

## **Energy Storage Communication Module Design**

What is a battery energy storage system?

Currently,a battery energy storage system (BESS) plays an important role in residential,commercial and industrial,grid energy storage and management. BESS has various high-voltage system structures. Commercial,industrial,and grid BESS contain several racks that each contain packs in a stack. A residential BESS contains one rack.

How does a BCU communicate with a PCs & BSMU?

The BCU needs to transmit the SOC,SOH,and rack status to the PCS and BSMU to operate the whole energy storage function. CAN,RS-485,and Ethernetis widely used in the communication interface.

What is a ucc12050 power module?

The device is available in the SOIC-16 (DW) package and a smaller SOIC-8 (DWV) package. The UCC12050 is an automotive qualified DC/DC power module with 5-kVRMS reinforced isolation rating designed to provide efficient, isolated power to isolated circuits that require a bias supply with a well-regulated output voltage.

What are ucc12050 and sn6505 devices used for?

The UCC12050 and SN6505 devices are used for isolated power supply. The design also connects the real-time clock BQ32002 to log data and the humidity sensor HDC3020 to monitor the condensation status of rack or pack. Figure 2-1. TIDA-010271 Block Diagram

Abstract. The large-scale battery energy storage scatted accessing to distribution power grid is difficult to manage, which is difficult to make full use of its fast response ability in peak shaving ...



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