



# CIT Engineering Polska Sp. z o.o.

**CIT Engineering Polska Sp. z o.o.**

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**ROBOTECH**

**AUTOMATYKA, STEROWANIE,  
OPRZYRZĄDOWANIE, ROBOTYKA**

**KOROLECH**



- **System integrator**
- **Specialist in Test & Measurement**
- **Specialised in Automation**
- **Turn-Key Solutions, Services**
- **CONCURRENT ENGINEERING PARTNER**

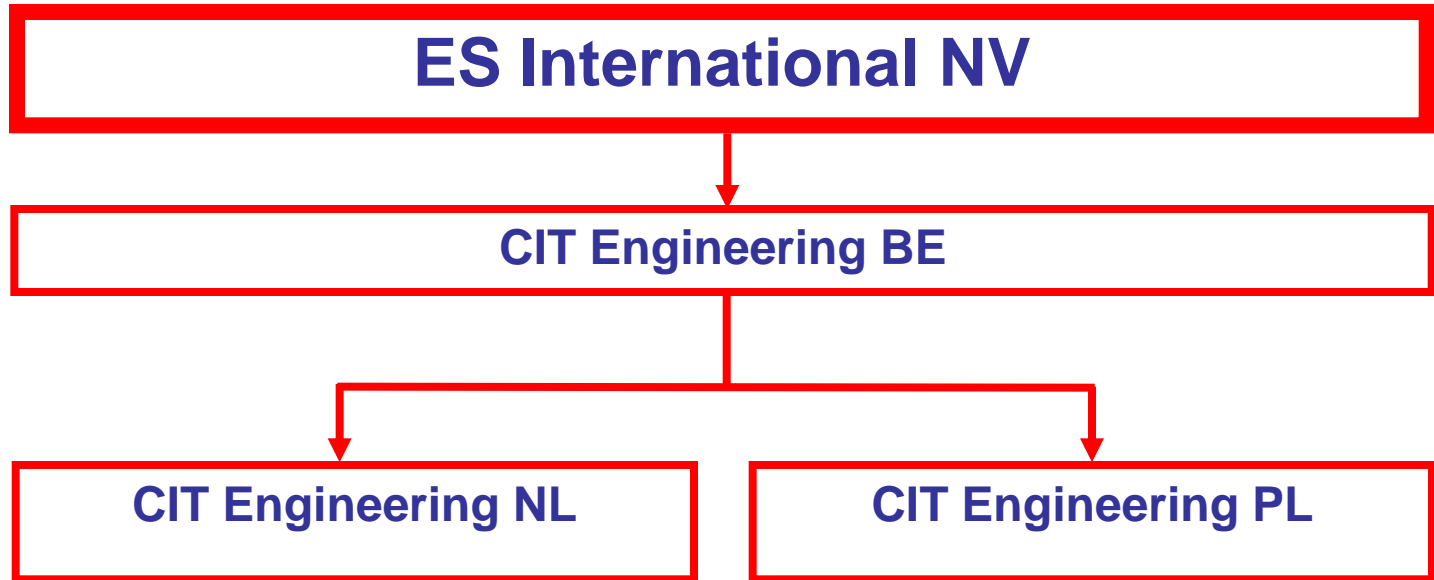




# Group Structure

ENGINEERING  
SOLUTIONS  
INTERNATIONAL

CIT  
ENGINEERING

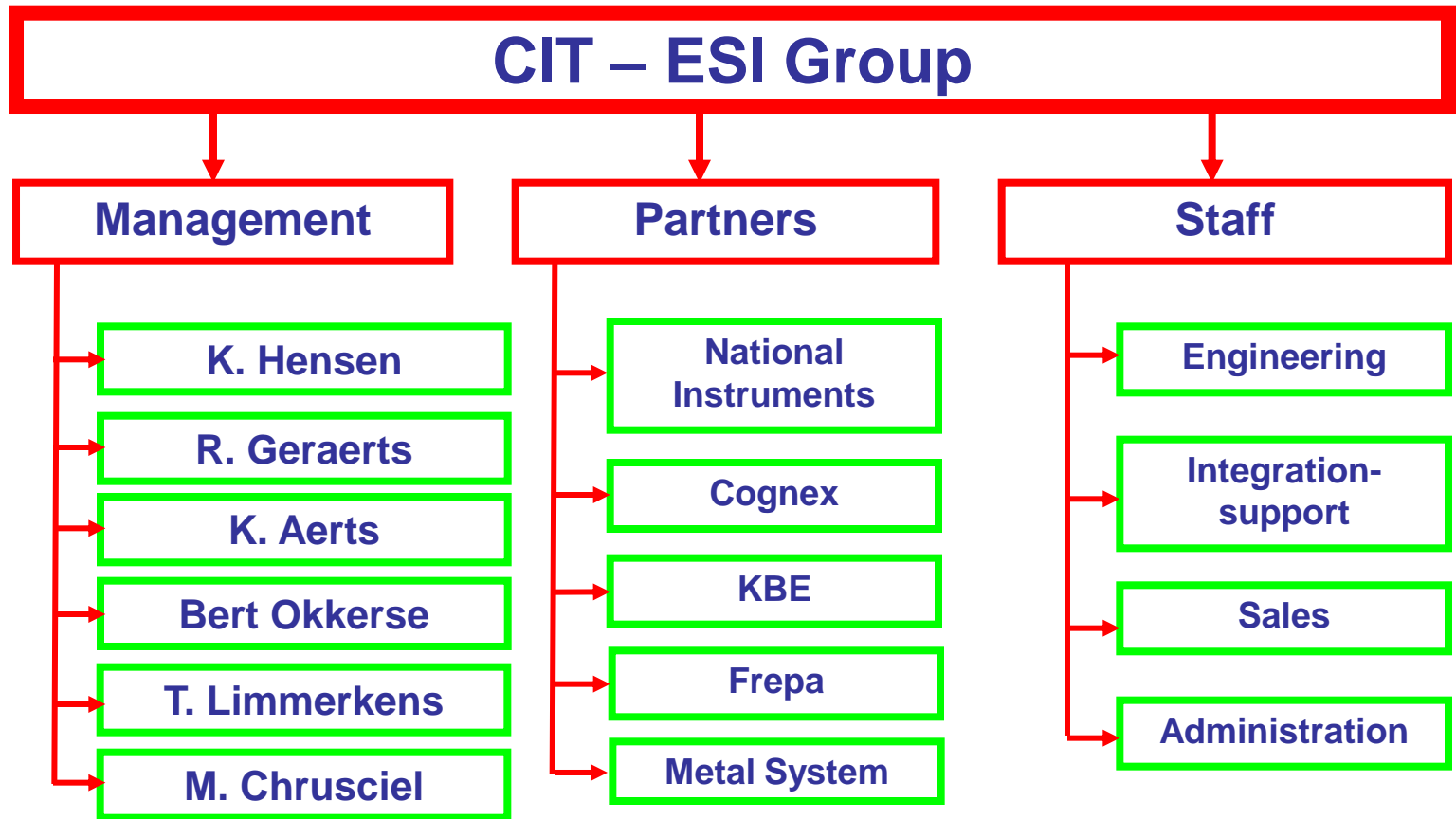




# Organisation

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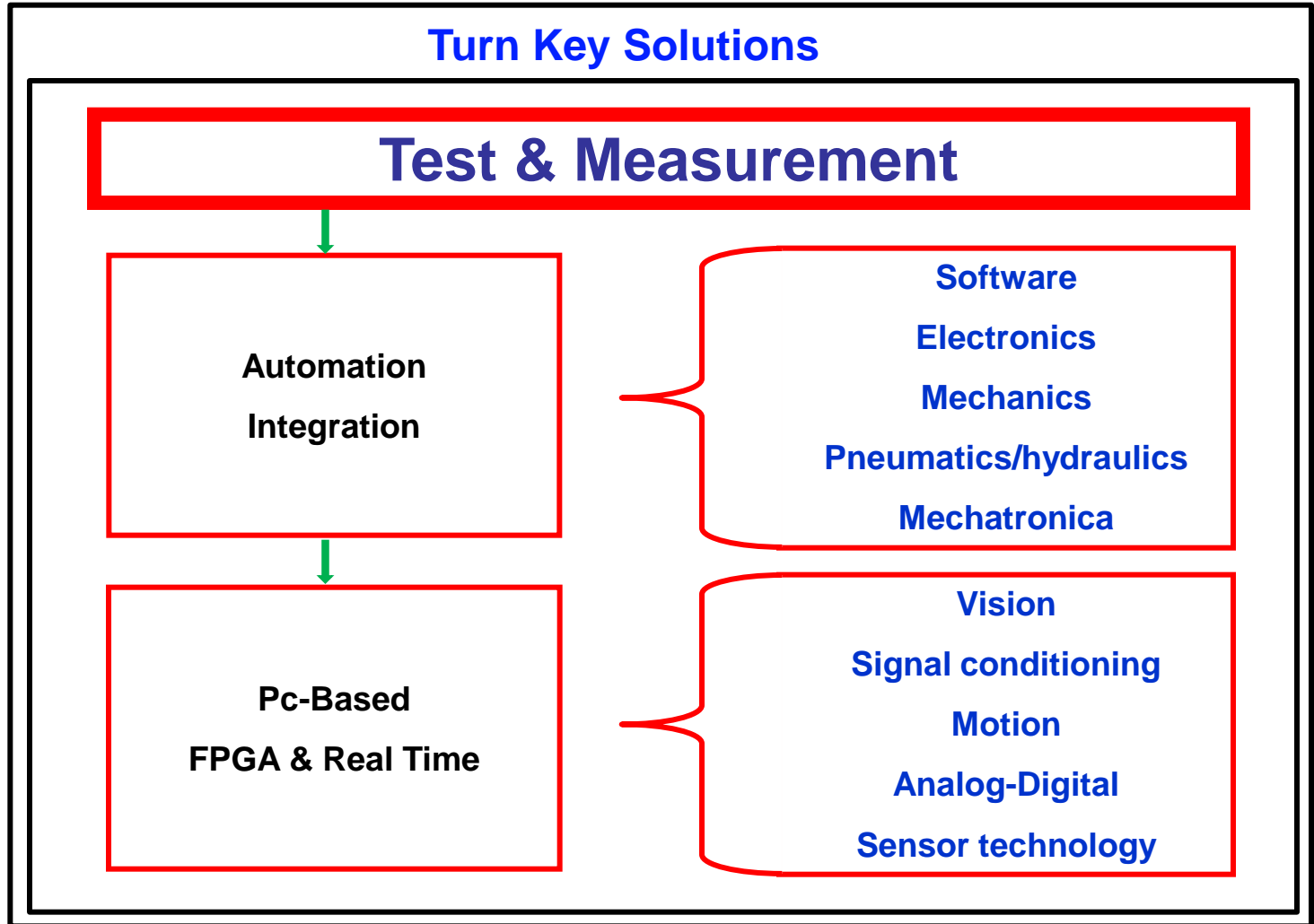




