The LHP Oxygen Sensor Simulation Module is part of the LHP Engine Test Suite that is engineered to work with the NI VeriStand Engine Simulation Toolkit for closed-loop engine simulation.

Features

The LHP Oxygen Sensor Simulation Module provides two channels of UEGO sensor simulation capable of simulating various wide-band oxygen sensors and fuel types over a wide range of air/fuel ratios.

The LHP Oxygen Sensor Simulation Module has built-in diagnostic and reconfiguration features available via the SLSC backplane interface.

The primary oxygen sensor simulation control loops are implemented with an on-board microcontroller, which provides the system integrator with a simpler interface, enhanced control, better diagnostics and reconfigurability.

All inputs and outputs to the DUT and to the measurement system are protected.
**Specifications**

**Lambda Simulation**
Two channels of wide-band O2 sensor simulation. Requires rear transition interface connection to a 0-10 V analog output per channel. When configured and calibrated, a 5.0 Volt command produces an air-fuel equivalence ratio (Lambda) of 1.0.

**Power Requirements**
24 VDC, 150 mA Max.

**Mating Interface Connectors**

*Input*
2 Analog inputs via Rear Transition Interface.

*Output*
D-Sub High Density 44 pin connector.

**Miscellaneous**
Fully validated for simulation of Bosch LSU 4.9 and NTK/NGK oxygen sensor. Bosch LSU 4.2 sensor simulation calibration in development.

SLSC fully compatible rear I/O using pinout [04].

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**Function Diagram**

[Diagram showing the components and connectivity of the oxygen sensor simulation module.]

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