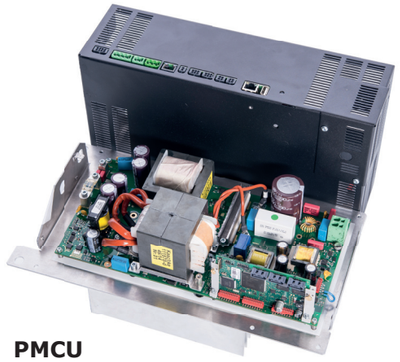
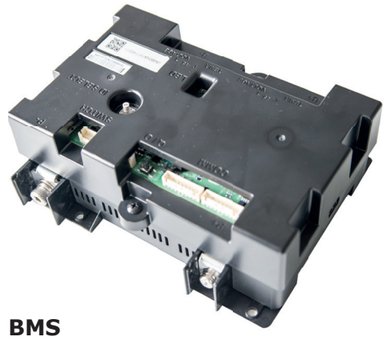
Modules for All-in-one-Energy Storage



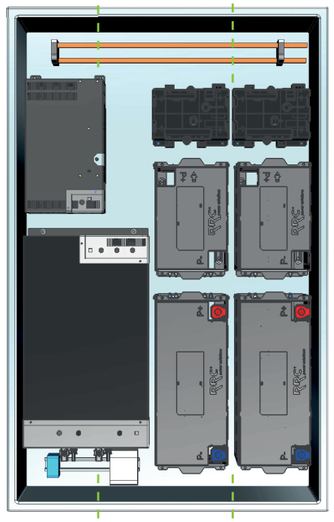
PMCU

Compact Power Management Control Unit (PMCU) which unifies the central control unit, internal/external communication (CAN-Bus/ Ethernet) and power interfaces between power inverter and battery (DC-DC-converter, isolation) with regard to functional safety.



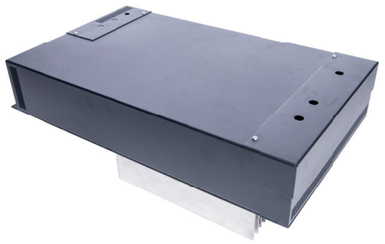
BMS

Intelligent Battery Management System with active safety conception. Safe separation and connection of battery current. Precise measurement of current, cell voltage and cell temperature, and determination of charge, energy and health states (SoC, SoE, SoH) for the batteries. Optimization of battery lifespan through cell balancing and dynamic specification of operating parameters.



Power inverter

Compact, transformerless hybrid power inverter (DC-coupled battery charging directly from two PV MPP inputs) for single-phase connection to the AC grid, with cooling by free convection.



Battery pack

Scalable High-Performance Lithium-Battery (LMO) with multi-level passive safety conception from the cell level (Overcharge Safety Device, Overcurrent Protection and Ceramic Separator).

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RRC® power solutions

Your OEM Partner for Residential ESS

RRC-Your OEM Partner

Energy storage systems are keys to the implementation of the energy transition. They bridge the time difference between generation and usage, stabilize the grid, and can supply energy in case of public grid outage.
RRC offers the development of energy storage concepts as well as their realization to producers and vendors of products and services surrounding the production, consumption, transportation and optimization of energy. RRC energy storage systems are flexible with regard to space requirements and capacity. Configuration depends on objectives:

- Integration into supply systems for private homes
- Optimization of own consumption of PV-Power
- Black out power
- Island mode operation

