

The logo for FTEX, featuring the letters 'FTE' in white and 'X' in orange, set against a background of a person riding a bicycle on a road with palm trees and hills.

# FTEX

Feel the difference

Product Catalogue

2023

# MISSION

FTEX is committed to making electric vehicles **more efficient and connected**. We believe in creating the **first operating system** for light electric vehicles.

FTEX provides OEMs with a full, plug-and-play electronics and software suite, including an IOT capable motor controller, mobile app, and analytics. With FTEX, traditional OEMs can quickly leapfrog their competitors and offer modern vehicles without increasing R&D time and costs.

# OUR STRENGTHS



## More Integration

Innovative hardware and operating system for light electric vehicles



## More Power

GaNFETs and control algorithms efficiently implemented



## More Range

Fewer power losses thanks to our motor control algorithms



## Better Experience

Exceptional motor control algorithms and unbelievably smooth acceleration

## We work with the most innovative OEMs

We work for e-scooter, e-bike, e-moped and e-motorcycle makers who are integrating the hardware, software and connectivity features of their vehicles into a single energy efficient solution.

# 1st

The world's first operating system for light electric vehicles with a **fully connected** GaN-Powered motor controller.

## FTEX Smart and Connected Drive System



# FEATURES

## Benefits of GaNFETs

GaNFETs offer better efficiency and higher power density than legacy MOSFETs. With GaNFETs, FTEX can offer **more power** in a **smaller package** with **better thermal management** and **fewer thermal shutdowns and failures**.

## Safety and Reliability

FTEX controllers offer **active thermal management** and **multi-level fail safes** increasing reliability and safety while reducing failures.

## Complete IoT Integration

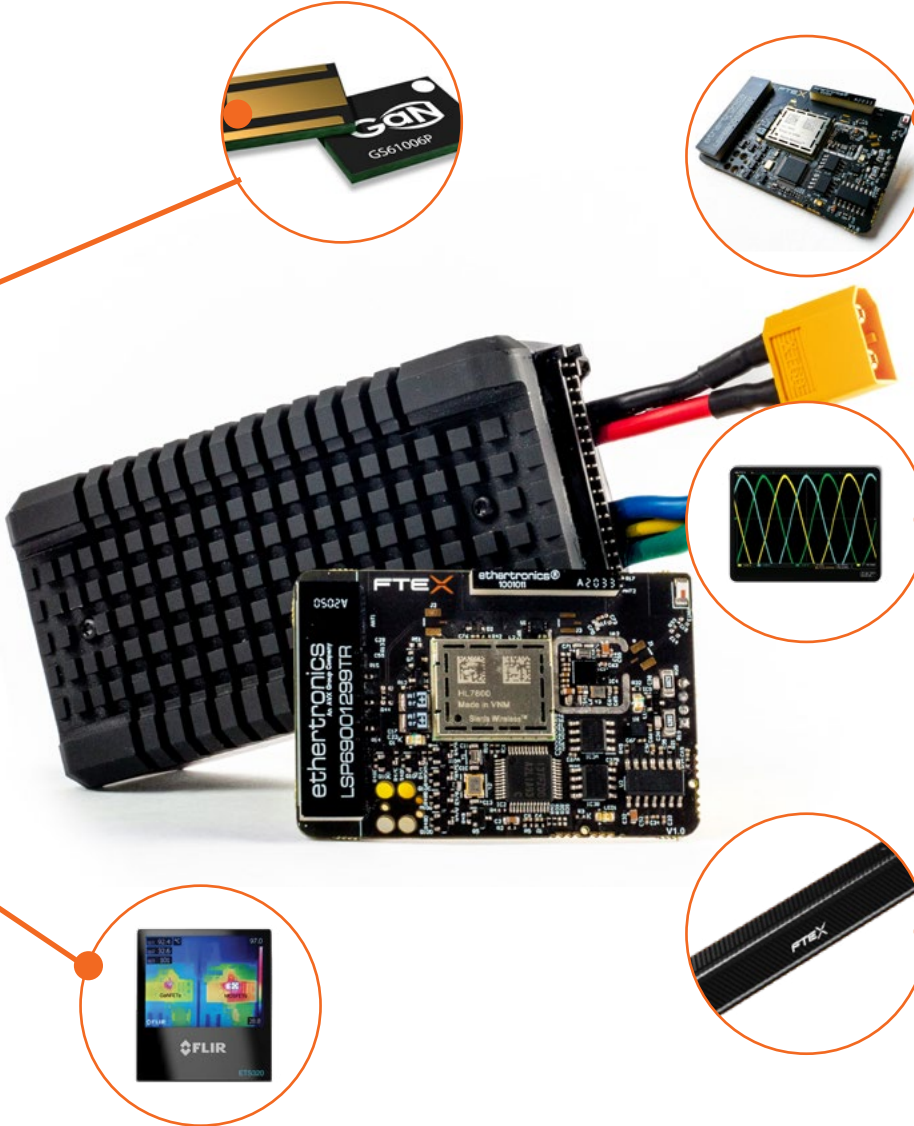
All of our controllers come with complete Internet of Things integration with **LTE**, **GNSS (GPS)** and **Bluetooth connectivity**.

