



## Re-Generative Electric Vehicle Actuation Node (RE-VAN™)

**Overview:** Re-VAN is an outdoor rated product designed to simulate a regenerative Electric Vehicle (EV). RE-VAN is capable of emulating full charging process and simulating EV communications with both CCS1 and CCS2 EV chargers.

**Applications:** The main applications of Re-VAN includes:

- ❑ Testing and evaluation of DC fast chargers (50- to 350-kW) and Electric Vehicle Controllers operation,
- ❑ Analysis of EV integration impact on host distribution systems,
- ❑ Cyber-security testing of EV charging management system through interface to a third-party controller.

**Features:** Re-VAN design provides a wide range of capabilities to ensure a safe and flexible operation which complies with most recent industry standards. A user-friendly HMI is built into the product which provides full visibility and control for the operators.

High Power Testing  
(Up to 350 kW)

Built-in Library of  
EVs

Regenerative

High-Current  
Testing (Up to  
1000 V, 400 A DC)

Providing Interface  
for 3<sup>rd</sup> Party  
Controller

Compatible with  
CCS 1 and CCS2

Compliant with ISO  
15118 DC EV  
Communication

Compliant with  
SAE J1772 for CCS1  
Coupler Interface

Compliant with IEC  
61851-23 for CCS2  
Coupler Interface





## RE-VAN Modes of Operation:

### Automatic Mode:

This mode can be used for simulating the charging process of a typical EV using different battery curves available in the device’s library. This mode is mainly used for testing chargers.

### Profiling Mode:

This mode, allows the user to upload user-defined charging profiles to investigate the impact of fast chargers and different charging patterns on the host distribution system

### Manual/3<sup>rd</sup> Party Mode:

In this mode, can utilize the 3<sup>rd</sup> party interface provided by RE-VAN for testing external EV Control Units (CU) or cyber security testing of the DC fast/extra fast chargers.



## Electrical Ratings:

Tap Box Output (Regenerative, 3 phase + G, 4 wires)	480 VAC/ 600 A, 60 Hz
Container Auxiliary Power Input (Split Phase + G, 4 Wires)	120/240 VAC / 30 A, 60 Hz
CCS1 Inlet	850 VDC/ 200 A
CCS2 Inlet	1000 VDC/ 250 A

## Physical Specifications:

Dimensions	14 ft. x 6 ft. x 8.5 f
Weight	~ 12,000 lb.
Ambient Temperature (With HVAC)	-20 °F to +110 °F

For more information contact Grid Edge Solutions at Quanta Technology: [GridEdgeSolutions@quanta-technology.com](mailto:GridEdgeSolutions@quanta-technology.com)

### About Quanta Technology

Quanta Technology is an independent technology, consulting, and testing company providing business and technical expertise, along with advanced methodologies and processes, to utilities and others in the power and energy industries. Our mission is to provide unparalleled value to our clients in every engagement across the value chain by using advanced software and hardware, laboratories, and custom tools for a holistic approach to practical service and the most insightful thought leadership in the industry.

For Additional Information Contact:

**Northeast (USA) and Québec**  
Mike Longrie: [MLongrie@Quanta-Technology.com](mailto:MLongrie@Quanta-Technology.com)

**South/Southeast (USA) and Ontario**  
Diana Prkacin: [DPrkacin@Quanta-Technology.com](mailto:DPrkacin@Quanta-Technology.com)

**Central (USA and Canada)**  
Evan Estes: [EEstes@Quanta-Technology.com](mailto:EEstes@Quanta-Technology.com)

**West (USA and Canada)**  
Reza Nasri: [RNasri@Quanta-Technology.com](mailto:RNasri@Quanta-Technology.com)

**International (outside USA and Canada)**  
David Elizondo: [DElizondo@Quanta-Technology.com](mailto:DElizondo@Quanta-Technology.com)

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