



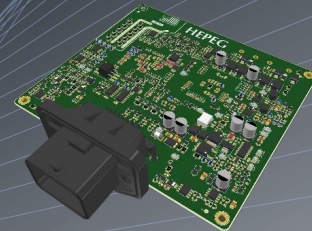
ENGINEERING
CONSULTING
SERVICES

Highly Efficient Power Electronics Generation



DC Fast Charging Junction Box

EVCC + CCS (ISO 15118)



Developed By Us

Owned By You

Designed in California, USA

Copyright © 2025 HEPEG, Inc.



HIGHLIGHTS

HEPEG offers vertical integration for **custom-made** hardware and CCS Software solution for Bi-directional (V2G) DC Fast Charging (EVCC) Junction Box to charge any electric vehicle high-voltage battery system.



Why HEPEG?

Using solution by HEPEG will help to cut down building costs and avoid dependency from other suppliers.



➤ EXPERIENCE

HEPEG has successfully delivered DC FCJB (EVCC) for production



➤ BENEFITS

HEPEG can provide all design manufacturing files to EV OEM

➤ FAMILIARITY

HEPEG knows EV US/EU charging standards, systems and equipment

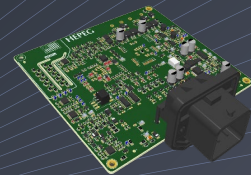


➤ HISTORY

HEPEG has collaborated successfully with EV OEMs in the past

➤ RESPONSIVENESS

HEPEG can adapt quickly and respond to EV costumers needs



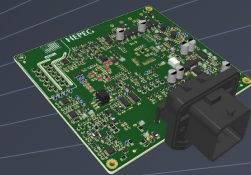
DC FCJB(EVCC) key Hardware Features

- Configurable EVCC (Electric Vehicle Charge Controller) PCB
- Supported charging standards are SAE J1772 L1 / L2 and CCS1 / CCS2 over the PLC
- Dual contactor drive
- High Voltage Contactor weld detection
- Single ended high voltage measurements
- AC input voltage detection for NACS safe operation
- Eight temperature reading points: 3 for inlet, 4 for busbars and 1 for PCB
- Up to 1000V powertrain system
- Up to 600A charging current
- Wide auxiliary voltage operating range from 9V-36V
- Reverse battery and transient voltage protection
- HVIL detection
- Two independent 1 Mbps CAN communication interface
- Wakeup over CAN or J1772 pilot
- Multi color LED drive
- Inlet Lock actuator drive with feedback
- Two extra programmable I/O interfaces
- IP67 waterproof aluminum enclosure
- Passive cooling with ambient operation range -40C to +55C
- Minimum 10 Meg insulation resistance with chase ground



DC FCJB(EVCC) key Software Features

- Configurable EVCC (Electric Vehicle Charge Controller) PCB
- CCS software framework that allows integrators to simply develop custom EVCC hardware that interacts with DIN 70121 and ISO 15118 compliant EVSEs.
- Standards Compliance
 - ISO 15118
 - DIN 70121
 - SAE J1772
 - IEC 61851
 - IEC 62196
- PLC Driver Management
 - Complete driver for QCA7005 PLC PHY
 - Boot-from-host capability
 - SLAC management
 - PLC monitoring and diagnostics
 - PSD calibration and tuning
- Pilot Line Decoding
 - Interprets J1772 Pilot and Proximity inputs
 - Provides non-CCS J1772 AC charging
- TCP/IP and Security
 - Abstract TCP/IP and crypto interfaces
 - Recommended TCP/IP stack: lwIP
 - Recommended security stack: mbedTLS
 - Able to integrate with any TCP/IP stack with IPv6 capability
 - Recommended stacks selected for commercially compliant licensing, reliability, and community trust
- Message Serialization
 - Custom tooling generates embedded C EXI codecs for any V2G schema
 - DIN 70121: urn:din:70121:2012
 - ISO 15118-2: urn:iso:15118:2:2013
 - ISO 15118-20: urn:iso:15118:2:2016 (Optional)
 - Deterministic on-target EXI serialization and deserialization
 - Development tooling including V2G message dissectors
- Application State Management
 - Clean C async API provides simple abstracted access to the CCS stack
 - CCS software efficiently handles state flow through SLAC and the V2G state machine.
 - (UDS) Unified Diagnostic Service (Optional)



Let's Do Something Unique and Valuable



Contact us: 

Phone: (747) 955-2555

Email: info@hepeg.com

Web: www.hepeg.com

Location: Los Angeles, CA

Thank You !

