Vehicle Communication (VCOM) Software Suite

NI's VCOM Software Suite streamlines ECU validation across diverse automotive bus systems, ensuring AUTOSAR compatibility, seamless integration, and effortless test sequence execution. It supports ECU network testing, calibration, and diagnostics, making it a cost-effective solution for automotive testing.

What Does it Offer?

The NI Vehicle Communication (VCOM) Software Suite ensures AUTOSAR compatibility and supports various automotive buses. It simplifies introducing new ECU variants and executing test sequences without programming. Users handle data, security, and safety mechanisms effortlessly, with the built-in engine managing the rest. The suite offers ECU network testing and easy add-on support for calibration and diagnostics through subscriptions, saving time and money. Widely used for Restbus simulation, it provides comprehensive functionality for automotive testing needs.

VCOM Main Features:

- Restbus Simulation on CAN, LIN, Ethernet, FlexRay.
- Various send types (Cyclic, spontaneous, etc)
- Signals activation for channel, node, message, PDU.
- Automatic CRC and counter signal calculation

- Manipulation of auto signals (Counter, CRC)
- AUTOSAR End2End communication protection profile calculation
- Network Management
- Signal Multiplexing support (Explicit and Implicit)

The NI Advantage

Seamless Compatibility

Experience seamless integration, supported by AUTOSAR standards and key communication protocols such as CAN, LIN, Automotive Ethernet, and FlexRay.

Effortless Configuration

Benefit from enhanced troubleshooting capabilities, accessing diagnostic data and services effortlessly, ensuring performance and reliability across ECUs.

Remote Accessibility

Enable configuration and execution of Restbus Simulation, diagnostics, and calibration directly from the web, providing flexibility and convenience

What Vehicle Communication Toolkit You Need

Solution Name	Description	Part Number
Vehicle Communication Software Toolkits	Vehicle Communication Toolkit **Full Edition**	788363-35
	Vehicle Communication Toolkit **Base Edition**	788362-35

	Base Edition	Full Edition
C/C++ API (Windows Only)	✓	✓
LabVIEW API (Windows and NI Linux-RT)	✓	✓
VeriStand Custom Device (Windows and NI LinuxRT)	✓	✓
Web UI Database Viewer	✓	✓
Web UI Configurator	✓	✓
CAN & CAN-FD .DBC Database Support	✓	✓
LIN .LDF Database Support	✓	✓
CAN and CAN-FD .ARXML Database Support		✓
LIN .ARXML Database Support		✓
Automotive Ethernet .ARXML Database Support		✓
FlexRay .ARXML Database Support		✓

Vehicle Communication Add-ons Features

Add-On Name	Features	Part Number
Measurement and Calibration Toolkit	LabVIEW APIs(Windows only): • CCP over CAN • XCP over CAN/CAN-FD, TCP and UDP Read/write signals (single-point mode) Continuous measurement in polling and/or DAQ list mode Multiple ECU support WebUI: .A2L file viewer Partially included*: • XCP over FlexRay • C++ interface	788660-35
Diagnostic Toolkit	LabVIEW APIs(Windows only): UDS on CAN/CAN-FD based on ISO-TP Services/Job execution ECU Flashing WebUI: .PDX/ODX file viewer Partially included*: • C++ interface	788662-35

*Customer must contact NI for more information about those features.

System Integration on Your Terms

NI offers a variety of solution integration options customized to your application-specific requirements. You can use your own internal integration terms for full system control or leverage the expertise of our worldwide network of Alliance partners to obtain a turnkey system.

To learn how you can increase product quality and shorten test timelines, contact your account manager or NI at (888) 280-7645 or info@ni.com.

Learn more at: ni.com/transportation