

Charge Control V

The worlds first HPC controller with EVerest charging stack.

The Charge Control V (CCV) is a modern dual-gun EVSE controller for high-performance-chargers (HPCs) based on our proven Charge SOM.

It combines two CCS ports with a safety co-processor and native support for high-resolution displays and plenty of universal IO.

The CCV simplifies the architecture of DC charging solutions, shortens time-to-market, and reduces the effort and costs for lifecycle management. The charging controller can be used for new designs as well as a drop-in replacement for outdated control solutions.

CCV is developed and manufactured in Germany and currently is in pre-series status.

Key Features

IEC 61851 & SAE J1772 Compatibility

- Works with CCS1 / CCS2 according to IEC 61851, SAE J1772, and ISO 15118, ensuring smooth communication with all types of EVs.

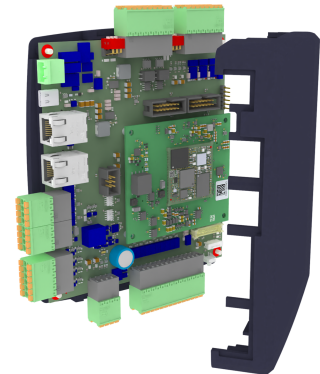
Safety Compliance

- Renesas co-processor monitors and controls CP signals, DC circuit breakers, temperature sensors, isolation monitors and other vital components
- Firmware meets IEC 61508 standard

Software Stack Optimization

- Plug-and-Play with EVerest, the popular Open-Source charging stack
- Also available as commercial LTS version
- Well maintained, open Yocto BSP

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HomePlug Green PHY Standard & ISO 15118 Support

- Classic coupling of Powerline signal to CP
- Utilizes the Vertexcom MSE1022 chip

Advanced Security

- TPM for secure hardware-based key storage
- RTC for precise timekeeping
- Integrated EdgeLock secure enclave in i.MX93

Host Controller

- NXP i.MX93 1.7 GHz
- 512/1024 MB DDR4 RAM
- 8/32 GB eMMC

Interfaces

- 2 x CCS
- 2 x CAN
- 1 x RS485
- 1 x RS485/RS232
- 2 x Charge Stops (graceful shutdown)
- 2 x HV Ready outputs – state “C” (safety)
- 6 x High Voltage DC contactor drivers (safety)
- 2 x IMD interfaces (safety)
- 8 x Temperature sensor inputs (safety)
- 6 x EStops (safety)
- 2 x Ethernet 100 Mbit/s
- 16x Digital Outputs
- 8 x Digital Inputs
- Generic GPIOs
- USB C
- LVDS Display