

Accuver



V2X Drive Test System WCEX-DRTS

BSM

(Base Safety Message)

Position

Speed

Direction

Size



Basic Safety Messages are the backbone of V2V communication, carrying data that prevents collisions and improves traffic flow. WCEX-DRTS is a V2X drive test system that verifies BSM accuracy and compliance in real-world driving, ensuring connected vehicle systems meet strict SAE standards.

CERTIFICATE OF COMPLIANCE / CONFORMANCE



@Wayties



Wayties, Inc.

V2X BSM Conformance & Performance Test Tool

Model Number: WCEX-DRTS-V2V HW: 1.6.0 SW: 1.5.7

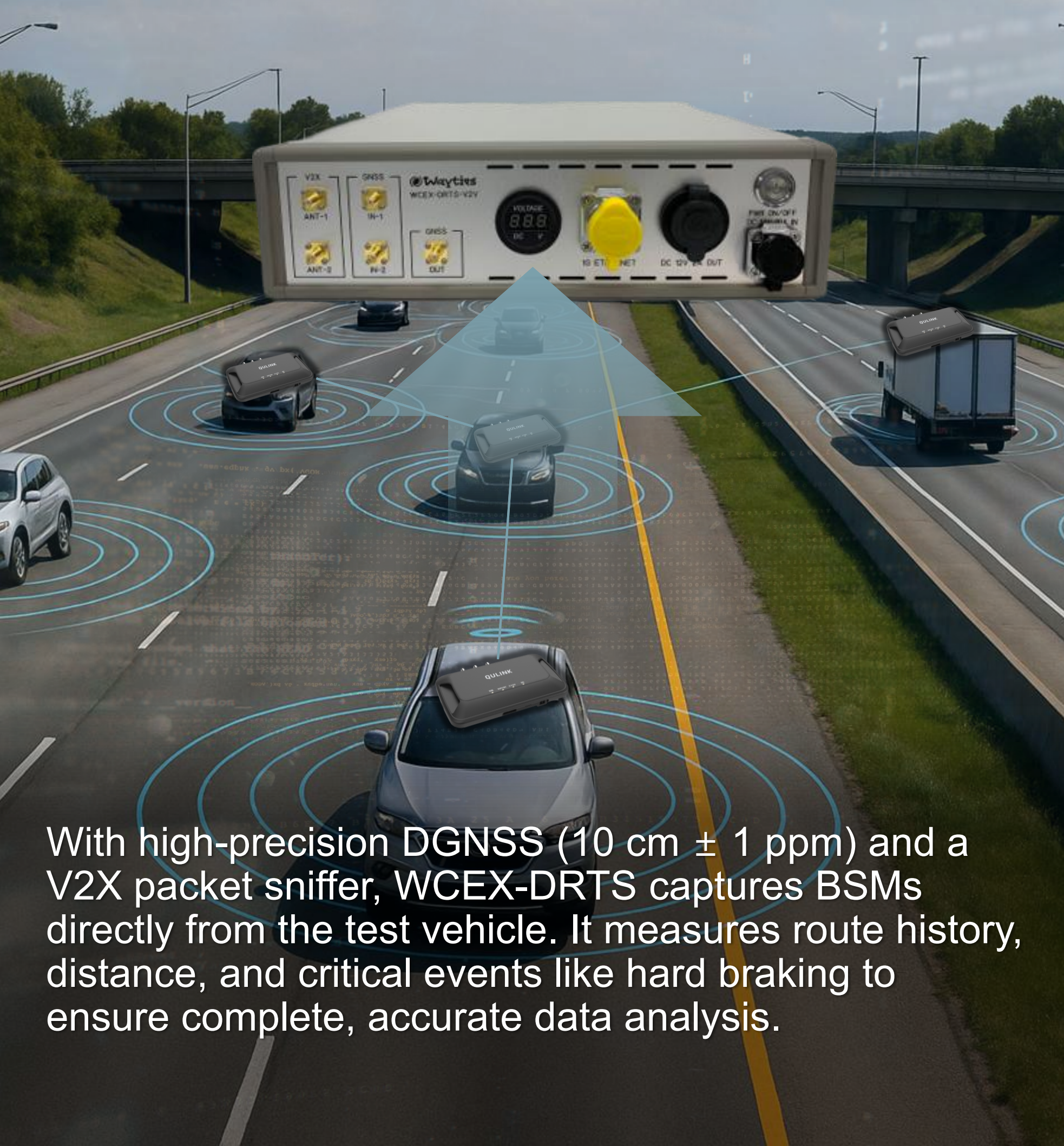
for passing the requirements for this OmniAir Certification Program

Connected Vehicle: LTE-V2X v1.0 Conformance & Interoperability

TEST PROCEDURES: 763 (1609.2), 767, 768 & 769 (BSM)

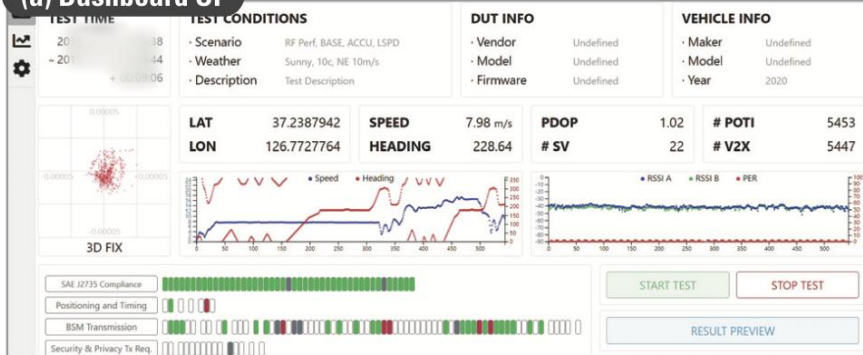
CERTIFICATE #2023110801 Awarded this 8th day of November, 2023
and expires in two-years unless product or scope changes occur sooner.*Randy Roebuck*Randy Roebuck / Senior VP, Technology & Certification Services
OmniAir Consortium, Inc.*Jason M Conley*Jason Conley / Executive Director
OmniAir Consortium, Inc.