# Company Mission

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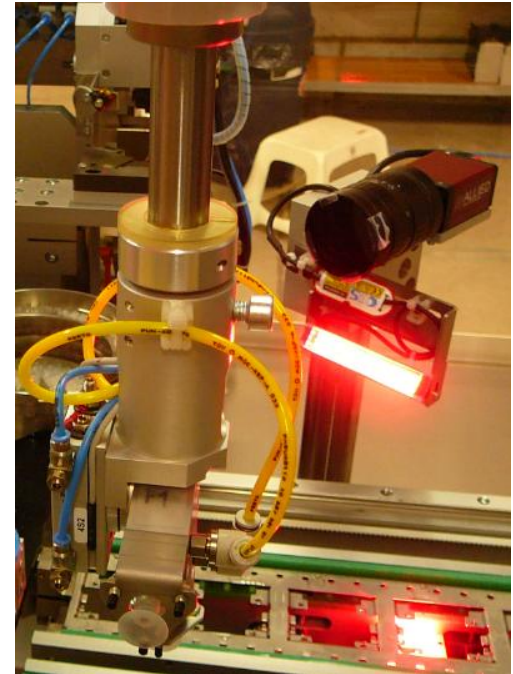


# Profile of industries

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- Research and Development
- Graphical Industry
- Automotive Industry
- Telecom Industry
- Web inspection, Glass
- Manufacturing processes
- Medical Industry
- Diamond industry





# Engineering Resources

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- LabVIEW™
  - Visual Basic™ , C, C#, .net
  - Data - Acquisition PXI-VXI-SCXI-DAQ-cRio...
  - Real Time systems
  - Spectrum analysis
  - Networking
  - Databases (SQL, Oracle, Access)
  - Reporting & validation
- 
- Machine Vision, Ni Vision,
  - Automation & Motion
  - Inkjet Drop & Head Technology
  - Spectroscopy & colour measurements
  - Mechanical precision Engineering
  - Electrical Engineering
  - Dedicated Hardware design
  - Calibration
  - 3D modelling





