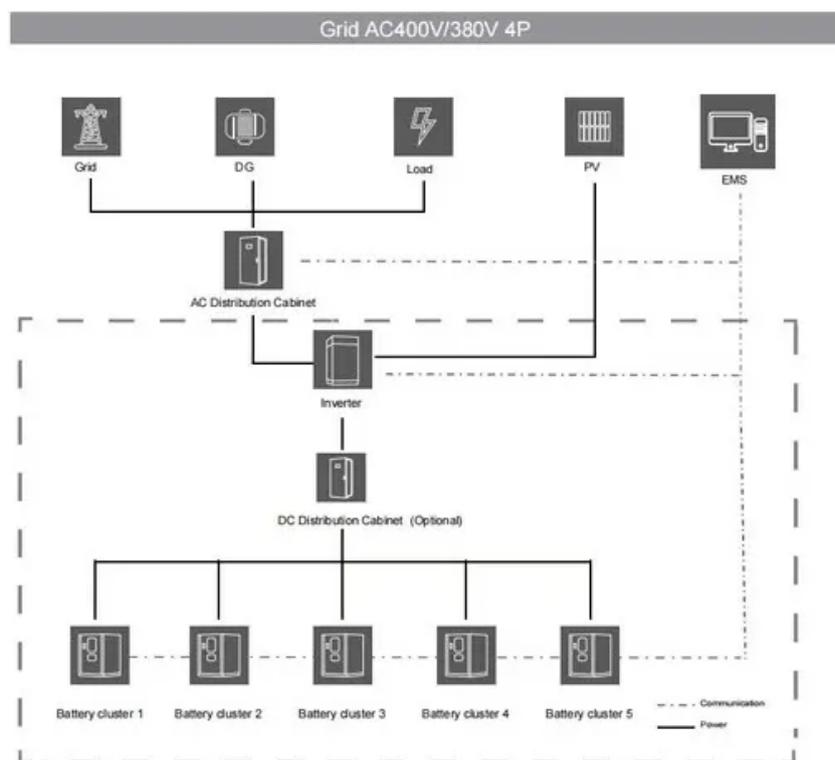


# Bidirectional charging of photovoltaic containers in ports



## Overview

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In this study, a novel multi-port bi-directional converter is proposed to be utilized as an off-board EV charging station. Four modes of operation, high gain, and three input/output ports are the main advantages of the proposed converter. The converter supports Grid-to-Vehicle (G2V), PV-to-Vehicle. Here, we provide comprehensive information about large-scale photovoltaic solutions including utility-scale power plants, custom folding solar containers, high-capacity inverters, and advanced energy storage systems. This technology unlocks the potential for EVs to serve as mobile energy storage units, contributing to grid stability and enabling efficient energy management. However, it has only one DC tapping, thus.

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**12.8V 100Ah**



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As these energy storage element's charging and discharging cycles are to be controlled, an isolated bidirectional converter topology with transformer is used.



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### [Multiport bidirectional converters for off board charging stations of](#)

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### Highvoltage Battery



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