

All-in-One

215KWh/60KW single system

High performance

6000cycle & 91% system efficiency

Scalability

Scalable to 20MWh systems

Flexible installation

Less than 2m² footprint



PowerOn D1

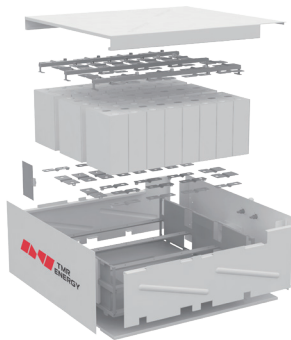
Distributed energy storage system



Product Presentation

Prime Distributed ess provides peak-shifting&valley-filling, power expansion and backup power services to help customers reduce electricity costs to the maximum extent.

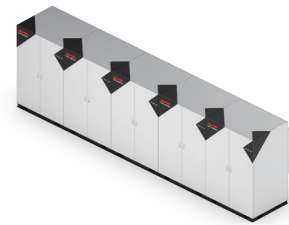
The battery pack uses LFP batteries from top supplier CATL, and is paired with selfdeveloped BMS. One battery cabinet consisting of 10 packs with integrated air cooling and fire protection to ensure system safety,while the system can be freely expanded according toproject requirements.



Batthey Pack



Battery Cabinet



Parallel System

Function&Service



• Time of Use

Charge and discharge Prime ESS at different electricity prices times



• Backup Power

Prime ESS provides emergency power in milliseconds during grid off



• Peak Shaving

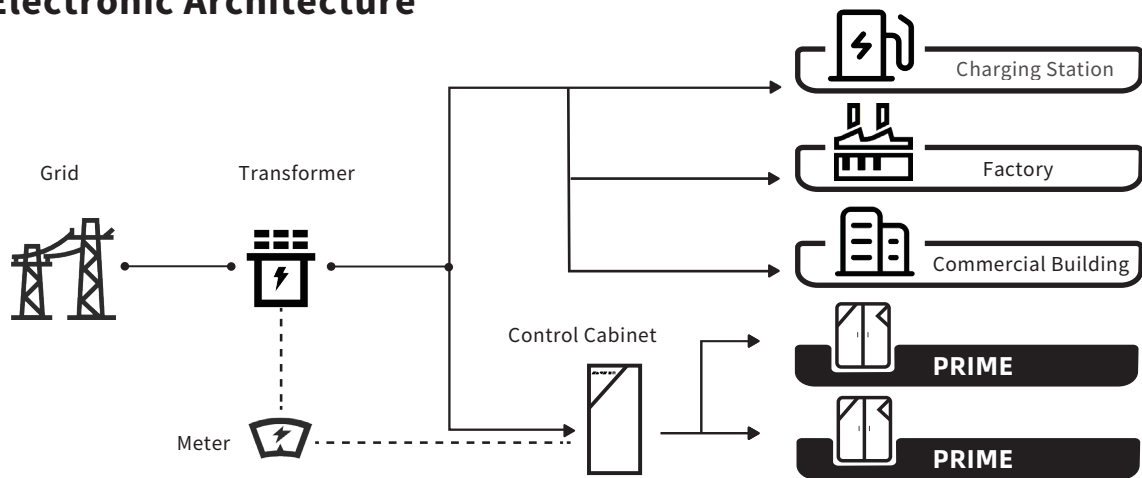
Prime ESS provides additional electricity if a peak load occurs



