

PARAMETERS

High-voltage Battery System	
System Voltage Range	172.8 ~ 688.8 V
Single-Tower Capacity Range	20.48 ~ 61.44 kWh
Maximum System Capacity	245.76 kWh (4 towers in parallel)
Max.Working Current	100 A
Rated Working Current	50 A
Operating Temperature	-20°C ~ 55°C (with heating)
Cooling Method	Natural Cooling
Altitude	<2000m
Communication	RS 485 / WiFi / Bluetooth
Protection Rating	IP55
Certifications	IEC 62619, CE, UN 38.3, DGM, MSDS
Master Module Dimension (W x D x H)	590 × 390 × 132 mm
Base Dimension (W x D x H)	590 × 390 × 73 mm
Low-voltage Battery System	
System Voltage Range	43.2 ~ 57.6 V
Single-Tower Capacity Range	5.12 ~ 61.44 kWh
Maximum System Capacity	245.76 kWh (4 towers in parallel)
Max. Working Current	100 A (5kWh), 200 A (≥10kWh)
Rated Working Current	50 A (5kWh), 100 A (10kWh), 150 A (15kWh, 200 A (≥20kWh)
Operating Temperature	-20°C ~ 55°C (with heating)
Cooling Method	Natural Cooling
Altitude	<2000m
Protection Rating	IP55
Communication	RS 485 / WiFi / Bluetooth
Certifications	IEC 62619, CE, UN 38.3, DGM, MSDS
Master Module Dimension (W x D x H)	590 × 390 × 102 mm
Base Dimension (W x D x H)	590 × 390 × 73 mm

PARAMETERS

Unified Battery Module (Used for both LV and HV systems)	
Cell Chemistry	LFP
Battery Module Capacity	5.12 kWh
Scalability	12S or 12P
Max. Working Current	100 A
Rated Working Current	50 A
Module Balancing Current	5 A
Operating Temperature	-20°C ~ 55°C (with heating)
Cooling Method	Natural Cooling
Altitude	<2000m
Cycle Life	8000
Protection Rating	IP55
Dimension (W x D x H)	590 × 390 × 133 mm
Weight	50 kg
Certifications	IEC 62619, CE, UN 38.3, DGM, MSDS
Smart Charging Module (Optional for HV Battery)	
Power	20 kW
Output Voltage Range	200 ~ 500 V DC
Charging Cable	3 m
Charging Port	CCS2
Cooling Method	Air Cooling
Function	Plug-and-charge
Operating Temperature	-20°C ~ 55°C
Protection Rating	IP55
Dimension (W x D x H)	590 × 390 × 215 mm



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META Node

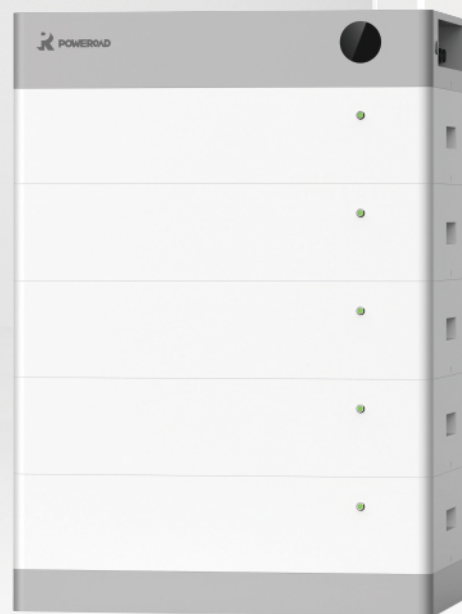
Stacking Battery Solution
Innovative Low-Voltage / High-Voltage Configurations



META Node

Stacking Battery

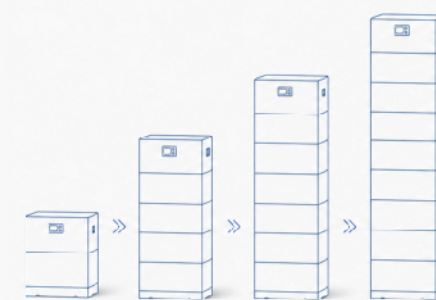
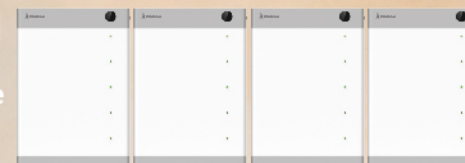
Meta Node is Poweroad's new platform-based residential and small C&I ESS solution, with an unified 5kWh battery module, flexible low-voltage and high-voltage configurations, integrated fire safety protection, optional low-temperature charging down to -20°C, and optional high-efficiency DC EV charging.



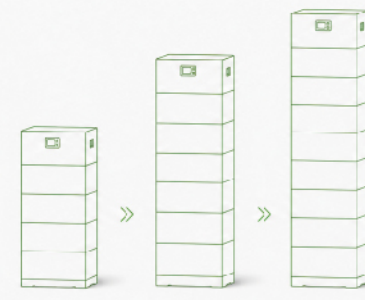
Wider Applications, Less Stock.



Up to 4 towers in parallel
Max. **245 kWh**



Low-Voltage Configuration
1-12 units in parallel per tower



High-Voltage Configuration
4-12 units in series per tower

Multi-Layer System Protection

- BMS Monitoring**
Real-time protection and intelligent management
- Integrated Fire Protection**
Active detection and rapid response for safety
- IP55 Outdoor Protection**
IP55-rated protection supports reliable outdoor and indoor installation



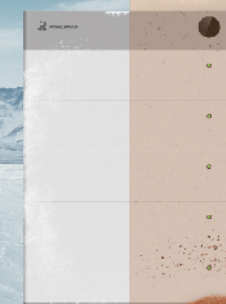
All-Weather Reliability

-20°C

55°C

Freezing Cold

Scorching Heat



Wider Applications, Less Stock

One module for HV series connection and LV parallel expansion, cover more applications with fewer SKUs



Grow with Your Needs

Max.12 packs per tower, 4 towers in parallel, 5-245 kWh capacity



All-Weather Reliability

Built-in heating & IP55 protection for indoor/outdoor reliability



Multi-Layer Safety

Integrated fire safety module, BMS Monitoring



EV DC Charging Ready

With direct DC EV charging support, this system enables faster, more efficient charging



Smart Energy Coordination

Hybrid inverter integration for solar self-consumption, backup power, peak shaving, and VPP-ready applications

Poweroad APP & Web Portal

Poweroad IoE APP
For Homeowners & Installers

Unified Web Portal
For Distributors



Powerful digital tools to reduce O&M cost and improve energy efficiency.

Unlock Value of Your Home Energy

- EV DC Charging*
- PV Self-consumption
- Backup Power
- VPP-ready

*Optional for HV Battery