Designed for SAE J2945/1, J3161/1, and J2735, WCEX-DRTS validates On-Board System requirements for V2V safety communications. As OmniAir Qualified Test Equipment, it delivers trusted results for U.S. certification programs and market readiness.



With high-precision DGNSS ($10 \text{ cm} \pm 1 \text{ ppm}$) and a V2X packet sniffer, WCEX-DRTS captures BSMs directly from the test vehicle. It measures route history, distance, and critical events like hard braking to ensure complete, accurate data analysis.

(a) Dashboard UI



(b) Test management UI

TestID	Start	End	Description	Preview	Download	Delete
T20: 47	04:58:47	05:08:43	Test Description	Preview	Download	Delete
T20: 17	04:57:17	04:57:46	Test Description	Preview	Download	Delete
T20: 54	03:15:54	03:26:19	Sample for Snapshot	Preview	Download	Delete
T20: 21	01:57:21	01:57:44	Test Description	Preview	Download	Delete
T20: 03	00:53:03	00:53:49	Test Description	Preview	Download	Delete
T20: 27	00:14:27	00:15:34	Test Description for Demo	Preview	Download	Delete
T20: 22	04:01:22	04:02:03	Input Description Text	Preview	Download	Delete
T20: 26	03:10:26	03:10:31	For Test Management Example	Preview	Download	Delete
T20: 29	02:39:29	02:41:22	Example for Demo	Preview	Download	Delete
T20: 21	01:30:21	01:39:58		Preview	Download	Delete

Test Details:

- Start: 20:08, End: 20:14
- Scenarios: RF Perf, BASE, ACCU, LSPD
- Test Result: 68.89 %
- Environmental Notes: Sunny, 10c, NE 10m/s
- Description: Test Description
- Device Under Test: Vendor: Undefined, Model: Undefined, Firmware: Undefined
- Test Vehicle: Model: Undefined, Year: 2020, Width: 540 [cm]

(c) Test result overview

TEST: J2945/1 Full Test

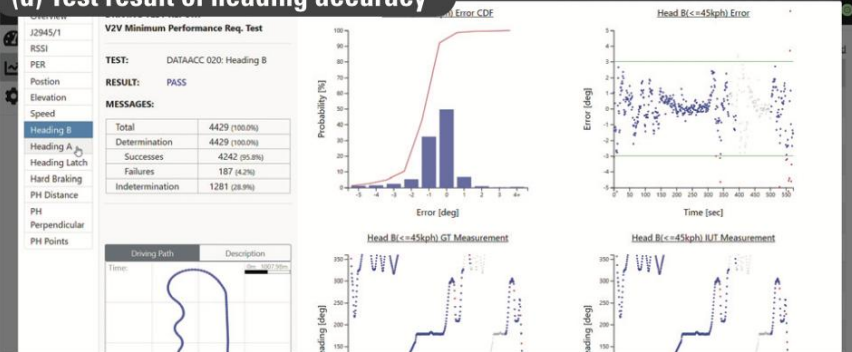
RESULT: PASS

MESSAGES:

Category	Item	Result
6.1 Standard Compliance	6.1.1 SAE J2735 Message encoding	001 M P 002 M P
6.1.6 V2V-STD-2735	003 M P 004 M P	
6.1.6 V2V-STD-2735	005 M P 006 M P	
6.1.6 V2V-STD-2735	007 M P 008 M P	
6.1.6 V2V-STD-2735	009 M P 010 M P	
6.1.6 V2V-STD-2735	011 M P 012 M P	
6.1.6 V2V-STD-2735	013 M P 014 M P	
6.1.6 V2V-STD-2735	015 M P 016 M P	
6.1.6 V2V-STD-2735	017 M P 018 M P	
6.1.6 V2V-STD-2735	019 M P 020 M P	
6.1.6 V2V-STD-2735	021 M P 022 M P	
6.1.6 V2V-STD-2735	023 M P 024 M P	
6.1.6 V2V-STD-2735	025 M P 026 M P	
6.1.6 V2V-STD-2735	027 M P 028 M P	
6.1.6 V2V-STD-2735	029 M P 030 M P	
6.1.6 V2V-STD-2735	031 M P 032 M P	
6.1.6 V2V-STD-2735	033 M P 034 M P	
6.1.6 V2V-STD-2735	035 M P 036 M P	
6.1.6 V2V-STD-2735	037 M P 038 M P	
6.1.6 V2V-STD-2735	039 M P 040 M P	
6.1.6 V2V-STD-2735	041 M P 042 M P	
6.1.6 V2V-STD-2735	043 M P 044 M P	

Driving Path: [Plot showing a loop]

(d) Test result of heading accuracy



The system fully decodes each BSM, comparing it against SAE standards in real time. Its dashboard enables live monitoring, while automated certificate renewal checks ensure secure message handling.



Compact and lightweight, WCEX-DRTS connects via GNSS, V2X, and Ethernet for quick setup. Automated reporting delivers complete results immediately after testing, making it easy to move between vehicles and routes.

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For more information

sales@accuver.com