



Comprehensive test fixtures for EV Charger product testing. The perfect HILTOP partner enabling flexible test and measurement solutions.

The EVSE-TOP is the perfect HILTOP companion for development and product testing of EV Chargers. Type 1, Type 2 and NACS socket options are available along with both 7kW 1-Ph and 22kW 3-Ph variants. Our comprehensive solution can be fitted in a 19" rack with load bank for full load testing or bench mounted for lab/regression testing.



**\*\*This accessory requires HILTOP Maxi/Compact and EV Sim Board**



**Type 1**



**Type 2**



**NACS**

The unit is paired to a HILTOP fitted with our new EV-Sim Board option which offers full CP, PP and PLC functionality. Features are numerous including:

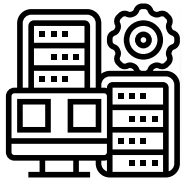
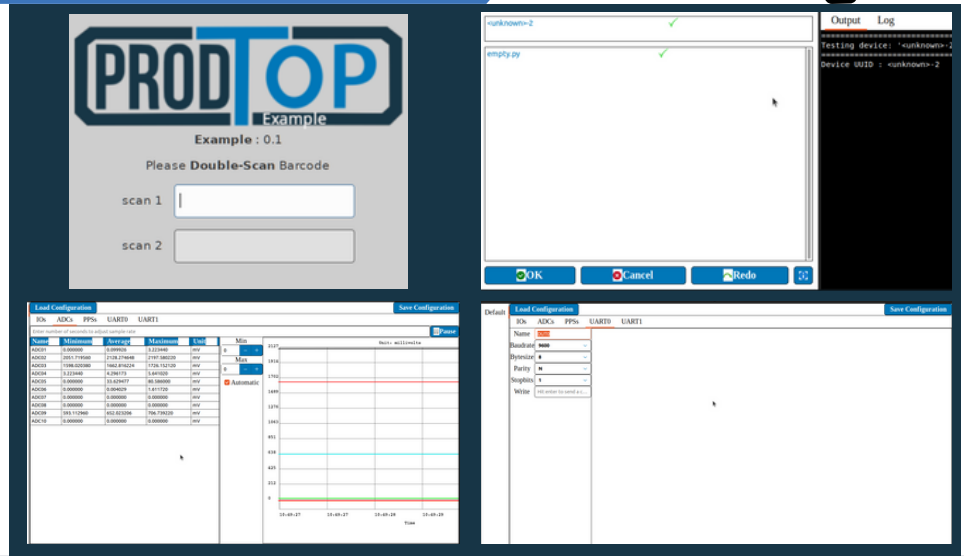
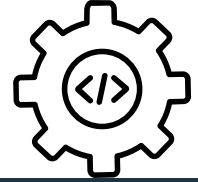
- Control Pilot (CP) (All states) and Proximity Pilot (PP)
- Power Line Communication (PLC) - CCS Ready
- Type 1, Type 2 & NACS
- Fault simulation - Diode, Short/Open on CP & PP
- Full isolation/control of charger power and load power flow, 90-250VAC (@32A)
- Relay Status/Weld detection
- Power Metering (Power, Voltage, Current, Frequency, Power Factor & THD)

Applications;

- Hardware In The Loop
- Product Development
- Regression Testing
- Automated Production Testing



# Software



# Hardware

- Ready to go
- Connect with a HILTOP and EV SIM Board
- Rack Mountable

# Data Analytics



- Test traceability
- See pass and fail rates
- Locate areas of failure

# Support



- One year warranty
- Technical support via phone or email
- Support contacts available

## EV Power Ratings:

- 7/22kW Single/Three Phase  
240/400VAC

## Connections (Rear):

- Auxiliary Power (IEC) - 100V-240VAC (3A)
- RS485 MODBUS (9 way DSub)
- Pulse Output from Energy Meter
- Safety Interlock
- Commando Inlet (32A 1/3ph 240/400V - Charger Supply)
- Commando Outlet (32A / 3ph 240/400V) - Load

## Connections (Front):

- commando Outlet (32A 1-3ph 240/400V) - Charger Supply
- EV Inlet (Type 1/2, NACS) (32A / 3ph 240/400V) - Load
- 24 way DSub - HILTOP Communication
- Control Pilot (BNC)
- Proximity Pilot (BNC)

## Safety Features:

- E-Stop
- Interlock - External Loop Through
- Relay Status / Weld Detection
- EV Power Status Light
- Internal Temperature
- Separate In/Out Power Control

## Displayed Parameters:

- Voltage - L-L, L-N, and Average
- Current - Phase, Total, and Max. Demand
- Power Factor - Per Phase and Average
- Total Harmonic Distortion - Current and Voltage
- Neutral Current (Calculated)
- Frequency
- Hours Run - Hours and Minutes
- Power - Active, Reactive, and Apparent (Per Phase and Total)
- Power Min. / Max. Demand - Active, Reactive, and Apparent
- Energy - Active, Reactive, and Apparent (Per Phase and Total)
- Import and Export Energy - Active, Reactive, and Apparent (Per Phase Total)

## Measurement Accuracies:

- Voltage 0.5% of Full Scale
- Current 0.5% of Full Scale
- Frequency 0.1% of Full Scale (L - N >20V)
- Power Factor 1% of Unity
- Active Power 1%
- Reactive Power 1%
- Apparent Power 1%
- Active Energy Class 1 (IEC/EN62053-21)
- Reactive Energy Class 2 (IEC/EN62053-23)
- Total Harmonic
- Distortion (THD - Up To 31st) 3%

