Simulation of Surrounding Systems for an Extracorporeal Life Support System

Getinge Rotaflow II



The Customer

Getinge is a leading global provider of products and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. It was founded in 1904 in Sweden. The Getinge offering includes solutions for:

> Intensive Care
> Cardiovascular Procedure
> Operating Rooms
> Sterile Reprocessing
> Life Science

The Challenge

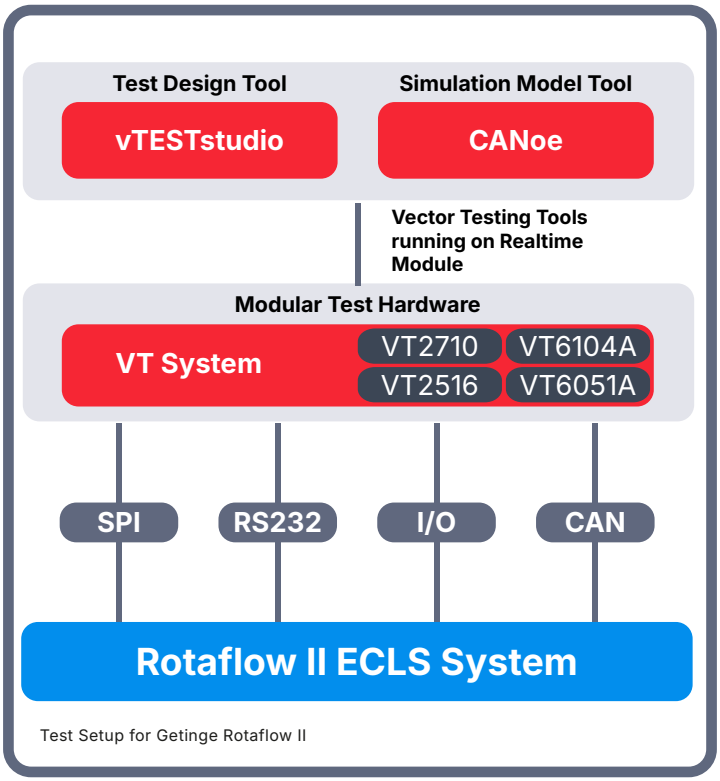
Testing the software of a new ECLS controller board, including simulating and stimulating of the surrounding external systems.

For the new Rotaflow II extracorporeal life support (ECLS) system a controller board was designed by Getinge. The software of the new system has to be tested and the surrounding external systems have to be simulated and stimulated for the tests. These surrounding systems are using different protocols: SPI, RS232 and CAN. These different protocols have to be tested automatically in one test environment.

The Solution

Getinge uses CANoe, VT System and vTESTstudio for the test bench. CANoe serves as the core platform for stimulating the environment and executing the test. CANoe offers the possibility of a wide variety of serial protocols such as SPI, RS232, SENT and many more. vTESTstudio is used for model-based testing and to simplify the creation of test cases. Different graphic notations can be combined in an integrated design environment in vTESTstudio.

At the same time, vTESTstudio supports the definition and reuse of test cases and variants. The VT System serves as the hardware interface to the adapter board and the various protocols.



Test Setup for Getinge Rotaflow II

The Advantages

> CANoe offers the possibility of simulating and stimulating the entire Rotaflow II System with an easy to use Software.
> The VT System provides the hardware interface for measurement and stimulation of each component of the Rotaflow II System: SPI, RS232 and CAN.
> vTESTstudio provides the possibility of easily creating reusable tests and generates automatic test reports.

This minimizes test times, lowers costs and improves product quality.

More Information: medical.vector.com