Multi Device Control (MDC)

Maximum Flexibility for System Design

NEW:
Multi Device Control

What is Multi Device Control?

Multi Device Control (MDC) enables, for the first time, the central monitoring and control of up to three PLENTICORE G3 inverters with battery storage systems within a single installation. One PLENTICORE G3 acts as the MDC host and centrally controls up to two additional compatible inverters (MDC clients). This allows the charge and discharge power of your system to be increased. The MDC host coordinates feed-in management and self-consumption – for maximum system efficiency with simple configuration.

Your Benefits with MDC

- **Higher battery power:** up to 60 kW charge/discharge power in a device network with 3 hybrid inverters
- **Flexible scaling:** system design according to customer needs – 1 to 3 PLENTICORE G3 with up to 3 compatible battery storage system(s)
- **Flexible selection:** system design with battery storage systems from different compatible manufacturers and with different capacities
- **Central control:** all necessary settings for the MDC network are made in the MDC host
- **Central visualisation:** the entire power flow is visible in the web menu and on the display of the host inverter
- **Intelligent control:** provider-independent use of dynamic electricity tariffs

Flexibility as a Core Competency

With three PLENTICORE inverters including batteries in an MDC network, up to 6 PV inputs can be realised. This allows all compass directions to be used for solar energy generation.

Maximum Energy Independence for Energy-Intensive Projects

Customers with high-power loads require greater battery power so that these loads can be supplied entirely from stored energy. With MDC, this becomes straightforward. The device network combines three inverters, each with a battery, into an XL storage system.

Smart Expansion of Established Technology

Every PLENTICORE G3 – including existing devices – can be upgraded for use in an MDC network via a software update. Familiar technology remains the foundation: with MDC and PLENTICORE G3, projects with high power output now become achievable.

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Up to 3 Hybrid Inverters in a Single Installation

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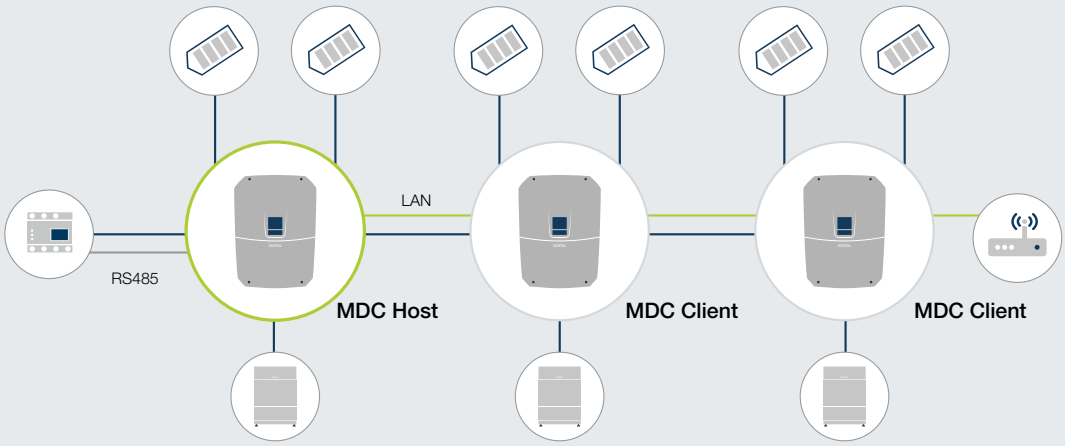
MDC Configuration Example

The device network shown illustrates MDC in action: one PLENTICORE G3 acts as the central host and controls two client inverters. Each of the three inverters is equipped with a battery storage system – creating a high-performance overall system with up to 60 kW of combined charge/discharge power.

The host handles all control tasks: it regulates the feed-in power at the grid connection point, manages the battery charging strategy for all three storage systems, and ensures communication with the energy meter (KSEM or KEM). The two client inverters follow the host's specifications – for coordinated and efficient system control. Communication is carried out via the home network (Ethernet/LAN).



Note: The battery storage systems do not need to be identical. MDC supports the use of compatible storage systems from different manufacturers and with different capacities within the same network. The intelligent charging strategy automatically balances the different storage sizes and ensures optimal utilisation of all available capacities – maximum flexibility in system planning without compromising performance.

MDC Installation: How It Works

1. **Hardware installation:**
   Install all inverters and position the energy meter (KEM or KSEM) at the grid connection point.
2. **Networking:**
   Connect the host to the energy meter via RS485 and connect all devices to each other via LAN (Wi-Fi is not permitted for MDC communication).
3. **Configuration:**
   During initial setup, define one PLENTICORE G3 as the host and all other devices as clients. Open the web menu of the host inverter and add all available compatible devices in the device manager.
4. **Go-Live:**
   Enable data transmission to the KOSTAL Solar Portal for all devices in order to manage the entire system in the new KOSTAL Solar 4me App as well.

*The activation code required for this purpose can be purchased from the KOSTAL Solar Electric webshop by your solar installer during initial commissioning.

Technical Requirements

- Currently available for the PLENTICORE G3 and PLENTICORE MP inverters from software version 3.06.10
- All MDC devices must be connected to each other via LAN cable
- KOSTAL Energy Meter (KEM) or KOSTAL Smart Energy Meter (KSEM) required at the host
- The battery system with the largest capacity must be connected to the host if battery systems of different sizes are present
- For systems with ≥ 2 inverters each with a connected battery, the product extension "Battery Control with MDC"* must be activated in the MDC host inverter

A detailed installation guide can be found here:

User Manual MDC

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