

Record Fast Measurement Data in the Inverter And Electric Drive With VX1000



The Customer

DeepDrive, a Munich-based high-tech company, is set to become the category leader in electric motors for the automotive industry and beyond. The company's patented Dual Rotor motor technology is an answer to the most pressing challenges of today's electric vehicles (EVs). Not only does it enable large-volume EVs with a range of more than 800 km, it also offers car manufacturers the potential to save over €1 billion in costs during high-volume production. Simultaneous, DeepDrive's technology significantly reduces CO₂ emissions and can potentially save several gigatons of CO₂ over the lifetime of an entire EV fleet. DeepDrive's technology is versatile in design and can be integrated as a wheel hub drive or as a classic central drive.

The Challenge

Measuring new technology efficiently

DeepDrive's products based on the Dual Rotor motor technology, the In-Wheel motor and the Central Drive, are revolutionizing the market and consist of three components developed in-house: Motor, Inverter and Software. For testbench and laboratory testing, a lot of data has to be collected and recorded in a very small space. This data must not be disturbed by external influences, for example by EMC problems.

The Solution

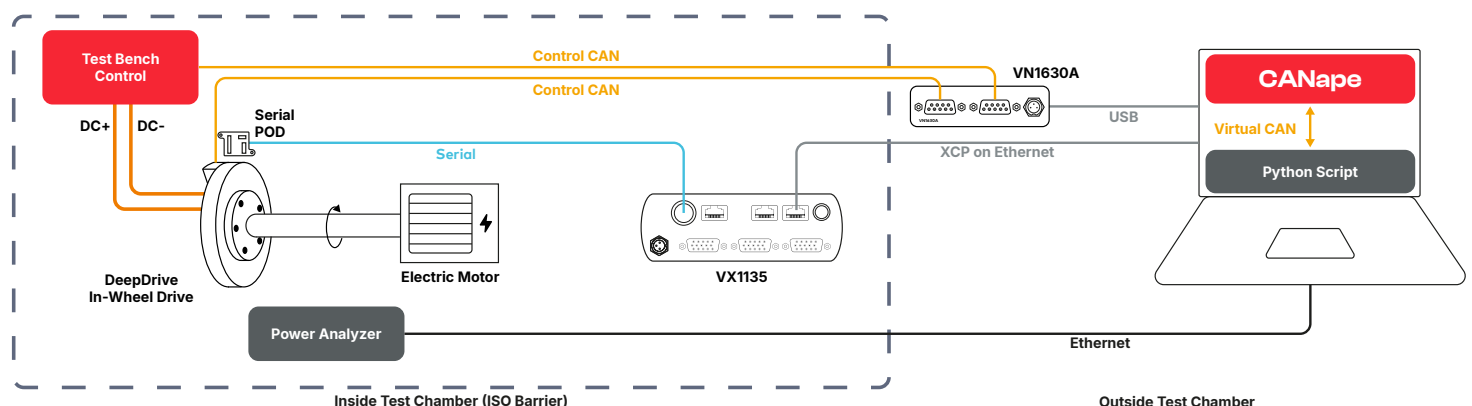
- > Fast measurement data in the inverter environment must be available synchronously; cycle times of 100 microseconds and faster must be sampled.
- > The VX1000 is used both in the laboratory environment and testbench, as well as in the vehicle.
- > The data is recorded and the test bench is controlled via CANape, which is open to all third-party hardware to be controlled thanks to its interfaces.
- > The aim is to reuse market-ready solutions. The Measurement and Calibration Hardware VX1000 is a perfect match here.

The Advantages

- > Easy installation and getting started process of the VX1000.
- > Reliable data acquisition via serial POD, Ethernet and CAN in EMC-harmed measurement-environment.
- > CANape as a central control system for testing infrastructure and DUT control.
- > Automation and evaluation inside CANape.
- > Fully synchronized measurement data.

More Information:

www.vector.com/vx1000



Schematic Test Setup