## Sine Wave Controller

Optimized software to enable clean F.O.C. sine wave control for **higher efficiency** and **smoother acceleration**.

## More Range

Go farther with less weight and fewer batteries. Our innovative power management systems extend your vehicle's range by up to **10% compared to conventional motor controllers**.



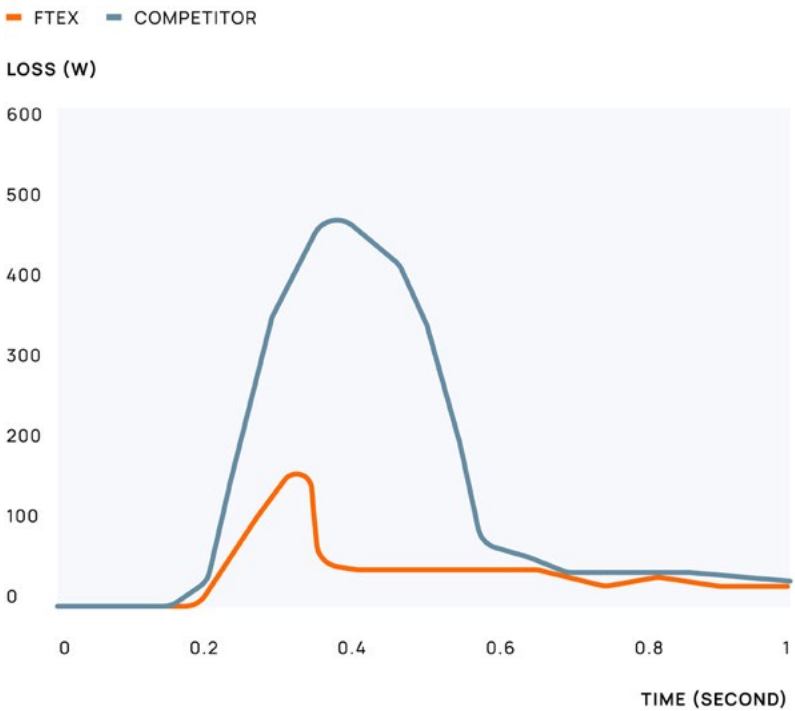


# OUR EDGE

FTEX advanced power electronics results



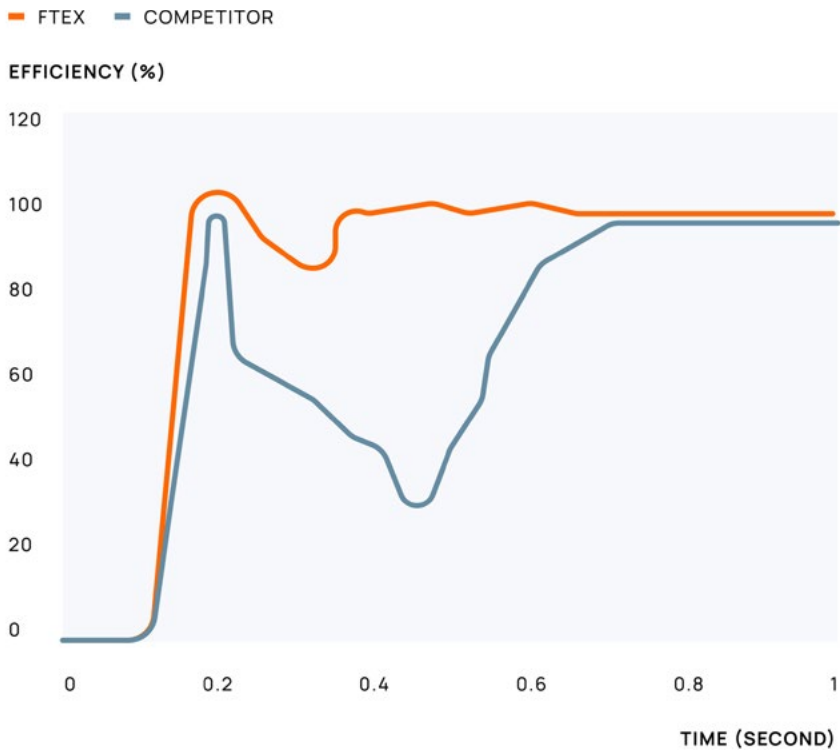
POWER LOSS FTEX VS COMPETITOR



**40%** Energy savings during acceleration

Up to **10%** more battery range

POWERTRAIN EFFICIENCY FTEX VS COMPETITOR



# A MORE PROFITABLE OPERATION

- 1. We increase up to 10% per charge
- 2. Reduce charging down time and cost
- 3. Increase profit per ride

40,000 Scooters averaging 5 rides per day	
Without FTEX	With FTEX
Charging cost/ride: \$0.86	Charging cost/ride: \$0.77 10%
Daily charging cost of fleet: 172K	Daily charging cost of fleet: 154K
→ 18k in saving per day / 6,6 million per year	



Dockless e-scooters ride share implementations are booming around the world, however, the cost of picking up and charging these fleets represents that single largest cost of operations.





