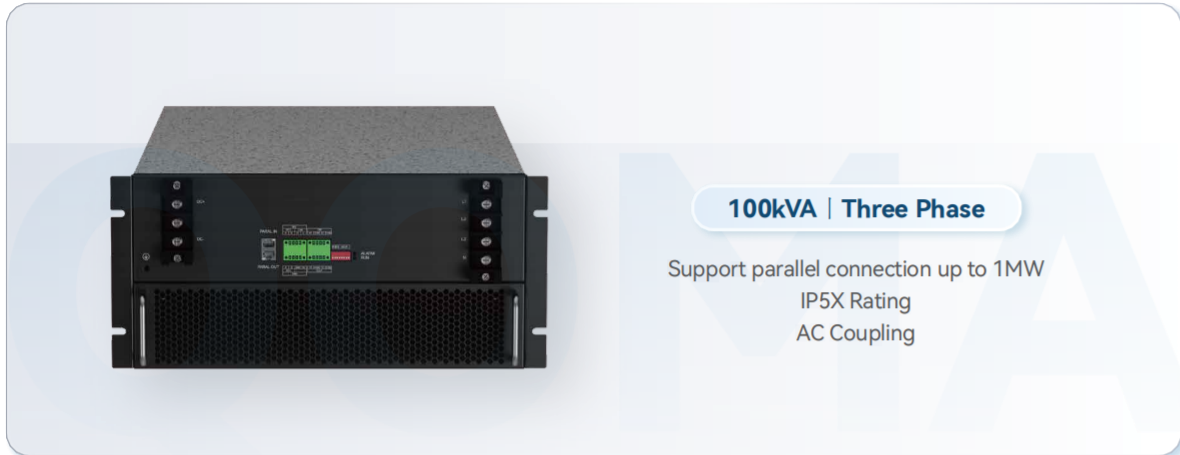


# Qoma100H-R

- Power Conversion System -



Qoma100H-R is a highly efficient power conversion system developed primarily for medium and large-scale mini-grid, commercial and industrial energy storage. It supports hybrid operation with diesel generators, both on-grid and off-grid modes, and various charging and discharging modes such as constant current and constant power. It can optimize energy consumption, implement peak-shaving, reduce electricity expenses, and provide emergency backup power.

## Optimal Performance

- Maximum conversion efficiency 98.7%
- Standby power consumption  $\leq 15W$ , no-load running loss  $< 130W$
- Charging and discharging transfer time  $\leq 20ms$
- Series application, fault in one branch does not affect the operation of other branches
- Supports three-phase unbalanced loads

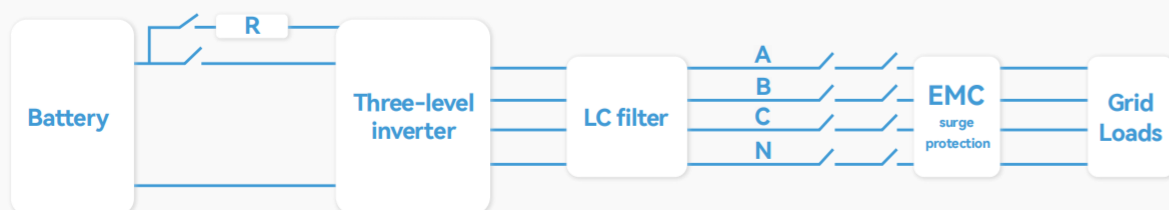
## Enhanced Flexibility

- Supports on-grid, off-grid, and hybrid operation
- Allows off-grid operation of up to 10 units in parallel
- Supports diesel generator hybrid operation: diesel generator priority, PCS priority, or hybrid mode

## Superior Reliability

- Supports functions such as high and low voltage ride-through, islanding protection, black start, and etc.
- Comprehensive fault protection functions and fault waveform analysis

## System Schematic:



Model	Qoma100H-R
<b>DC Side</b>	
Max. DC Voltage	950V
Min. DC Voltage	650V
DC Voltage Range for Nominal Power	650~850V
Max. DC Current	180A
Max. DC Power	110kW
<b>AC Side (Grid)</b>	
AC Output Power	100kVA @45°C
Max. AC Current	160A
Nominal AC Voltage (AC Voltage Range)	400V/230V (-20%~15%)
Nominal Grid Frequency / Frequency Range	50Hz/47Hz~52Hz, 60Hz/57Hz~62Hz
Harmonic (THD)	< 3 % (at nominal power)
Power Factor at Nominal Power /Adjustable Power Factor	-1~1
<b>AC Side (Micro-Grid)</b>	
Nominal AC Voltage	400V/230V (-5%~5%)
Harmonic (THD)	< 1 % (Resistance load)
Unbalanced Three Phase Load	100%
Nominal Frequency / Frequency Range	50Hz/45Hz~55Hz, 60Hz/55Hz~65Hz
Max. AC Power	125kW
<b>Efficiency</b>	
Max. efficiency	98.7%
<b>Protection</b>	
Reverse polarity protection	Yes
Over-voltage Protection	DC Type II / AC Type III
Grid Monitoring / Ground Fault Monitoring	Yes / Yes
Insulation Monitoring	Yes
Overheat Protection	Yes
<b>General Data</b>	
LED	2
COM	Modbus RTU*2 (Monitor and BAT)
CAN	CAN*2 (Monitor and BAT)
DI	2
DO	2
Dimensions (W*H*D)	720*220*440mm
Weight	48 kg
Degree of Protection	IP5X (Independent ventilation design)
Operating Temperature	-30~60°C (>45°C derating)
Relative Humidity	0~100 %
Cooling Method	Temperature controlled forced air cooling
Max. Operating Altitude	4000m (>3000 m derating)
Display	LED, HMI (Optional Accessories)
Self-consumption in Standby Mode	<10 W
Compliance	IEC/EN62477-1, IEC/EN62040-1; EN61000-6-1-2/-3/-4; IEC62116+IEC 61727, NRS097-2-1
Grid Support	LVRT, active & reactive power control and power ramp rate control