



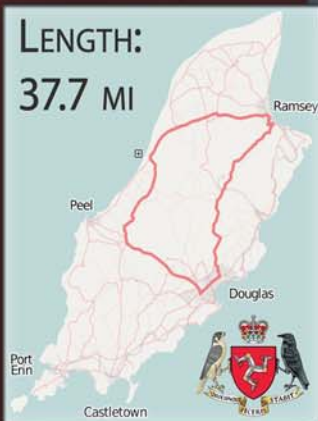
# MIT EVT



**TF**  
ZERO  
ISLE OF MAN



# TT ZERO MOTORCYCLE RACE | ISLE OF MAN



## THE RACE

A showcase of the latest zero emissions propulsion technologies. With speeds reaching 135mph in 2010 and increasing every year, it is certainly not for the faint-of-heart.

Held on the closed public streets of a mountainous island in the Irish Sea, the race attracts over 40,000 fans who overtake hedges, fields, gardens and pubs to get closer to the action. With riders from over 20 countries and live television coverage around the world, participation has grown each year since the first race in 2009.

## THE TEAM

A group of grad and undergraduate students from the Massachusetts Institute of Technology, who spend more weekends in the shop than the park and routinely stretch academic deadlines to make time for building high-performance electric vehicles.

Past projects include a 1976 Porsche 914-EV, 2010 Mercury Milan EV and TMS eMotorcycle - of which the latter two can recharge in 11 minutes.



UTM projection (WGS84 datum)



# THE MOTORCYCLE

## HIGH FREQUENCY MOTOR CONTROLLER

Drives the two motors with 540 Amps continuously or 1,200 Amps for one minute, based on the rider's input.



## CYCLE ANALYST DISPLAY

Displays power throughput, remaining energy and instantaneous efficiency. Allows the rider to optimize energy usage and cross the finish line with an empty pack.



## AXIAL-FLUX MOTORS

Two permanent-magnet DC motors move the bike with 75kW of peak power and 160N-m of torque. Peak efficiency is rated at 91%.



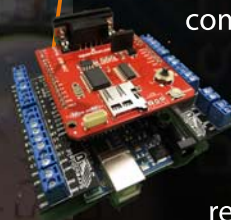
## LiFePO<sub>4</sub> PRISMATIC BATTERIES

Four lithium-iron phosphate battery modules provide 11.88kWh of energy at 99 volts. Continuous power output capacity is 240kW.



## VEHICLE-LEVEL MICROPROCESSOR

Provides signal-processing and communication between the battery management system, motor controller and rider display. Alerts the rider of system errors, logs data and reports real-time back to the pit using GSM telemetry.





# SPONSORSHIP

We will not be able to cross the finish line without the help of our sponsors. Our bike is in the testing and validation stage, and we have a ways to go before we are ready for a spot on the starting grid.

Our team is looking to raise \$45,000 to fund further development, racing logistics and fees. Please consider joining our team!

Our work is made possible by the support of like-minded individuals and organizations, and we work to provide exposure through news coverage, our website and outreach activities.

## Sponsor Benefits:

- official team membership
- logo on motorcycle
- advertisement
- tax deductions

## Sponsorship Levels:

GigaWatt:	\$20,000
MegaWatt:	\$10,000
KiloWatt:	\$5,000
Watt:	\$1,000

## 2011 Isle of Man Race Budget:

- fiberglass bodywork	\$4,000
- spare parts	\$5,000
- travel costs	\$10,000
- shipping	\$2,000
- test track time	\$4,000
- pit trailer and tools	\$20,000

WIT

A123  
SYSTEMS



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