• Market Participation

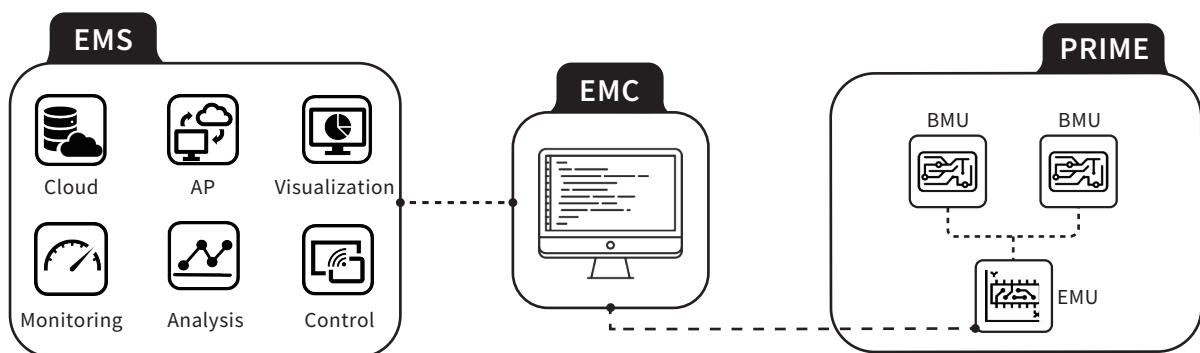
Prime ESS acts as virtual plant to participate in electricity market trades

Electronic Architecture



Prime ess is easy to connect and flexible to deploy. Each Prime system is connected to a cluster control cabinet, which is then connected to a low voltage distribution cabinet under the transformer. The cluster control cabinet communicates in real time with the Prime system and the smart meter on the transformer side to obtain their energy status. The system automatically discharges during peak hours or high loads, thereby reducing the use of the high-cost grid. Low voltage side access allows the saved power to reach the load without going through the transformer, avoiding the loss of transformer voltage conversion.

Control System



TMR Platform provides a rich visual interface that allows users to view equipment operating status, load power and revenue in real time.

The EMC system will dynamically allocate the output power of each Prime device to reasonably allocate Prime system working time.

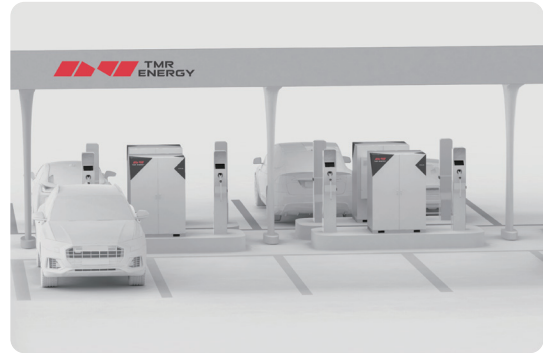
Local EMU system integrates device control, system protection, battery management to ensure the perfect operation of the system.



Multi-scenario

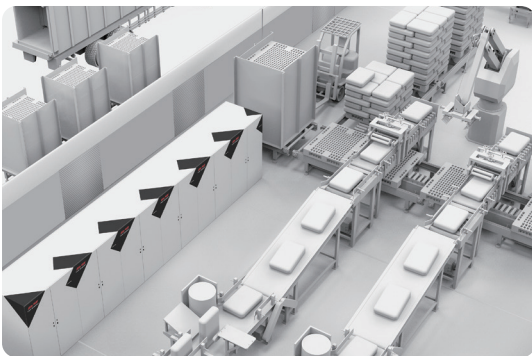
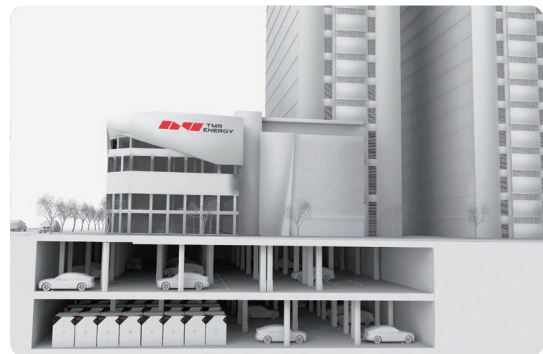
Charging Station

By deploying Prime in between of each charger could avoid expensive grid connection expansion, since Prime regulates the load peaks to protects against overload while save electrical bills.



Commercial Building

Commercial buildings have high electricity needs with predictable time-based peaks, energy storage can significantly lower electricity costs. However, the space of commercial buildings is limited.