**Licenses: Hardware:** CERN OHL-W v2

**Software:** LGPLv3



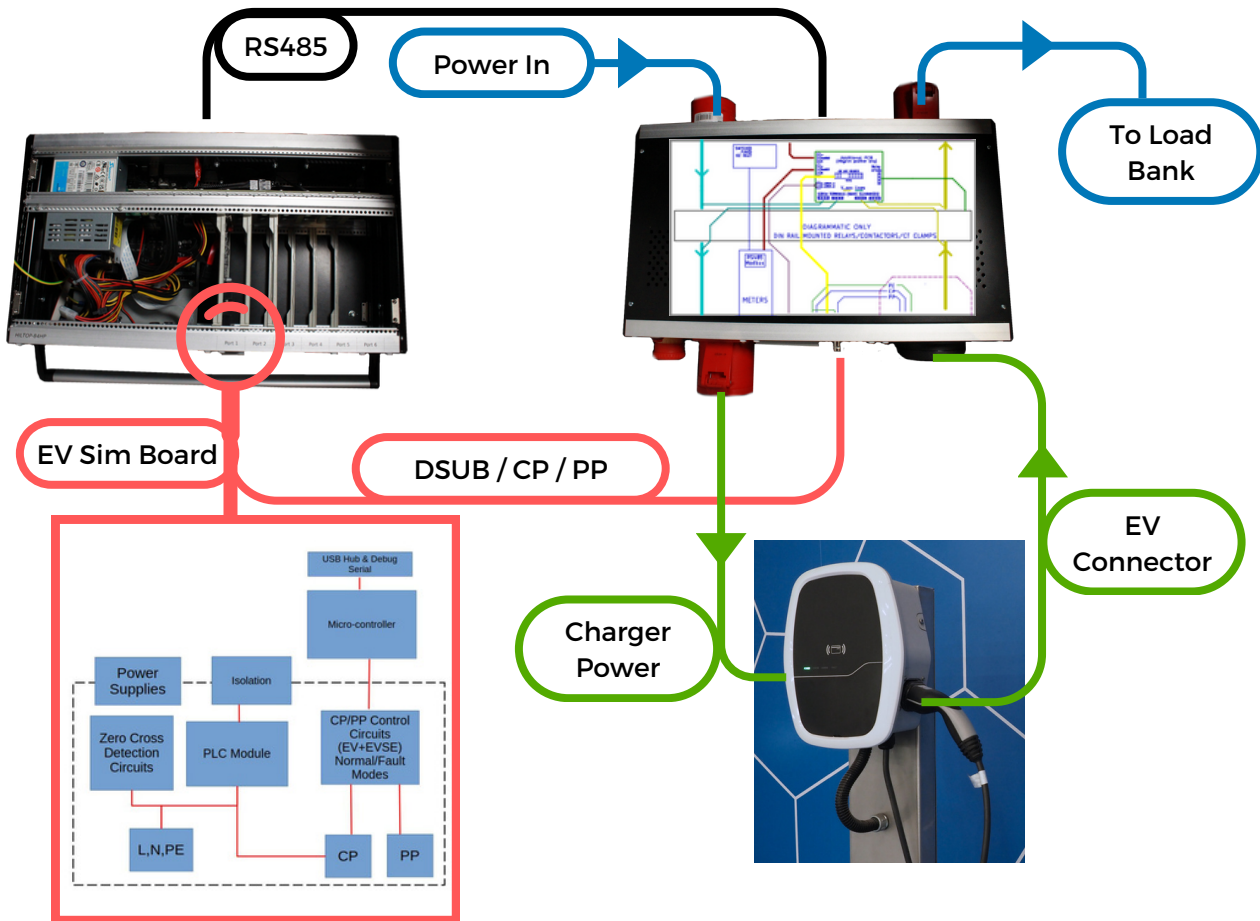
## **Minimum Requirements:**

EV Sim Board **OR** CP/PP and Control Power Switching Device

## **Certifications**



# System Diagram



## EV Sim Board Specification:

- Isolated control of CP/PP
- Fault Injection capability
- Power Line Communication Option (CCS ready)
- External Relay control outputs
- Digital I/O for remote monitoring of EVSE-TOP and interlocks.

# Complete System

- Turnkey solution
- Built to your requirements
- Complete Rack
- Safety Features
- Operator Friendly



# EV Charger Test Solution

# CASE STUDY



## Objectives

- Operator-friendly bar code-driven test solutions
- Motherboard electrical and functional testing
- Automated production testing
- End-of-line full product testing

## Solutions

- Motherboard test solutions (HILTOPs & Test Fixtures)
- End-of-line test solutions - EV Simulators with full load capability
- Real-time pass or fail
- Full asset tracking of all tested products.
- Full support contract (24-hour response)
- Data Analytics

## Benefits one

Simulation replacing real vehicles

## Benefits two

Tracking through each test stage

## Benefits three

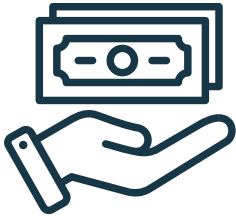
User-friendly with a simple pass or fail solution



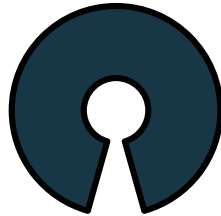
Case  
Studies



# Benefits



Cost Effective



Open Source



User-Friendly



Improve  
Quality



Improve  
Process



Test  
Traceability



Fault  
Tracking

## Order Details

### EVSETOP-PHx-CONx-Bx

PH1 = Single Phase

PH3 = Three Phase

CON1 = Type 1

CON2 = Type 2

CON3 = NACS

B0 = Freestanding

B1 = With 19" Rack Mounting Brackets