

Spirent **TTsuite-WAVE-LTEV**

Running WAVE Conformance Tests against C-V2X (LTE-V) Equipment

Benefits

- Ensure the conformance of an implementation or a system based on USDOT test specifications
 - Required for USDOT certification
- Fast and simple test execution and analysis
- Repeatability of tests and full support of test automation
- Platform independence and rapid integration in existing test environments
- Flexibility through usage of the constantly evolving standardized test notation TTCN-3

Target Audience

- Companies supplying or testing C-V2X WAVE-LTEV technology

Scope of Delivery

- C-V2X LTE-V MoDem hardware device as radio proxy

Reference Platforms

- Java 8
- Microsoft Windows 7/8/10
- Linux (GTK2, x86-32, x86-64)

TTsuite-WAVE-LTEV is Spirent's solution for signalling protocol testing of C-V2X devices that implement the US V2X protocol stack over LTE-V PC5 interface. It contains a set of automatically executable test scripts for the Wireless Access in Vehicular Environments (WAVE) standard (as defined by OmniAir) for validating compliance to IEEE and SAE standard specifications.

The solution helps ensure cross-vendor interoperability of On-Board Units (OBU) and Road-Side Units (RSU) supporting those standards.

Features

- USDOT Certification Operating Council (COC) Conformance Test Suite for Wireless Access in Vehicular Environments (WAVE)
- WSM/WSA packet validation
 - Secured/unsecured reception/transmission of WSM/WSA packets
 - Communication using IPv6
- Full test automation via Test Control Interface
- Freely combinable with additional test access (TTplugins)

Base Specifications

- **SAE J2945.1**
 - On-board system requirements for V2V Safety Communications
- **SAE J2735**
 - Candidate Improvements to Dedicated Short Range Communications (DSRC) Message Set Dictionary [SAE J2735] Using Systems Engineering Methods
- **IEEE 1609.2-2016**
 - IEEE Standard for Wireless Access in Vehicular Environments
 - Security Services for Applications and Management Messages
- **IEEE 1609.3-2016**
 - IEEE Standard for Wireless Access in Vehicular Environments
 - Networking Services

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About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

Spirent's customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

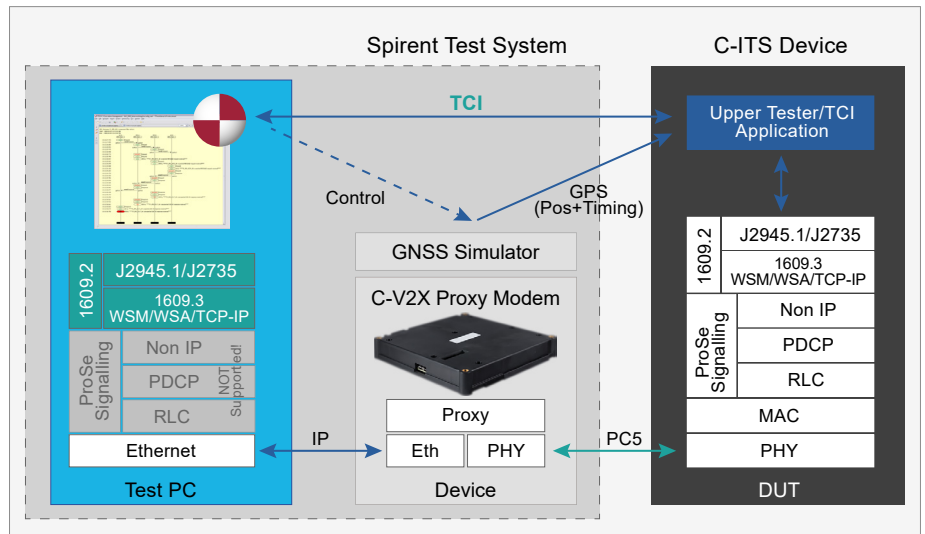
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Test Specifications

- **WAVE-16092-TSS&TP** Conformance test specifications for Wireless Access in Vehicular Environments (WAVE)
 - Security Services
 - Test Suite Structure and Test Purposes (TSS & TP)
- **WAVE-16093-TSS&TP** Conformance test specifications for Wireless Access in Vehicular Environments (WAVE)
 - Networking Services
 - Test Suite Structure and Test Purposes (TSS & TP)
- **J2945/1-TSS&TP** Conformance test specifications for SAE J2945/1
 - On-Board System Requirements for V2V Safety Communications
 - Test Suite Structure and Test Purposes (TSS & TP)

Ordering Information

Part Number	Description
TEC-SUITE-WAVE-LTEV	TTsuite-WAVE-LTEV
TEC-SVC-1015-TS-1Y	TTSUITE SUPPORT AND MAINTENANCE 1YR
TEC-TT-WP	TTWORKBENCH PROFESSIONAL
TEC-SVC-1015-WB-1Y	TTWORKBENCH SUPPORT AND MAINTENANCE 1YR