# FTEX Evionics



## Instant Diagnostics

Get instant diagnostics on your controller and EV and make sure everything checks out before every ride.



## Over the Air Updates

Ensure that your users always have the latest and greatest firmware. FTEX offers long term support for all our products.





## Smart route navigation

Offer the FTEX app to your users, with live telemetry and smart route navigation to get them where they need to go, safely.



## Safety Collision Detection

Keep riders safe with automatic collision detection that alerts a friend, partner or emergency services automatically.



## Remote Locking

Allow users to lock and unlock their bikes automatically, remotely, from anywhere in the world.



## GPS Tracking

With FTEX, users never lose track of their ride.



# Specifications

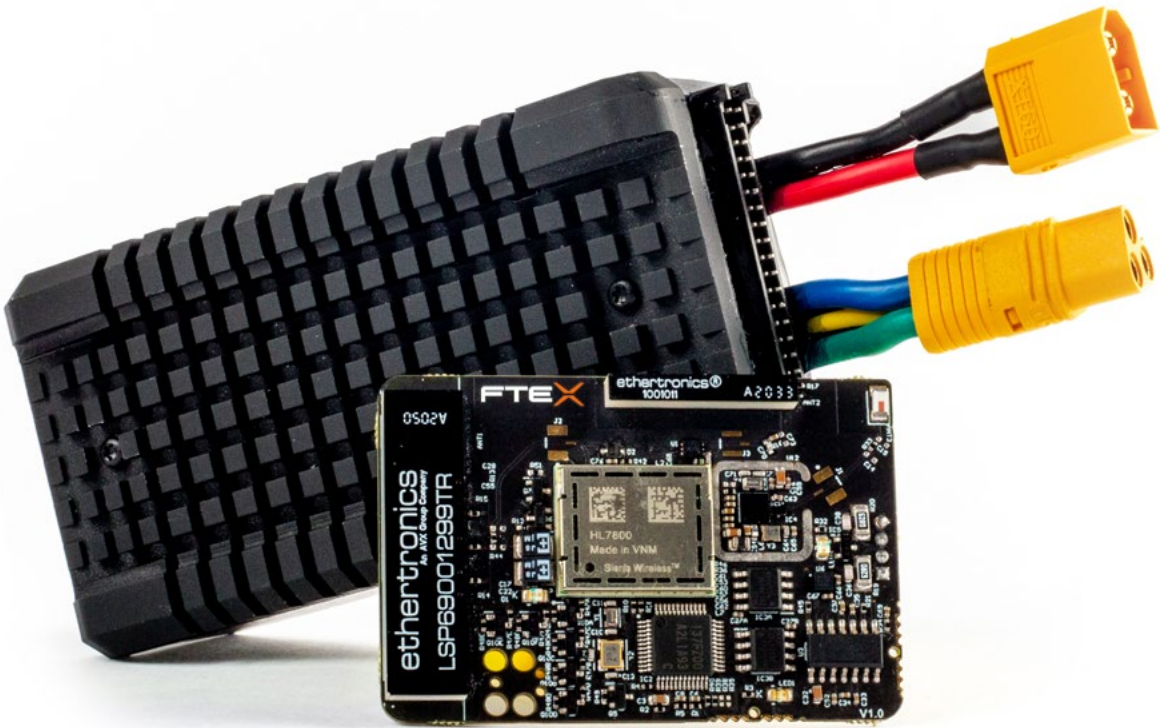
## Single Motor Programmable Controller\*

Power	1500W @ 48V
Motors supported	BLDC
Drive Train supported	Single hub motor
Voltage	28V to 72V (Max 84V) DC
Continuous Current	50A
Peak Instantaneous	75 A-RMS
Peak Acceleration	60 A-RMS
Mean	35 A-RMS
Communication	UART/CAN BUS
Motor control scheme	Sinusoidal field oriented (FOC)
Control Method	FOC sinusoidal

## Dimensions

LW (W/WIRES)	L (mm)
210	100
W (mm)	H (mm)
50	36
Weight (g)	
375	

\* Possibility to use as a modular controller and to extend for multiple motor vehicles using CAN BUS



## IoT Module

Networks	BLE, LTE, GNSS
Compatible with	FTEX eBike SDK (iOS available, Android pending)  Out-of-the-box compatibility with the FTEX app

## Dimensions

L (mm W/Grommet)
112
L (mm)
100 mm
W (mm)
43
H (mm)
15

# Customer Success Team



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# FTEX

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