

Qualcomm

Qualcomm[®] Automotive Powerline Communication (PLC)

FAQs

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What is the significance of this announcement?

Qualcomm Technologies' new Powerline Communication device supports the growing electric vehicle (EV) segment by addressing increasing quality and functional requirements, helping EV charging to be more efficient and intelligent. It supports the Combined Charging System (CCS) standard that provides bi-directional energy flow between the car, home, and electric grid, balancing the flow of energy to and from the grid to mitigate overload. This is a critical need in today's growing EV market, as more EV users re-charge their vehicles—often at the same time.

What are the benefits of the QCA7006AQ?

The benefits of this device include:

- Smart-grid integration supports vehicle authentication on the network, allowing users to access Plug and Charge automated payments for EV charging, schedule charging times, and manage the direction of energy flowing to and from the grid, car, and even the home.
- The ability to extract energy from EVs and put it back into the grid reduces the need to generate more power when loads are already at peak. This helps to manage and balance the flow of energy between EVs and the grid.
- Smart grid integration makes EV charging stations more user-friendly, while supporting the growing EV segment that aims to reduce greenhouse gas emissions globally.

The release notes that Qualcomm works with “virtually all global, leading automakers”.

Can you clarify which companies this includes?

While we cannot provide names of specific companies, all European and North American automakers have adopted our PLC solution. In addition, many Asian car manufacturers are adopting our PLC solution

This is the “next generation” of Qualcomm’s PLC devices, but I am not familiar with your past devices. Can you elaborate on Qualcomm’s role in this segment?

Qualcomm has been supplying PLC devices (specifically the QCA7000 and then QCA7005) to the automotive industry since 2013. These devices have been widely adopted in the industry, primarily due to the rapid growth and adoption of Plug-In Hybrid and Battery Electric Vehicles.

While Qualcomm has been a major player in the EV segment for years, the EV market is expanding rapidly. With the launch of the QCA7006AQ, we are reconfirming our commitment to support our customers’ success in the EV category.

What are the main differences of this device from past devices?

Qualcomm is expanding the operating ambient temperature support for this device to -40 to +105 Degrees Celsius, along with a full AEC-Q100 Auto Grade 2 qualification. By comparison, our QCA7005 supports an ambient operating temperature of -40 to +85 Degrees Celsius. This upgrade will provide customers additional margins for their designs, helping meet increasingly demanding design objectives. The latest device supports an Ethernet digital interface to provide higher data rates than existing solutions. With the new PLC device, users can enjoy higher data rates using the HPAV at up to 200 Mbps. The Ethernet digital interface provides an alternate connection to the host processor for both HPGP and HPAV, and is required to fully benefit from the HPAV, as the SPI digital interface is limited to 60 Mbps.

Can you expand on the CCS standard and what this means?

For electric vehicle charging to become a simple and smooth experience for users, the industry needs to come together on a common charging solution where vehicles, chargers, and software are all interoperable and support smart grid integration. The Combined Charging System (CCS) standards combine type 1 (US) and type 2 (Europe) chargers to help to reduce complexity for manufacturers and accelerate the deployment of common charging stations worldwide.



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