

Spirent TTsuite-WAVE-LTEV

Overview

TTsuite-WAVE-LTEV is a 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 of On-Board Units (OBU) and Road-Side Units (RSU) to IEEE and SAE standard specifications.

The solution helps ensure cross-vendor interoperability of on-board and road-side units supporting those standards.

Features

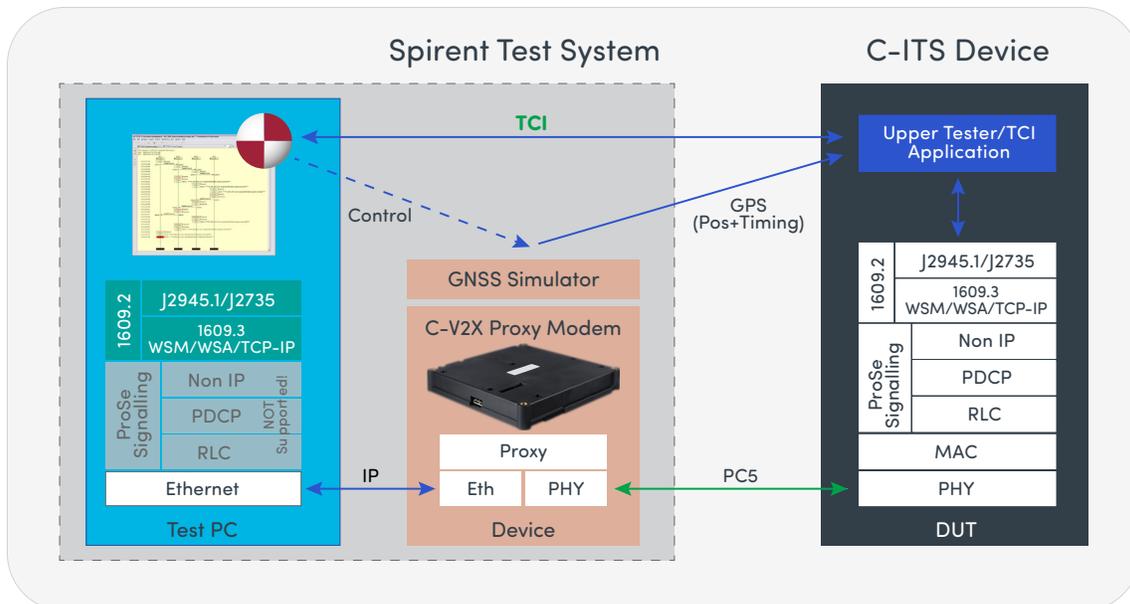
- USDOT Certification Operating Council (COC) Conformance Test Suite for Wireless Access in Vehicular Environments (WAVE)
- WSM/WSA packet validation
 - Secured/unsecured reception/transmission of WSM/WSA packets
 - Communication using IPv6
- Full test automation via Test Control Interface (TCI)
- Freely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

Target Audience

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

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



Benefits

- Ensure the conformance of an implementation or a system based on USDOT/OmniAir 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

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)

Test Specifications

Standard	Description
WAVE-16092-TSS&TP	Conformance test specifications for Wireless Access in Vehicular Environments (WAVE) <ul style="list-style-type: none"> • Security Services • Test Suite Structure and Test Purposes (TSS & TP)
WAVE-16093-TSS&TP	Conformance test specifications for Wireless Access in Vehicular Environments (WAVE) <ul style="list-style-type: none"> • Networking Services • Test Suite Structure and Test Purposes (TSS & TP)
J2945/1-TSS&TP	Conformance test specifications for SAE J2945/1 <ul style="list-style-type: none"> • On-Board System Requirements for V2V Safety Communications • Test Suite Structure and Test Purposes (TSS & TP)
RSU4.1-TSS&TP	Conformance test specifications for RSU4.1 V2I v1.0 <ul style="list-style-type: none"> • RSU4.1 V2I • Test Suite Structure and Test Purposes (TSS & TP)

Ordering Information

Product Number	Description
TEC-SUITE-WAVE-LTEV	TTsuite-WAVE-LTEV
TEC-SVC-1015-TS-1Y	TTsuite support and maintenance 1 year
TEC-TT-WP	TTworkbench Professional
TEC-SVC-1015-WB-1Y	TTworkbench support and maintenance 1 year