

Vertexcom HomePlug GreenPHY with ISO 15118-20 Bidirectional Power Transfer

An Innovative Solution for the Future of Vehicle-Grid Integration

HSINCHU, TAIWAN, June 21, 2023 /EINPresswire.com/ -- [Vertexcom Technologies Inc.](https://www.vertexcom.com), a world-class smart charging communication chip design company, announces support for ISO 15118-20 Bidirectional Power Transfer (BPT). This functionality, also known as V2G (Vehicle-to-Grid), allows electric vehicles (EVs) to not only draw power from the grid, but also supplement it, strengthening energy resilience during the global transition to renewable resources.



Vertexcom HomePlug GreenPHY chips are ready for the adoption of ISO 15118-20 BPT/V2G capabilities.

According to [CharIN](https://www.charin.org)—the worldwide non-profit organization for the support and development of the Combined Charging System (CCS) standard—the grid-serving integration of EVs into the power grid is one of the steps in making the energy world of tomorrow intelligent and sustainable. Therefore, it is important that hardware and software used in EV charging support bidirectional charging, whose key enablers are CCS and ISO 15118-20.

Vertexcom HomePlug GreenPHY SECC chipset MSE1021 + MSEX24-i and EVCC chipset MSE1022 + MSEX25-i support the implementation of ISO 15118-20 BPT. In addition to regular EV charging, drivers may choose to save money or even profit by using power stored in the EV when rates are high and recharging the EV when rates are low. Vehicle-grid integration benefits the grid, all the while satisfying drivers' mobility needs.

With the CCS standard, bidirectional access to the EV or its battery takes place directly via the charging station, without the need for installing V2G hardware in the car. This is unlike Type 1, Type 2 plugs and AC charging commonly found in residential garages. Furthermore, CCS-enabled DC wall boxes not only make it possible to charge and discharge EVs at home, but also prove compatible with high-power charging infrastructure in other locations, making for a future-proof choice in the era of rapid energy innovation.

BPT is a feature of ISO 15118-20, "2nd generation network layer and application layer requirements" published in April 2022. Apart from improving the functionalities covered by its predecessor ISO 15118-2, such as AC & DC charging, Plug & Charge, and Smart Charging, ISO 15118-20 specifies bidirectional and other innovative charging features. Drivers using BPT can provide service to the grid for stabilization, to the home for self-consumption, to buildings such as company offices, and to tools or consumer devices. No matter the scenario, the goal is to transform EVs into mobile energy storage systems.

About Vertexcom Technologies

Vertexcom Technologies develops communication chips and networking software for long-range, large-scale IoT, smart grids, and automotive applications. The company offers a complete communication solution including Wi-SUN, HomePlug AV & GreenPHY, HPLC, G3-PLC, and hybrid dual-mode communication solutions. As a contributor to international communication specifications, Vertexcom participates in the development of Wi-SUN FAN 1.1 as well as G3-PLC & RF hybrid dual-mode specification.

About CharIN

CharIN is the leading global association with over 320 members dedicated to promoting interoperability based on the Combined Charging System (CCS) as the global standard for charging vehicles of all kinds. It is a non-profit organization open to any company worldwide being involved in the business around e-mobility.

Karvino LU

Vertexcom Technologies

info@vertexcom.com

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