

Application Note To monitor and measure internal temperatures of new prototype vehicles in a hot dry environment.

Customer Requirements

As part of new product testing new prototype vehicles one of the tests is the “Hot Soak” in which the vehicle placed in a hot dry environment for a period of time and the internal temperatures of the vehicle and other parameters are measured.



Equipment

DT500
Iridium satellite modem
Solar cells and external batteries
DeLogger™ 4 Pro software

Sensors

Thermocouples
Global Radiation sensor

Datataker Solution

The prototype vehicle was instrumented at the manufactures Australian based development facilities. The thermocouples were placed to monitor temperatures of items and surfaces on both the inside and outside of the test vehicle. The radiation exposure of the vehicle was measured with a Global Radiation sensor.

The entire system was then extensively checked before the prototype vehicle was flown to a location in the Middle East where it was placed in the desert for several months during the summer period. The *dataTaker DT500* was powered by the solar cells and the satellite modem was placed under the vehicle out of direct sun exposure during the test period.

Using DeLogger 4 Pro's actions facility the data retrieval and storage was fully automated and the evaluation team in Australia is able to dial in to the *dataTaker DT500* at any time to download and review the latest data.

This data was then used to evaluate vehicle stagnation temperatures and use as the basis for further accelerated environmental testing programs.

If you need more detail on this application please contact joyce.reid@datataker.com.au

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