Factory

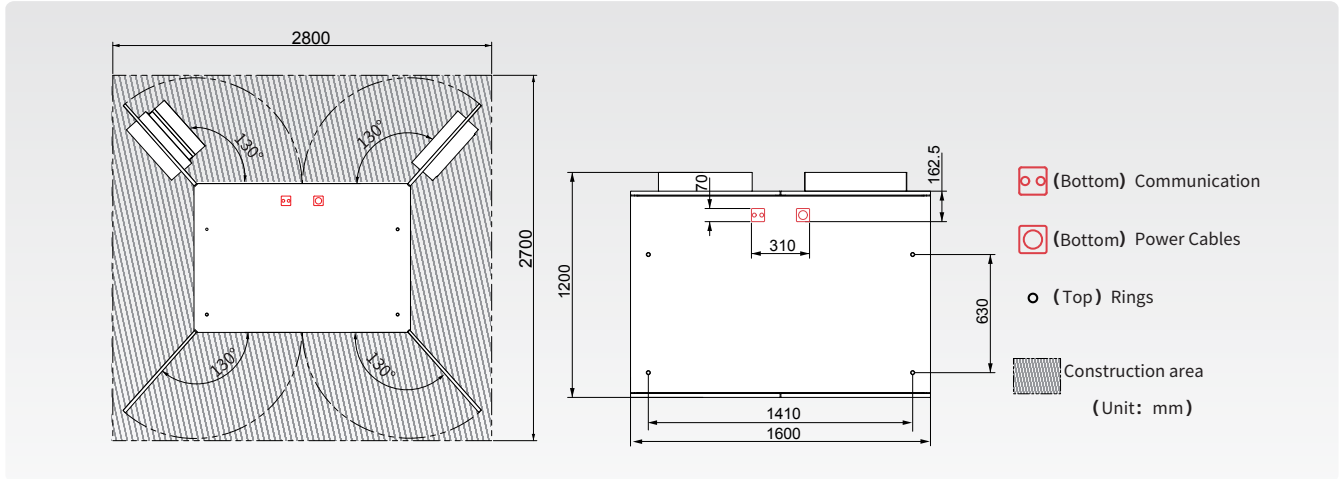
Prime embedded multilayer artificial neural network is able to forecast in load changing in advance, adjust control algorithms instantaneously to reduce electrical costs.



Airport

Prime replaces diesel generators as auxiliary power unit (APU) to provide power and air conditioning for the aircraft while parking at the airport.

Size



SPEC

Model		D1B0215P0100	D1B0430P0200	D1B0645P0300	D1B0860P0400	D1B1075P0500
Num of DC Cabinet		1	2	3	3	5
Power Distribution Cabinet		PowerNet 300	PowerNet 300	PowerNet 300	PowerNet 500	PowerNet 500
Rated Energy(kwh)		215	430	645	860	1075
Nominal Capacity(Ah)		280	560	840	1120	1400
Rated Power(KW)		100	200	300	400	500
System Efficiency		90%	90%	90%	90%	90%
AC Grid Parameters	Grid-connected System	3W+N+PE				
	Grid-connected Voltage(VAC)	380(-15%~+10%)				
	Grid-connected Frequency(Hz)	50(±2)/60(±2)				
	Power Factor	-0.9~+0.9				
	Output Harmonics	≤3%(Rated Power)				
	Charge/discharge Conversion Time(ms)	≤100				
AC Off-grid Parameters	Voltage Precision	1%				
	Frequency Accuracy(Hz)	±0.2Hz				
	Output Voltage Harmonics	≤3%Linear load				
	Dynamic Response(ms)	20				
	Unbalanced Load Capacity	100%				
	Overload Capacity	≤105%, Long-term operation available 105%-110%, Running times≤10 min >110%,Stop running				
Cycle life(times)		≥6000				
IP Rating		Battery Cabinet IP54,PowerNet 300/500: IP54				
Installation		Outdoor,Floor mounting				
Cooling		Rack Frame ;Ail Cooling;Power distribution cabinet;Fans				
Noise Level		≤70				
Anti-corrosion Grade		C4				
Lifespan		≥10 years				
Certification		IEC62619, UL1973, UL9540, UN38.3, CE, GB36276, UN38.3				