

Electrical model development

The VSM-100 developed by D&V Electronics is a complete vehicle power electronics tester and simulator

D&V Electronics

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➤ D&V Electronics has created a new development tool for vehicle electronic systems that provides wide-ranging benefits for automotive design teams. There has been a significant focus on how virtual simulation software is improving the design cycle. Now there is a test platform to realize the implementation of a design and evaluate a system's performance before going to a full build, thereby reducing time and money spent in cold rooms or other third-party testing expenses.

With the world-class expertise of D&V Electronics in designing alternator and starter test systems, the VSM-100 provides an all-in-one solution that enables users to quickly and accurately conduct systems-

level testing of a wide array of vehicle electrical system architectures. D&V's comprehensive testing software lets users build detailed testing scenarios, one object or multiple objects at a time, using multiple configuration options. With this flexibility, the VSM-100 saves critical time in identifying positive and negative trade-offs when selecting from a vast array of variables in creating the control software.

The VSM-100 is a comprehensive electrical model test platform. Simultaneously testing the alternator and starter in real-time processing up to 200,000 samples per second, the VSM-100 provides a test bench for ECU programmers, systems architecture

designers, and electrical engineers, allowing them to validate their systems' integration.

Software and virtual simulation takes designs to a theoretical proving ground that relies on assumptions. D&V Electronics is introducing a testing system that allows the design to be validated with real-time control and response measurement during development of vehicle control module firmware, under real-world conditions, with environmental testing between -30°C and 140°C. The VSM-100 is a tool that will take a design into the real world and validate that the system is ready for build, while providing an environment that is flexible to component modifications or replacements.

On the VSM-100, the electric system is powered by the alternator and the battery is also in climatic conditions. After the tests are complete, the starter motor will need to start the engine reliably just like in a real vehicle. In this way, the VSM-100 tests the reliability of the electric system without constructing an entire vehicle and records all the data at a very high sampling rate.

D&V Electronics has specialized in industry-leading starter motor and alternator test systems since 1997. The VSM-100 now provides a flexible environment to test all of the vehicles' electrical components and their integration with the vehicle's electric control, storage and generation system. ◀



LEFT: VSM-100 enables electrical system tests without the full vehicle