# Produkcyjny tester instalacji elektrycznej autobusu Volvo, oparty o rozwiązania CAN/DAQ National Instruments

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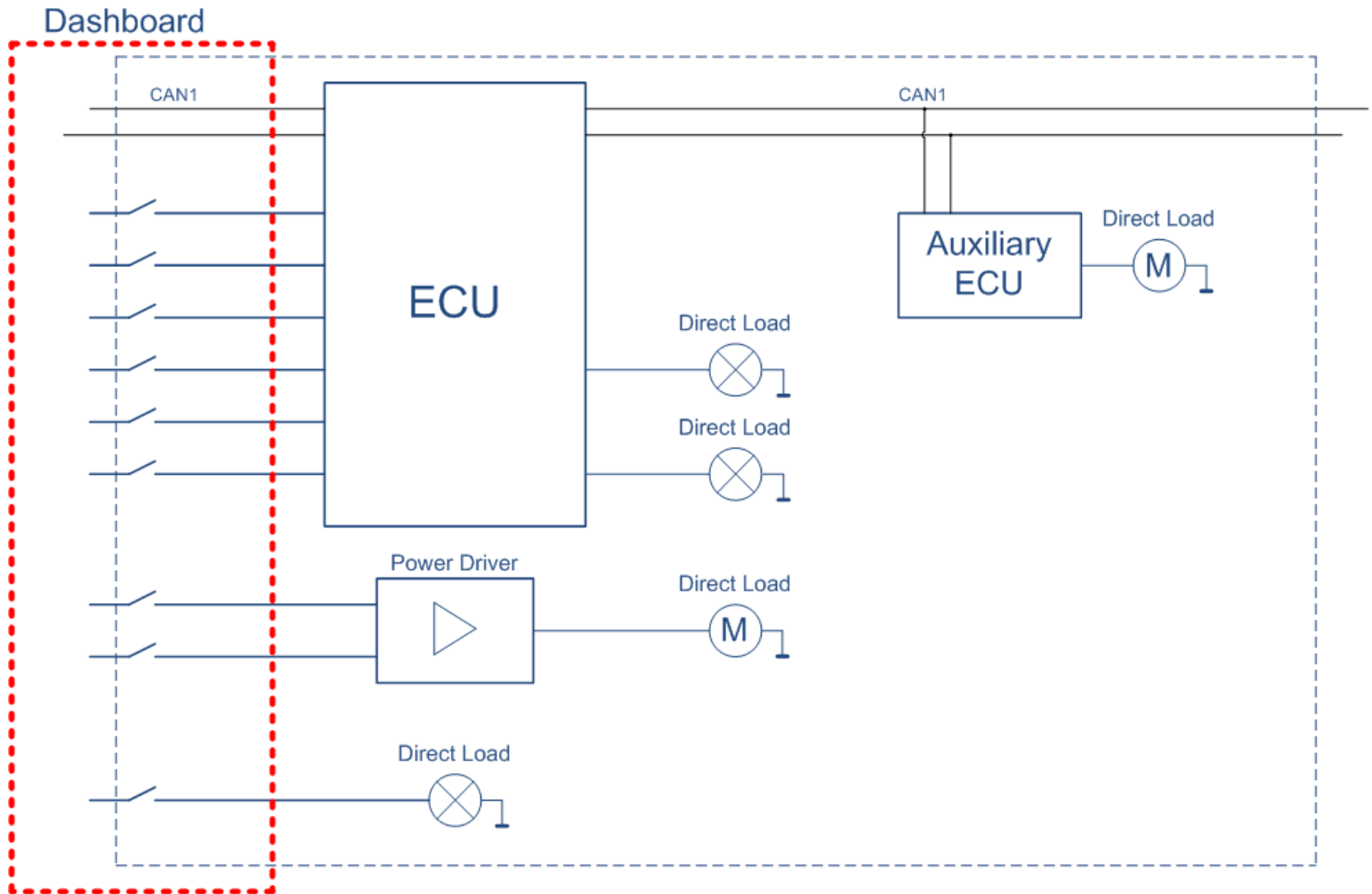




