V2G and CCS Charging Interoperability Products

Enabling V1G, V2X, and Interoperable Charging of EVs

IEEE 1547.1 TEST TOOLS – UL 1741 SB WILL BE KEY TO V2G-DC AND V2G-AC

Leading states such as California and Hawaii are mandating UL 1741 SB certification (which includes validating IEEE 1547 conformance). CA already allows UL 1741 SB certified DC EVSEs to be interconnected for V2G-DC applications. Other jurisdictions are following their lead by mandating UL 1741 SB certification for all interconnected DERs. Accelerate your timelines to get UL 1741 SB certified by using the fully automated IEEE 1547.1 test tool that can also control and manage your grid simulator, DC supply and collect results data from a power analyzer and oscilloscope.

These same test tools are also being used to validate the required IEEE 1547.1 conformance of on-board inverters for V2G-AC as mandated in SAE J3072. We are proud to be the official Test Tool and Training partner of the OpenADR Alliance. QualityLogic designed, developed and maintains the OpenADR Test Harness, and we are intimately familiar with the OpenADR 2.0 specification. Our smart energy experts authored the OpenADR Test Specification and PICS, contributed to the profile specification, and supported the Alliance in the development of the "OpenADR Implementation Guide.".

CCS ANALYZER

QualityLogic's CCS Analyzer is a new class of tool for analysis of Combined Charging System (CCS) traffic between the EV and the EVSE. The CCS Analyzer is an "expert

system" that improves productivity of human experts by automating the analyses the session traffic to identify anomalies that cause failed charging sessions, extract timing data from the files and uncover non-fatal anomalies that may cause future issues.

OPENADR TEST TOOLS – POPULAR FOR V1G

OpenADR is the leading communications protocol for V1G-managed charging applications globally. Developing your OpenADR 2 implementation can be challenging and time-consuming. As the official technology partner to the OpenADR Alliance, we have helped countless vendors to learn the OpenADR technology and implement them based on best practices.

V2G-DC COMMUNICATIONS

Leading states such as California and Hawaii are mandating UL 1741 SB certification (which includes validating IEEE 1547 conformance). California already allows UL 1741 SB-certified DC EVSEs to be interconnected for V2G-DC applications. Other jurisdictions are following their lead by mandating UL 1741 SB certification for all interconnected DERs. Accelerate your timelines to get UL 1741 SB certified by using the fully automated IEEE 1547.1 test tool that can also control and manage your grid simulator, DC supply, and collect results data from a power analyzer and oscilloscope.

These same test tools are also being used to validate the required IEEE 1547.1 conformance of on-board inverters for V2G-AC as mandated in SAE J3072.

V2G-AC COMMUNICATIONS

With the growing interest in using on-board inverters as grid resources (V2G-AC), QualityLogic will support the testing needs for both EVSE-EV communications and EVSE-Grid communications.

EVSE-EV communications require IEEE 2030.5 as specified in SAE J3072 for single-phase charging (US) and SunSpec Modbus for 3-phase charging. QualityLogic's IEEE 2030.5 test tools already include support for SAE J3072 IEEE 2030.5 requirements and will implement the formal SunSpec J3072 certification tests when available.

The EVSE-Grid (upstream) communications for V2G-AC is currently being defined in UL 1741 SC but will likely include the same testing as required for IEEE 1547.1 interoperability. These tests are already included in Qualitylogic's IEEE 1547 test tools for all three required protocols (IEEE 2030.5, SunSpec Modbus and DNP3).

QUALITYLOGIC SERVICES

- **IEEE 2030.5 Test Tools & Training**
- **IEEE 1547 Test Tools & Training**
- **CSIP Australia Test Tools & Training**
- **OpenADR Test Tools & Training**
- **CCS Interop Tools & Services**
- **V2G and EV Infrastructure Services**

Discover why OEM manufacturers, companies, and labs rely on QualityLogic's DER protocol expertise. Contact us today.

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