



INTRODUCING THE
STEM RACING TELEMETRY MODULE

TURN EVERY RACE INTO DATA

The STEM RACING Telemetry Module captures performance data directly from the car, helping students understand why their car performs the way it does and use **real world data to guide improvements.**

DESIGN. MAKE. TEST. RACE.



MORE THAN A RACE RESULT

The Telemetry Module adds another dimension to the STEM Racing experience, turning every race into an opportunity to analyse, learn and improve.



FEATURES



Real-Time Data Monitoring

Receive and visualise accelerometer and gyroscope data directly from the Bluetooth-enabled Telemetry Module.



Interactive Data Visualisation

View real-time charts displaying up to 1,500 data points at once, with refresh rates of up to 20 FPS.



Statistical Analysis

Analyse performance data to identify patterns, understand results and make informed design improvements.



Ghost-Run Comparison

Compare data from different runs to evaluate performance and identify potential improvements.



Data Export

Download recorded data for more detailed analysis, comparison and further investigation.



Web-Based Application

Access the STEM Racing Telemetry Monitor through a web-based interface, designed to work with STEM Racing embedded firmware.

TECHNICAL SPECIFICATION

- › Dimensions : L 50 x W 24.57 x H 22.58mm
- › Sample rate : 1000Hz
- › Sample time : 1ms
- › Accelerometer range : $\pm 16G$
- › Gyro range : $\pm 1000^\circ/\text{sec}$
- › Module weight : 11.8g
- › Battery capacity : 70mAh
- › Charge time @ 500mA : 10 mins
- › Run time when logging : 10 mins

BRING PRACTICAL DATA INTO THE CLASSROOM.

The **STEM Racing Telemetry Module** builds on the hands-on STEM Racing experience, helping students move beyond simply racing their designs, to capturing and analysing real-time data directly from the track.

BOOK A CALL