# Super VOOC in fast lane, fills battery in 15 minutes

February 25 2016, by Nancy Owano


This week, battery-charging technology carrying a pitch of being especially fast and safe was talked up at the Mobile World Congress. A Chinese smartphone company announced its quick-charge technology,

which can deliver low-temperature charging of smartphone batteries.

Oppo is the company and the new phone-charging technology is called Super VOOC Flash Charge; a presentation at the event showed just how fast charging can be. How fast? Super VOOC Battery tech can fully charge a phone in 15 minutes—it will charge a 2,500mAh battery to 100 percent.

That is pretty impressive as a 15-minute charge appears comfortably short as a painless interruption which one can carry out during any busy day.

(Another important fast-charging player is Qualcomm. They said that in laboratory tests using a 2750mAh battery, a Quick Charge 3.0 enabled device went from 0 percent to 80 percent charge in 35 minutes; Quick Charge is the company's fast charging technology for devices powered by Qualcomm Snapdragon processors.)

*PCMag* mobile analyst Ajay Kumar made the point too on Tuesday that fast charging is not a new technology; companies like the above-mentioned Qualcomm have their own version of it, but what sets Oppo's VOOC apart is that it is low-voltage. "Most types of fast charge work by pushing out more amps, but VOOC keeps your standard amperage, reducing risk of overheating or battery damage."

The technology works with micro-USB and USB Type-C ports. As Kumar reported, the adapter was designed with military-grade materials and compatibility for micro USB and USB Type-C ports.

How did Oppo pull off this 15-minute feat? Oppo said that "Super VOOC Flash Charge uses a 5V low-voltage pulse-charge algorithm, ensuring a low-temperature charge that's safe for the battery and dynamically regulating the current to charge the phone in the shortest

time possible. The all-new algorithm pairs with a customized super battery, as well as a new adapter, cable and connector made using premium, military-grade materials."

Samuel Gibbs of *The Guardian* talked about the company's technology approach. According to Gibbs, Oppo said the technology was "safer and better for battery longevity because it maintains the voltage at 5V and dynamically adjusts the current to keep the fastest possible charging rate while not damaging the battery."

The circuitry to enable the faster charging is stored within the charger for Oppo's system, said *The Guardian*. "Oppo's system moves a source of heat, which is hazardous to battery health and causes phones to heat up during charging, to the wall."

*PCMag*'s Kumar reported that Oppo has included a customized battery and software with Super VOOC-enabled devices, allowing them to regulate the current to prevent overheating.
When can we expect to see this technology in the real world? *GSMArena* said that the company hopes to implement it in Oppo smartphones in the near future.

The company said in its press release that it plans to release a device with Super VOOC Flash Charge in the latter part of the year.

If you are not yet familiar with the name Oppo, it is worth recognizing for its place in the phone world. Natasha Lomas reported last month in *TechCrunch* that "In the game of thrones that is the Android OEM space, Chinese smartphone maker Oppo's star is rising. It said today it sold 50 million smartphones in the full year 2015—a growth rate of 67 per cent, year over year."

**More information:** www.oppo.com/en/about-us/press … ge-

sabilization-tech