog IO ports (user-configurable) | |
| Internet (TCP/UDP/HTTP/SMTP) | | Internal 1000 mAh rechargeable battery ¹⁾ | | 1 x Predefined digital input (Ignition) | |
| Multi channel GNSS | | Average Power Consumption | | 3 x LED indicators (user-configurable) | |
| (GPS/Galileo/GLONASS) | | Normal operation: 50mA @ 12 VDC | | 2 x RS-232 Ports or RS-485 | |
| A-GPS (online / offline /autonomous) | | Sleep mode: < 1mA @ 12 VDC | | 1 x 10pin Mini-USB connector (for IOBOX-MINI ¹⁾ , IOBOX-CAN ¹⁾) | |
| Protocols: NMEA, PFAL (binary) | | Environmental Data | | 1 x 1-Wire interface (incl. 5V Phantom Power) | |
| Accuracy: | GPS GLONASS | Operating temp.: -40°C to +85°C | | 1 x I ² C interface | |
| Position: | 2.5 m 4.0 m | Storage temp.: -40°C to +85°C | | 1 x CAN-Bus Interface ²⁾⁵⁾ (uses 2 of 3 I/Os) | |
| Acquisition / Sensitivity: | | GSM ³⁾ : -40°C to +85°C | | 1 x 2FF SIM Card Holder | |
| Cold Start: | 29 s 30 s | Battery ⁴⁾ Discharging temp.: -20°C to +60°C | | 1 x USB 2.0 interface | |
| Tracking: | -161 dBm -158 dBm | Charging temp.: 0°C to +45°C | | Sensor / Measurement Range | |
| Sensitivity: | -148 dBm -145 dBm | Physical Characteristics | | 3-axis Acceleration/Temperature | |
| GPS Operational limits: | | Dimensions (LxWxH): 105 mm x 83 mm x 28 mm | | - 3DG: ± 8g (programmable) | |
| Velocity: | 500 m/s (972 knots) | Security Features | | - Temperature: - 50 to + 120°C (programmable) | |
| Altitude: | 50.000 m | Secure Boot | | Processor Core | |
| Update rate: | 1 Hz | ATEC608 secure element | | RTC | |
| GSM / GNSS Antennas | | | | 8 MB Flash (History / Firmware / Configuration) | |
| Internal and external ²⁾ with automatic/manual | | | | | |
| Wi-Fi 2.4, BLE 5.2 | | | | | |

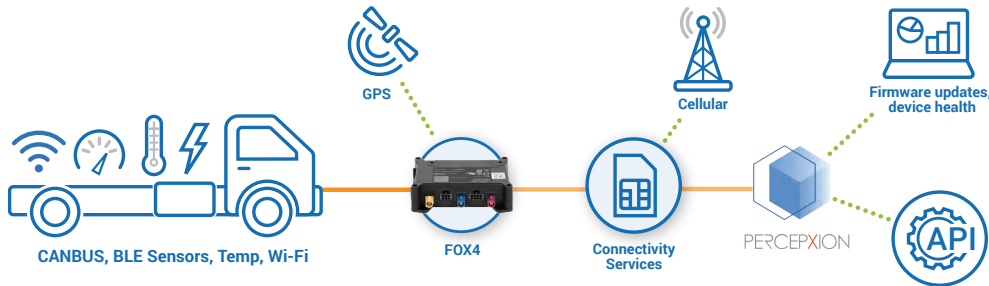
1) Optional / Accessory. 2) Activation with PFAL-Command. 3) The GSM/GPRS module is fully functional (-20°C to + 55°C meets the 3GPP specifications). 4) Applicable with backup battery. Storage and using conditions of the device with battery option are limited to the battery temperature range. 5) Hardware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

OPTIONS

- 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.

APPLICATION AREAS

- 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



AVAILABLE MODELS

| 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. |