# General test harness architecture

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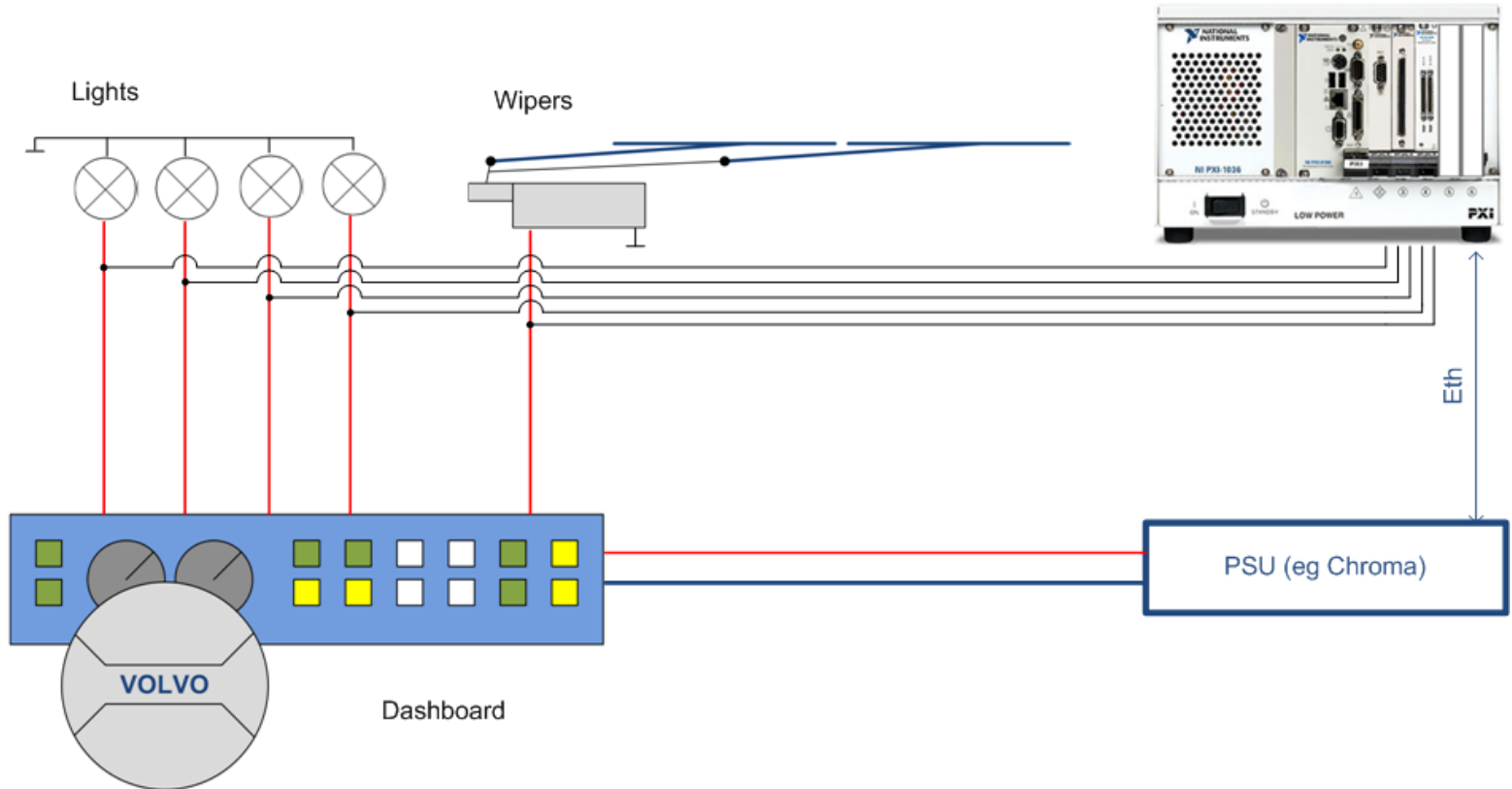




# Volvo Case Study / End to End validation

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Analog measurement - 3rd party components:

