

Temperature Logger Software

Development of a datalogger application to allow logging and trending of temperature in industrial environments.

Introduction

When characterising temperature profiles in industrial environments, for example; in furnaces, environmental chambers, electrical control panels, engines and turbines etc, it is necessary to make many measurements at many measurement points. Often the large channel count means that it is not practical for these measurements to be made manually and therefore systems are needed to automate this process.

The Challenge

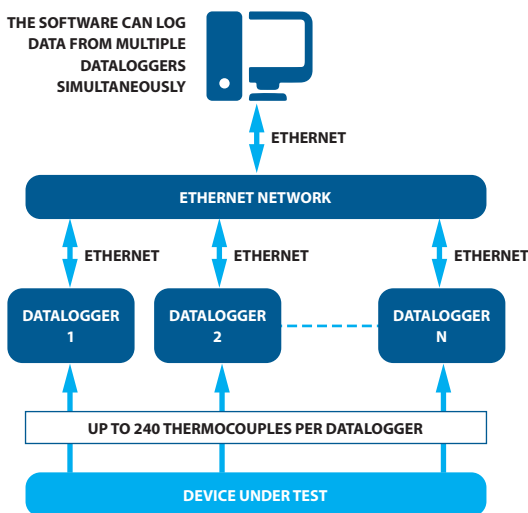
To develop a monitoring system to measure, trend and log temperature at many measurement points. The system was required to be expandable so that additional loggers could be added to the system. Log rate, alarm conditions and test duration needed to be configurable depending on the requirements of the test.

The Solution

Control Software Solutions Ltd developed a flexible logger application capable of:

- > Controlling multiple dataloggers.
- > Adding and removing dataloggers.
- > Acquiring from up to 240 thermocouples per data logger.
- > Allowing operators to configure individual or groups of channels as required.
- > Allowing user defined log conditions including log interval, start condition and stop condition.
- > Displaying live readings for a specified channel.
- > Displaying trend data in graph format with the ability to add and configure plots.
- > Displaying data in a table format showing latest reading and alarm conditions.
- > Logging of test data to text files for importing into Microsoft Excel.

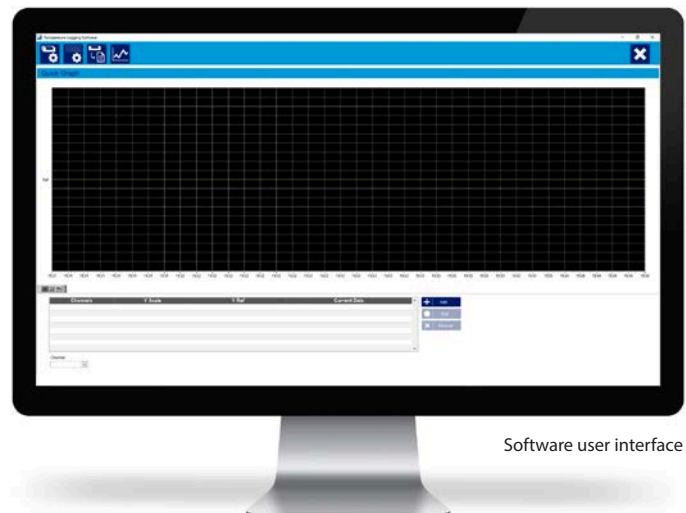
THE SOFTWARE CAN LOG DATA FROM MULTIPLE DATALOGGERS SIMULTANEOUSLY



Overview of the temperature monitoring system showing the main hardware elements

Hardware/Software Used

- NI LabVIEW
- Agilent 34890A Datalogger



Software user interface