

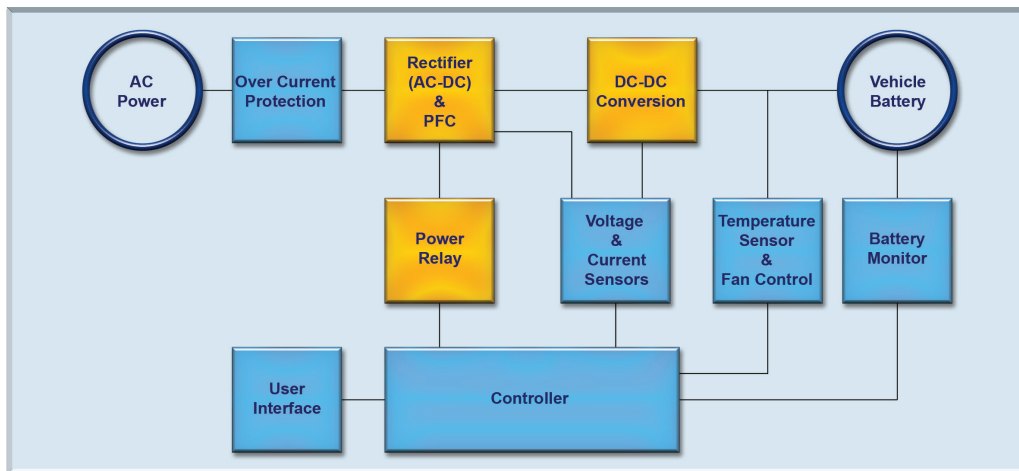
Electric Vehicle (EV) Charging Station



The electric vehicle (EV) industry is expected to have unprecedented growth, aided in part by continuing climate change. With the possibility of EV charging stations becoming as widespread as gas stations, it is now more important than ever to ensure these stations can provide quick and reliable charging. Central Semiconductor manufactures a broad portfolio of high-power bridge rectifiers and diodes that are ideal for various types of EV chargers.

Currently, three EV charging architectures exist: level 1, level 2, and DC fast charging. Levels 1 and 2 supply AC to the internal charger of the vehicle which converts it to DC to be sent to the battery. Charging stations are essentially a straight connection from a power source to the vehicle, with some power-factor correction and overcurrent protection built in. The high voltage required for fast charging necessitates a much larger rectifier than is practical for a vehicle, so AC-DC conversion is performed at the charging station, bypassing an onboard rectifier.

For more information visit: www.centrasemi.com/applications



AC/DC Rectification & DC/DC Conversion

• Full-Bridge Rectifiers

- CBRDFA4-100: 1000V, 4A (BR DFN-A)
- CBRHDSH2-40: 40V, 2A (HDDIP)

• Rectifier Diodes

- CUDD16-08C: 800V, 16A (D2PAK)
- CR16UD-08FP: 800V, 16A (TO-220FP)

• Silicon Schottky Diodes

- CRSH16D-100FP: 100V, 16A (TO-220FP)
- CSHDD16-200C: 200V, 16A (D2PAK)

• Silicon Carbide Schottky Rectifiers

- CPC13-SIC50-1200: 1200V, 50A (Bare Die)
- CPC11-SIC30-650: 650V, 30A (Bare Die)

Power Relay & Boost/Buck

• Power MOSFETs

- CDM3-800: 800V, 3A (DPAK)
- CDM7-650: 650V, 7A (DPAK)