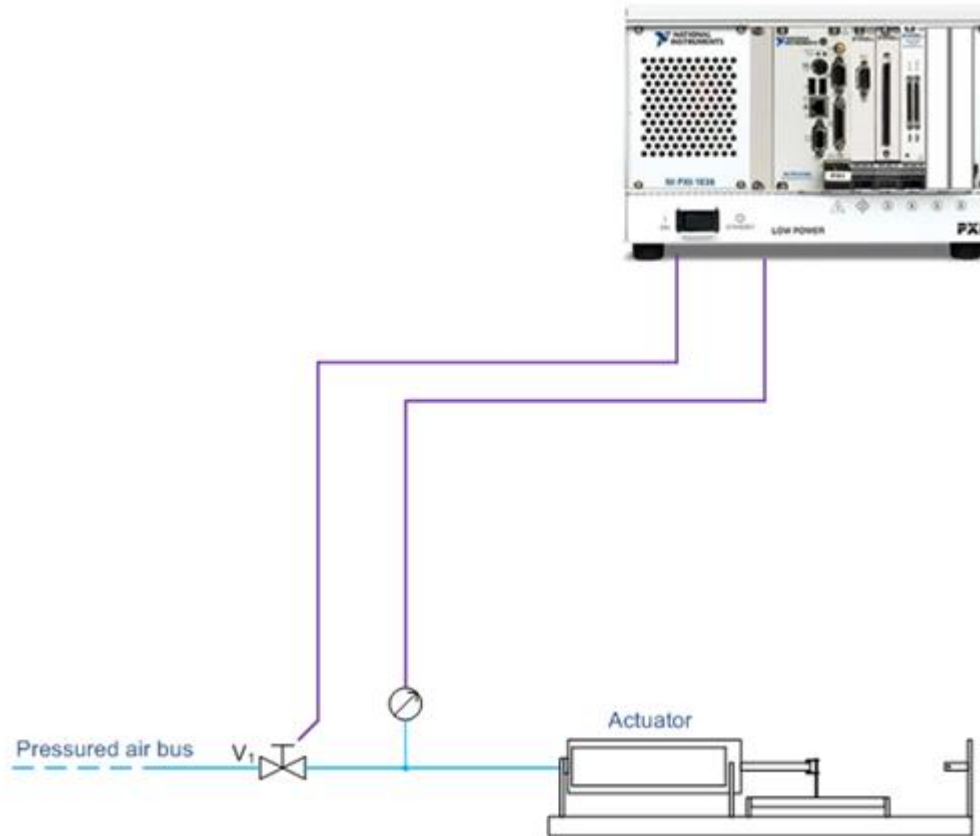
- PXI controllable PSU



# Volvo Case Study / Pneumatic circuits tightness validation

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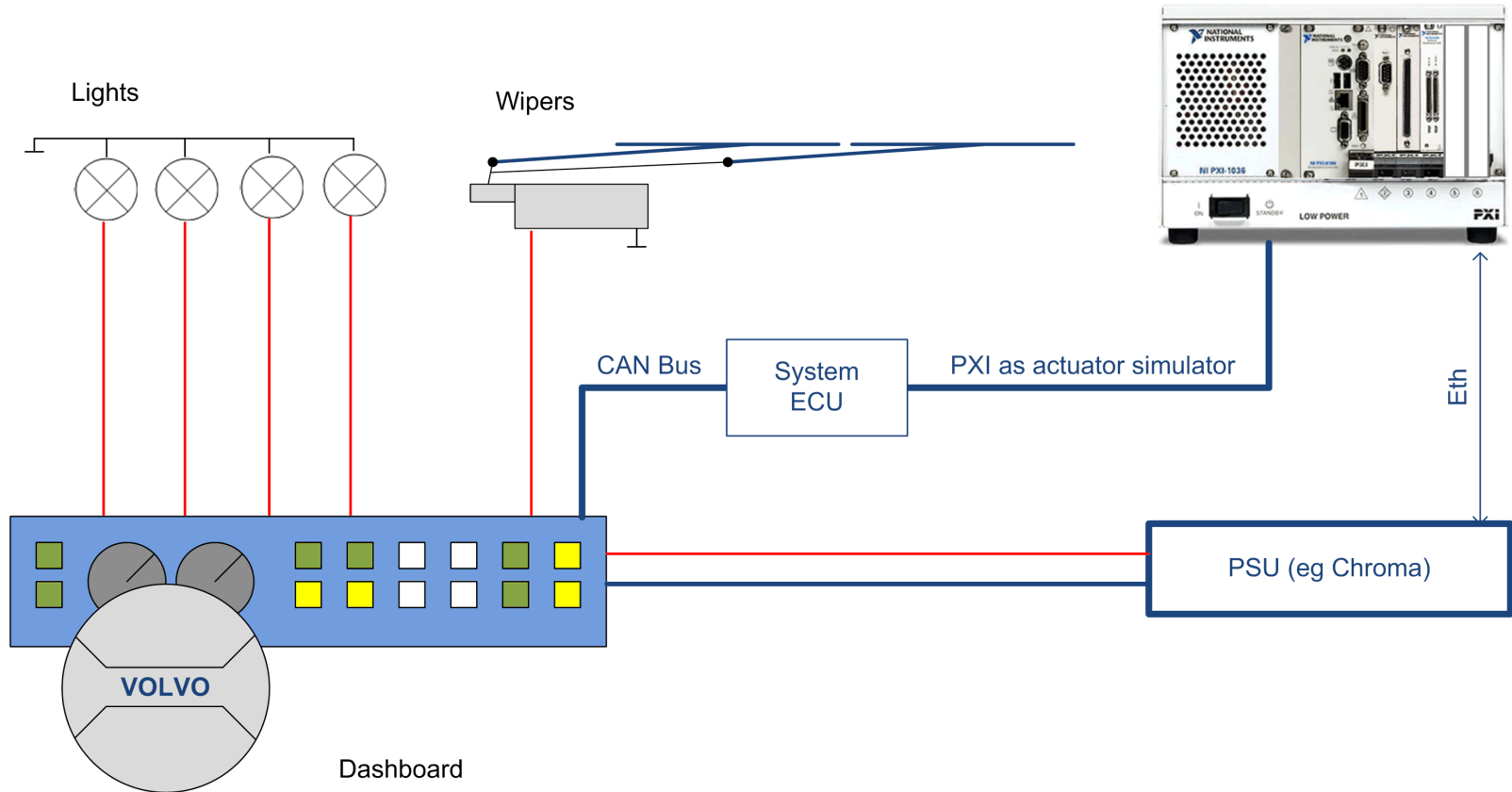
Analog measurement - 3rd party components:  
• Bridge pressure sensors



# Volvo Case Study / ECU -> Actuator CAN communication Validation

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CAN Communication



# Proof of Concept

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NI USB-6009  
USB High-Speed  
CAN I/F



