



Direct current fast charging station

Direct current fast charging station

Wendy is a contributing writer for Motorbiscuit. She loves learning new things, and is currently trying her hand at watercolor painting. When she's not writing, you'll find her off tinkering with her lawnmowers or trying to keep up with her teenage son.

Satisfaction with EV charging has improved, particularly with DC fast chargers and Tesla Superchargers, but challenges remain, according to the J.D. Power “2024 US Electric Vehicle Experience (EVX) Public Charging Study.”

As consumers look to purchase electric vehicles, the amount of time it takes to charge an EV continues to influence their buying decisions. The fastest way to charge an EV today is high-power direct current (DC) fast charging. DC fast charging differs from alternating current (AC) charging, and it requires specific considerations for OEMs when it comes to designing key components of a vehicle's electrical architecture, such as charging inlets.

Slower charging options (AC Level 1 and AC Level 2) use AC, which is how electricity is typically delivered from the power grid in general, and it is how power is delivered to homes. AC charging rates can range from 12A to 80A, per the SAE J1772 standard in North America, while charging rates elsewhere vary based on regional standards, such as IEC 62196 or GB/T 20234. When EV owners charge their vehicles at home, they plug an EV charger into the vehicle's charging inlet, and the EV's onboard charger then converts that AC power to DC to charge the battery.

For OEMs, the challenge is to provide a charging inlet that is flexible enough to accommodate both AC charging and DC fast charging options across regions, is able to detect and dissipate heat, and is built with a service-friendly design.

Aptiv's modular charging inlets are equipped with advanced temperature-sensing technology that can accurately track temperatures and relay that information to the system in real time. The inlets can use passive-cooling systems leveraging busbars, or active-cooling systems that run liquid coolant to a cold plate near the terminals or to the busbars adjacent to the pins to draw heat away.

Aptiv works closely with OEMs to address their pain points, designing state-of-the-art charging inlets and charging harnesses that meet their requirements for charging speed, cooling, physical orientation and flexibility across regions — all with Aptiv's full-system perspective and global reach, ensuring compatibility with DC fast charging stations located around the world.

Contact us for free full report

Web: <https://sumthingtasty.co.za/contact-us/>

Email: energystorage2000@gmail.com

WhatsApp: 8613816583346