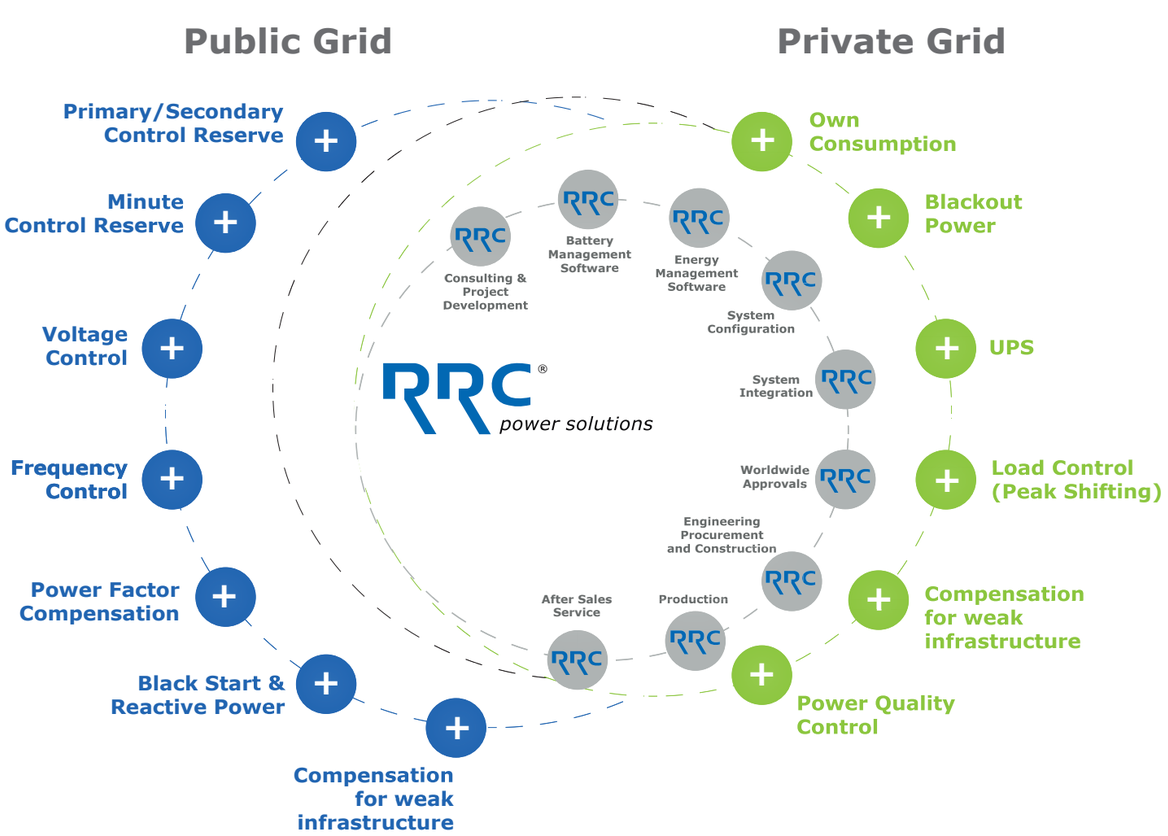
Energy storage systems do not have to be standalone devices. They can also be designed into other devices and installations (for example, micro-CHP or heat pumps).

RRC provides services at all stages of the value chain.

The portfolio includes the following modules: Requirement management, project management, product development (Hardware, Software, Mechanics), system configuration and integration, homologation, EPC, production and after-sales-services.
RRC has attained distinct and demonstrable expertise concerning Li-Ion energy storage.
Since 1989, RRC has been producing intelligent battery and charging systems for safety-critical and medical applications.

Our processes are certified according to ISO 13485, which is especially suited to safety-related products.

Our Products and Services



The way to a perfect energy storage system

All from a single supplier!

RRC customers' target markets are driven to specific demands which influence the characteristics of an energy storage system. RRC offers individual customer solutions instead of replaceable „me too" products. In order to fulfil specific market requirements, we analyze:

- Our customer's target market
- Our customer's product portfolio and quality standards
- The system requirements

Based on the outcome, we develop specifications and a road map in order to achieve the best possible market position for our customers.

As customized as necessary, as standardized as possible!

The rule is to find the balance between individualized solutions and cost. This means that when possible, we use standard components and only develop new components when these will produce a real customer value.

In the name of the Customer ...!

Where needed, we deliver systems and batteries in the name of our customers, using their corporate brand. Thus unnecessary transportation is eliminated, and on the customer side, no costly training (e.g. transportation and storage of batteries) is required.

How much production can it be?

We deliver both - complete devices and pre-assembled system - modules to our customers. The customer chooses the required degree of prefabrication, so that integration into their own production can be optimized, i.e. for integration of a storage system into existing housings.
In coordination with the customer, RRC chooses the best production site with regard to customer proximity and economic feasibility.

Europe, Asia, North America ...

RRC's worldwide homologation service ensures that products adhere to country-specific requirements and standards. In this aspect RRC carries out the complete certification process.

CE TÜVRheinland® c UL us LISTED

Numerous renowned customers have already made use of this service.

RRC ... a strong partner, before and after purchase!

RRC offers a wide scope of After-Sales-Services to its customers:

- First/Second Level Support
- Field Service
- Remote Monitoring and Update Service
- Guarantee services

These services can also be provided under the name and corporate design of the OEM customer.