NI USB-8472  
USB High-Speed  
CAN I/F

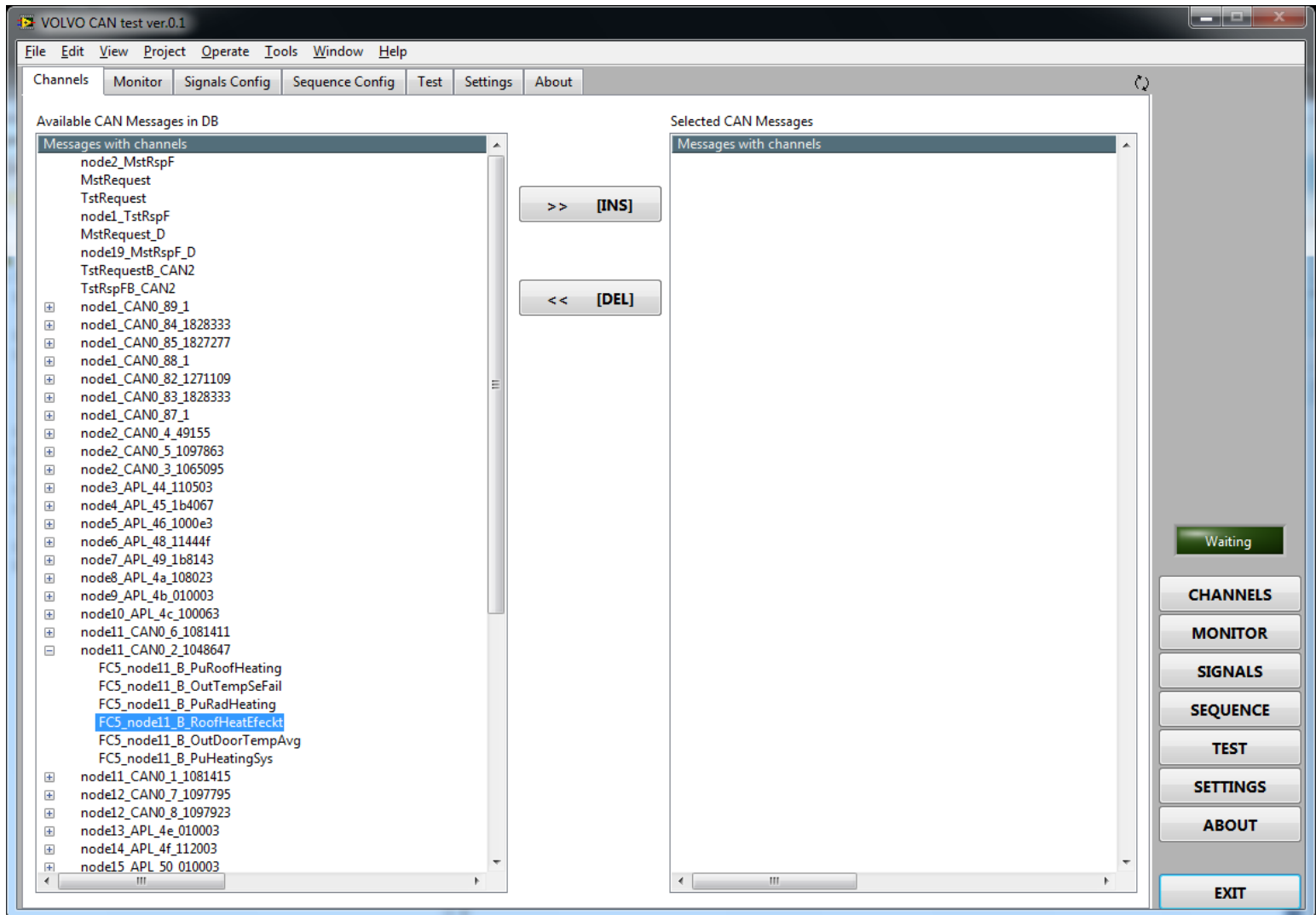




# Software

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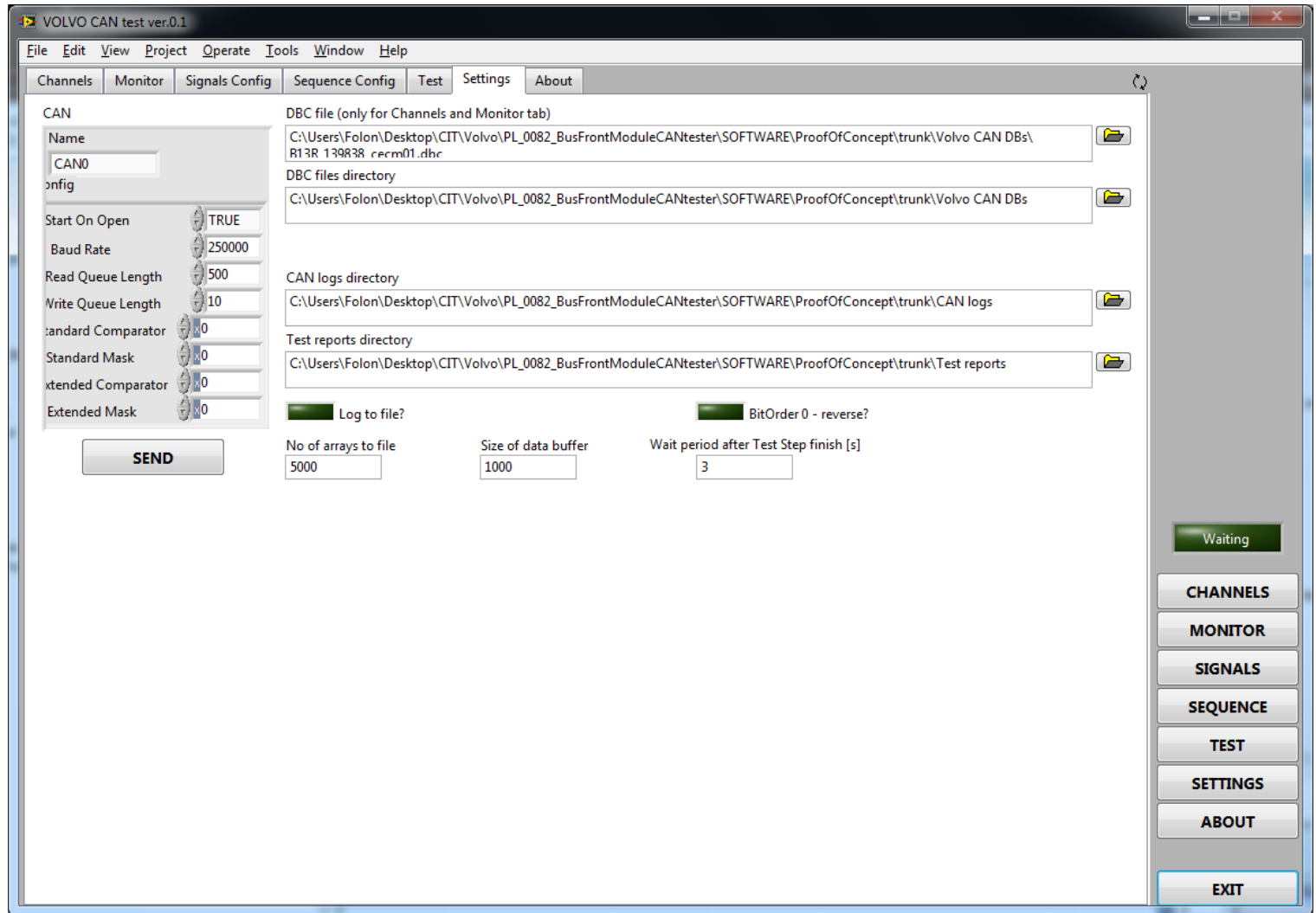




# Software

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# Software

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The screenshot displays the 'VOLVO CAN test ver.0.1' software interface. The window title is 'VOLVO CAN test ver.0.1'. The menu bar includes 'File', 'Edit', 'View', 'Project', 'Operate', 'Tools', 'Window', and 'Help'. The main interface is divided into several sections:

- Configuration Section:** Contains fields for 'Chassis Type', 'Chassis Number', and 'DBC Files'. A 'Matched files' counter shows '0'. There are 'SELECT' and 'START TEST' buttons.
- Test Step Section:** Features a 'Current Test step' area (currently empty), a 'Step number' field, and a green 'Waiting' button.
- Graph Section:** A line graph with 'Amplitude' on the y-axis (ranging from -1 to 1) and 'Time' on the x-axis (ranging from 13:17:51 to 13:18:02). The graph is currently empty.
- Control Section:** Includes a 'Timer [s]' field showing '0', a 'Test kind' dropdown menu set to 'CAN', and a 'Show Graph?' checkbox which is checked.
- Status and Action Section:** A large grey button at the bottom center displays 'Waiting'. To its right are 'PAUSE', 'SKIP STEP', and 'ABORT TEST' buttons.
- Navigation Panel:** A vertical sidebar on the right contains buttons for 'Waiting', 'CHANNELS', 'MONITOR', 'SIGNALS', 'SEQUENCE', 'TEST', 'SETTINGS', 'ABOUT', and 'EXIT'.



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**Quality is a  
requirement  
not an option**

