ABOUT MILLBROOK TECHNOLOGY PARK

Millbrook Technology Park is home to many vehicle technology companies, each that have the benefit of immediate access to Millbrook's tracks, test facilities, and expertise. The Park supports its tenants with test and engineering services, product development, facilities management, catering and hospitality, and product demos. Millbrook has locations throughout the world, including the U.S., Finland, Germany, Sweden, Turkey, India, China, South Korea, and Japan.

MILLBROOK

rotronic
MEASUREMENT SOLUTIONS

CUSTOMER

Millbrook Technology Park

MILLBROOK.CO.UK/TECHNOLOGY-PARK/

CHALLENGES

◢ Measuring emissions in accordance with industry regulations

◢ Ensuring compliance for vehicle test and validation services

◢ Integrating with the RotronicMonitoring System server platform

RESULTS

◢ Full on-going integration with Rotronic Monitoring System

◢ Quick and easy calibration

◢ Traceability and transparency of data

◢ Simple reporting and live alarms

◢ Assurance to meet regulatory compliance

PRODUCTS

INDUSTRIAL NETWORKING

E3 I/O Module- 16 Isolated Thermocouple Inputs

DEFINITION OF
PROBLEM

For some time, Millbrook's testing and validation processes measured the ambient temperature at a single location; however, new Vehicle Emissions Regulations (WLTP) now require this to be measured in each area and on a five-minute rolling average. Millbrook also has multiple soaking areas operating at different temperatures, ranging from -20°C to +50°C, requiring numerous sensors.

Millbrook was unable to find an existing solution on the market to ensure compliance with new regulatory requirements and meet the test and validation service process needs that would be supporting their new facility.

Millbrook had a set of solution requirements:

◢ Temperature data recording at 0.5Hz and the capability to calculate a rolling five minute average

◢ Capacity to record additional thermocouples

◢ Report and record all the data to a central location, with all locations viewable at the same time

◢ Traceable recording for evidence of regulatory compliance

◢ Visualization of data in real time to improve operator efficiency

◢ Flexibility and expandability for the future of Millbrook's operations as they expand with the growth of the 5G autonomous car and electric car industry

THE RED LION
SOLUTION

Millbrook chose Red Lion Controls and Rotronic to create a custom solution for several reasons. Red Lion offers:

◢ A wide range of operating conditions

◢ Worldwide support

- ◢ Availability of detailed technical documentation online

- ◢ High specification hardware

- ◢ Flexibility of communication options

- ◢ Availability of a wide variety of interface modules (both analog and digital, inputs and outputs)

The product recommended by Red Lion would be required to interact seamlessly with the Rotronic Monitoring System (RMS). As such, Millbrook introduced Rotronic to Red Lion Controls, and both companies liaised directly with each other to create a world class solution.

Supporting multiple thermocouples and featuring 16 bits A/D resolution, +/- .02% full scale accuracy, and a +/- 50 ppm per °C temperature coefficient, Red Lion's E316ISOTC1- 16 Thermocouple Input module was selected for integration, assimilating effortlessly with Rotronic's software and hardware while expanding the variety of compatible I/O modules. The Rotronic Monitoring System was selected for continuous monitoring of the Redlion and Rotronic measurement hardware. The Redlion E3 range was easily integrated into the RMS software. Millbrook chose Rotronic as they offered:

- ◢ True server based monitoring system designed for industrial applications (both cloud and on premis)

- ◢ Simple dashboards, reporting and live email, sms and voice alarms

- ◢ Full audit trial of events and data

- ◢ Flexible industrial IOT solution designed to support integration

- ◢ High security and redundancy

- ◢ Support for Redlion devices

RESULTS

Red Lion provided Millbrook with the desired configuration and a solution that facilitates easy communication to the Rotronic Monitoring System. Red Lion E3 devices support Ethernet bridging (meaning, only one Ethernet connection per chamber was necessary), Modbus over Ethernet communication, and compatibility with a wide range of high specification hardware options. Further, the built-in web interface provides quick, trouble free calibration, and the complimentary Crimson 3 software simplified configuration. Delivering a solution that empowered full information transparency and ease of data accessibility, Millbrook described Red Lion as "capable, reliable, and supportive."

Red Lion Controls provided Millbrook Group with a solution that enables stress-free operation, simple data capture, optimized traceability, and regulatory compliance in their vehicle test and validation services.

For more information, please visit www.redlion.net.