

Racing Engine Data Logging

Project Overview

High speed data logging from high performance racing engines when being tested on an engine dynamometer – F1, WRC, IndiCar and Cart with engine speeds up to 20000 RPM and power outputs up to 1000 BHP.

7 engine test cells using VXI C-Size data acquisition racks and MXI communications acquiring data from up to 128 individual analogue inputs at 1KHz sample rate simultaneously (128Ks/s). Analogue readings converted to engineering units in real time and displayed graphically and numerically and written to black box data file updated through duration of test.

Durability, development and racing preparation testing. Calculations of engine performance, fuel/oil consumptions , turbo efficiency , air consumption, heat rejections, mas air flows and volumetric efficiencies.

Safety over-range and critical alarm monitoring and engine shut-down.

Comprehensive engine, cell and test configuration database administration, channel calibration, post test data retrieval, analysis and reporting options.

