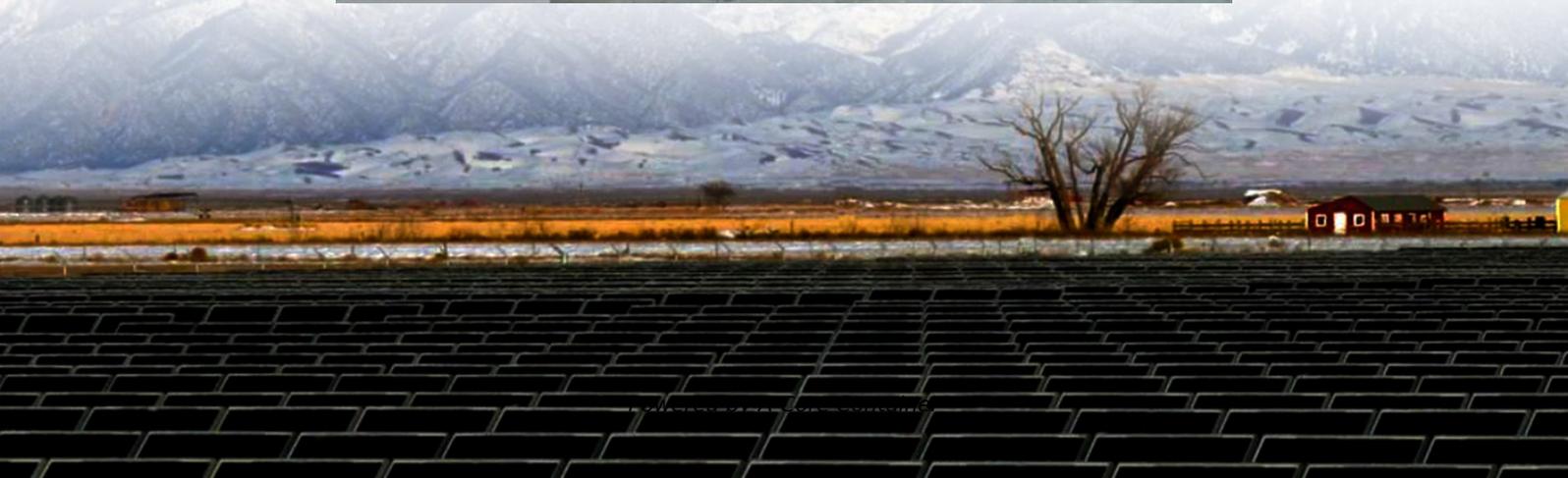


A-Core Container

How to realize PLC communication with solar inverter



Overview

This reference design features a simple approach for PLC, using an On-Off-Keying modulator in combination with a line driver and passive filtering, to transmit data over a Universal Asynchronous Receiver, Transmitter (UART) interface. How does a micro inverter plc work?

The PLC module converts the operational data sent by the micro inverter into high-frequency signals through power lines and transmits them to the PLC receiver through the power grid. The receiver then connects the data to the router through a network cable, thereby connecting to the user's device. No additional wiring is required.

What is PLC communication technology?

PLC communication technology utilizes existing power lines as data transmission media to connect micro inverters with PLC modules. The PLC module converts the operational data sent by the micro inverter into high-frequency signals through power lines and transmits them to the PLC receiver through the power grid.

What is plc based power line communication (PLC)?

PLC (Power Line Communication) based bi-directional communication for energy measurement and control. Automatic PLC network management. In field firmware upgrade. 12 ~ 60V input. Max. current 15A. • 700 ~ 900W power. Smart solar panel module and the master module on inverter based on Power Line Communication (PLC).

Which power line communication options are implemented in different solar installations?

Figure 1 shows typical power line communication options implemented in different solar installations. These installations can be divided into communication on DC lines (red) and communication on AC lines (blue).

How does an inverter communicate with a monitoring platform?

The communication between the inverter and the monitoring platform relies on a communication protocol in terms of software and mainly uses a monitoring stick module as a medium or bridge for data transmission and reception in terms of hardware. This ensures that the inverter's operation can be displayed on the monitoring and maintenance platform.

What communication methods do micro inverters use?

This ensures that the inverter's operation can be displayed on the monitoring and maintenance platform. The mainstream micro inverter manufacturers in the global market primarily transmit and control data through communication methods such as WiFi, PLC, RS485, Sub-1G, and Zigbee. Below is an overview of each brand's communication methods:

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