

GridOne

PV-ESS All-in-One System

125 kW

PCS Rated Power

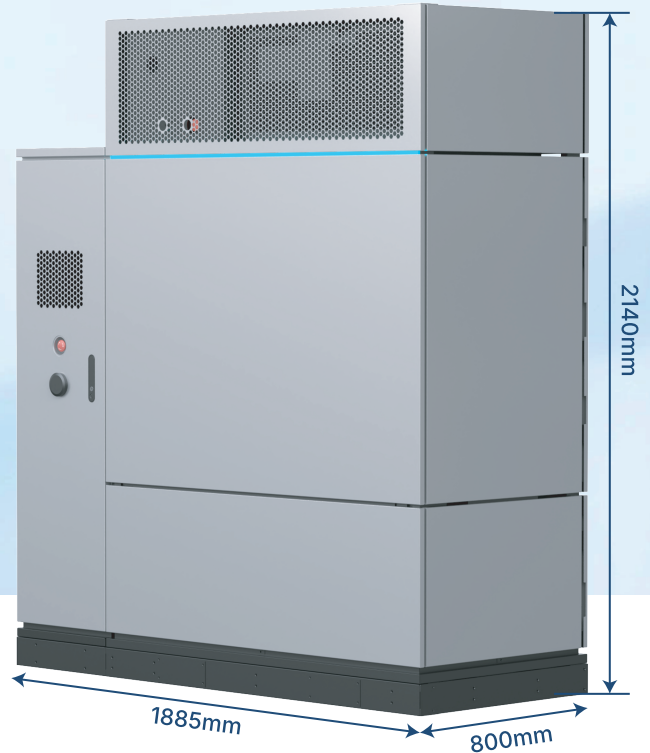
50 kW

PV MPPT

215 kWh

LFP Battery

A compact commercial & industrial energy storage platform that integrates 125 kW PCS, 50 kW PV MPPT and 215 kWh LFP battery capacity for charging, peak shaving, grid support and off-grid applications.



Key Highlights



Solar-Storage-Charging Hub

Integrates PV MPPT, battery storage and high-power PCS output for EV charging and site electrification.



C&I Peak Shaving

Charges off-peak and discharges during peak tariff periods to reduce electricity cost and smooth demand.



Microgrid & Off-grid Support

Maintains critical loads in weak-grid or no-grid sites, with modular parallel expansion capability.



Distributed Generation Firming

Absorbs surplus renewable power and releases it on demand to improve PV utilization.



Grid Support Services

Supports reactive-power control plus LVRT/HVRT functions for voltage and frequency stability.



Demand Charge Management

Works with smart meters and EMS to cap site demand and avoid demand-charge penalties.

Technical Specifications

Feature		Capability
On-grid AC		125 kW 230/400 V 180 A 340–440 V 50/60 Hz THDI ≤ 2% PF >0.99 adj. -1 to +1 110% overload
Off-grid AC		125 kW 230/400 V 180 A 50/60 Hz THDU ≤ 3% isolation transformer supported on/off-grid switching supported
PV Input		630 V max input 50 kW max power MPPT 0–630 V full-load 500–630 V
Battery		LFP (3.2 V / 280 Ah / 1P) 768 V (240S) 215 kWh operating 600–876 V 1C charge/discharge
Efficiency		PCS peak efficiency ≥ 98.5% MPPT peak efficiency > 99%
System		IP54 cabinet -30°C to 55°C humidity ≤ 95% noise 75 dB(A) altitude ≤ 2000 m
Interfaces		Cloud platform RS-485 CAN Ethernet APP / EMS communication
	Battery safety	EC 62619, IEC 63056, EN 62477-1, IEC 62933-5-2 and EN 62109-1/-2.
Compliance	Electromagnetic Compatibility (EMC)	EN 61000-6-2 / EN 61000-6-4.
	Grid-code coverage	Includes EN 50549 variants and country-specific certifications such as VDE-AR-N 4105 and UK G99.
Protection		Includes AC overcurrent, overvoltage, short-circuit, anti-islanding, DC reverse polarity and BMS-related protections.
Application Scenarios		EV charging hubs Peak shaving & demand control Microgrids & backup power Renewable firming
Grid-connected parallel operation		Up to 24 units
Off-grid parallel operation (VF mode)		Up to 6 units
Off-grid parallel operation (VSG mode)		Up to 10-12 units
Requirement for off-grid VSG operation		Independent management of each battery cluster