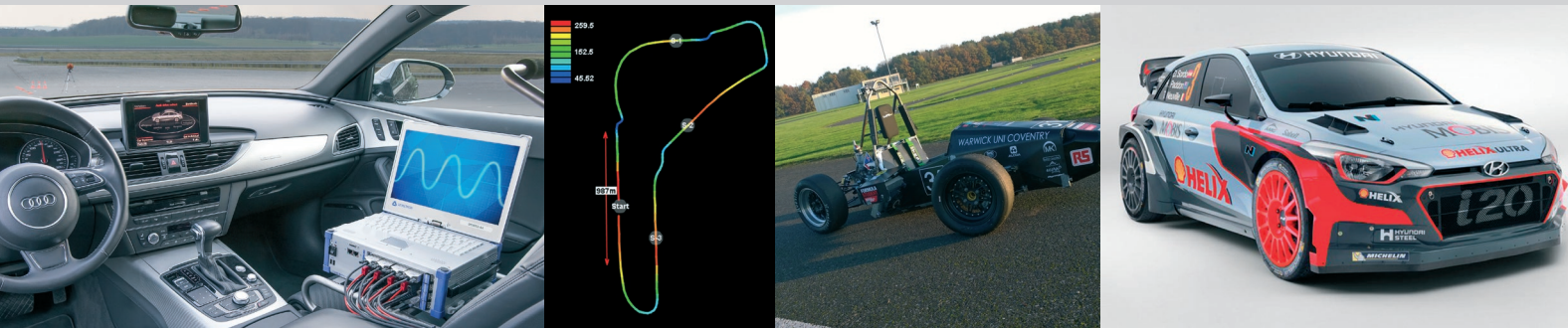


Our comprehensive range of sensors and instrumentation for autosport covers all applications from component test to race performance monitoring and control. Whether you need to equip your R&D lab and test rigs or instrument your race car, we have the right solution for you. At StrainSense we understand the demands within the industry for high accuracy, low size and weight, combined with competitive costs. We also understand the unique nature of many applications so custom designs are available in many sensor ranges, these allowing for revised packaging, performance and outputs to meet customer requirements. In addition our data acquisition systems are customisable and re-configurable to allow you to make the most use of your investment.



### Sensor types

#### Linear Position

The MS-94 range of sensors are ideally suited for autosport applications being engineered from the best materials for the purpose. Sealing to IP67 makes them ideal for harsh environments such as WRC and rally raid. Proven extensively on F1 cars and MotoGP bikes to name but a few. The larger MS-19 sensors have seen heavy duty service on World Rally cars and off-road vehicles. Stroke lengths from 10 - 450mm are currently available. Rod-end or pop-joint mountings are standard with custom mounting options possible. Titanium shafts can now be provided where weight saving is at a premium.

#### Rotary Position

The new MS-22R range of rotary potentiometers are available with measurement angles of 0-30 to 0-350 degrees and can operate in environments up to 175C. Dual independent outputs can also be supplied. Non-contact rotary position sensors that offer up to 0-360 degree measurements can be supplied with single or dual outputs with either analogue or PWM. Housings can go down to 13mm diameter and operate at up to 150C.

#### Pressure

Our range of pressure sensors are supplied in a wide variety of forms to suit measurements of pressure in air, water, fuels, lubricating oils and hydraulics fluids. In addition we also supply specialist sensors for use in aerodynamic and hydrodynamic performance testing. A variety of port types are available including flush diaphragm along with materials selection to suit the application. Typical pressure ranges from 50 mbar to 2,200 bar.

#### Force/Torque/Strain

StrainSense offer a range of transducers for measuring force. These can be for linear measurement or rotational in the case of torque. Strainsense are also experts in the application of discrete strain gauges to measure forces in components. Applications range from suspension and steering components to bodywork and aerodynamic aids. If you need to measure forces on a component then we have a solution for you.

#### Acceleration and Vibration

StrainSense provide a range of high precision accelerometers for measuring acceleration and vibration. We provide multi-axis accelerometers as well as sensors for tilt, angular rate and a range of specialist sensors for crash testing. Our Engineers have extensive experience in finding solutions for all of your accelerometer and vibration testing needs. Our range typically covers accelerations from 1g to 10,000g and from DC to 20,000Hz.

Acceleration | Force | Position | Pressure | Strain | Tilt | Torque | Vibration | Weight

[www.strainsense.co.uk/autosport](http://www.strainsense.co.uk/autosport)

All your sensor and data acquisition needs can be met from one source, StrainSense!

### Data Acquisition Systems

We offer a comprehensive range of test and development hardware and software to suit all requirements and budgets. Our Team have worked in the highest echelons of professional motorsport and can offer you expert guidance when selecting a system to meet your requirements. We now also offer a range of road and race orientated dashes, loggers and timers.



#### Interfacing to suit all sensor types:

- Voltage/Current/Potentiometer/RTD/Thermocouple/Bridge/IEPE
- Digital/Counters
- CAN/Flexray
- Audio/Hi-speed and Hi-resolution video
- High-precision GPS
- Custom interfacing available

#### Key attributes:

- Up-to 2000 channels
- Sampling rates up-to 2MS/s
- Resolution up-to 24bit
- Angle domain systems for Engine dynos
- Comprehensive systems for vehicle dynamics
- Power monitoring and analysis for EV's and hybrids
- Variety of hardware configurations to suit your application
- Data acquisition, analysis and processing software
- Comprehensive technical support
- Maintenance and calibration services
- Project Engineering support and customisation services available



#### Race and road:

- Full colour hi-resolution dashes
- Compact multi-channel loggers with GPS
- Lap timers with GPS and track mapping
- CAN bus integration
- Video integration
- Data analysis software
- Standard fit looms for many applications



#### Some of the specific areas where our systems and sensors are used are:

- Vehicle Dynamics
- Aerodynamics
- IC Engine performance
- Hybrid and EV powertrain
- Braking systems
- Transmissions
- Suspension
- Component failure analysis
- Crash testing



### Follow Motorsports premier teams:

Our comprehensive range of sensors and DAQ systems are used in all areas of both domestic and International Motorsport. Customers for our range include teams competing in:

Formula 1 • World Rally Championship • MotoGP • World and British Superbikes • British Touring Cars • Formula Student Series • Dakar Rally • Rally Raid • British Cross Country Championship

Our sensors and systems are used in all areas of Motorsport from test and development to race performance monitoring, from aerodynamics to power-train performance, from oil system pressure to high-precision GPS positioning.