www.pixii.com

PowerShaper XD

50kW/112kWh/kWp (PV), Hybrid, Aircon, LFP

Fully integrated, pre-wired and factory configured system that reduces the installation time significantly.

EMS for remote monitoring, configuration and control, eliminates the need for complex on-site configuration.

Flexible, scalable energy storage

PowerShaper XD is a modular IP55 system for on-grid, off-grid, and hybrid use. Built for solar self-consumption, peak shaving, grid support, and other value-stacking applications.

Built for future-proof performance

Designed and manufactured in Europe. Combining robust engineering with high-quality components to deliver modular, scalable and reliable energy storage for critical applications and demanding environments.

Secure, connected, and compliant

Our 48V systems are built for always-on operation. Encrypted communications, secure remote access, and full GDPR compliance, enabling uninterrupted connectivity, real-time insight, and maximum ROI through value stacking.

Resilient by design, reliable in use

Pixii BESS feature built-in redundancy, active monitoring, and automated recovery protocols. This ensures secure operation even under failure or cyber threat, ideal for mission-critical energy storage needs.

Pixii Energy Architect (EMS)

Managing power in on-grid and micro-grid setups. It automatically controls and balances different power sources like solar panels and generators. Tracking battery health, charge level, and energy use.

Air-conditioned hybrid with LFP

The hybrid version includes high-energy LFP batteries with up to 145 kWh per cabinet and active air-conditioned cooling. Also supports DC-coupled solar for flexible hybrid operation.

Highlights

- Shipped with batteries installed
- UL9540A tested with LFP batteries
- Modular and scalable
- Galvanic isolation (AC-DC)
- Quiet operation at full power
- Safe ~48V installation and operation

Key functions

- On- or off-grid locations
- On/off-grid compatible
- Backup and fast response

20 foot base, Prewired and including AC connection cabinet

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AC specifications

Grid connection type	TT / TN
Phase config. (grid)	1ph / 3ph
AC voltage (-10/+15%)	230V / 400V
Nominal AC voltage range	207 - 260V
Nominal frequency (grid)	50Hz, 60Hz
Nominal AC current	220Arms (3Ph+N+PE)
Max. AC current (input)	83Arms (3Ph+N+PE)
Nom. cont. AC power (±2%)	50kW
Max. AC power (±2%)	60kWp
Power factor (Cos φ leading)	0.5 - 1
Power factor (Cos φ lagging)	0.5 - 1
THDi (grid connection)	<5%
Off-grid operation support	Yes
Generator backup support	Yes
Phase config. (genset)	1ph, 3ph
Frequency range (genset)	45 - 66Hz

DC specifications

Installed capacity (max)	112.5kWh
Usable capacity (max)	101.3kWh
Max. system capacity	112.6kWh
Nominal DC voltage	~48V

Efficiency

Max. efficiency (inverter)	96.9%
Max. efficiency (MPPT)	97.4%
Weighted Euro efficiency (MPPT)	96.6%

Communication and connectivity

Wireless interfaces	Wi-Fi hotspot (local AP), 4G (optional kit)
External comm. protocols	MQTT, Modbus

Safety

Ingress Protection (IP)	IP54
Max. short-circuit current	10kA

Operating conditions

Operating environment	Outdoor
Thermal management	Heater, Aircon
Acoustic noise 1m distance	<50dB(A)
Operating amb. temp. range	-20 - +55°C
Operating relative humidity	5 - 95% NC
Max. operating altitude	2000m

Physical specifications

Dimensions (HxWxD)(mm)	580x800x1600
Net. weight (cabinet only)	356kg
Net weight (equipped)	1267kg
Color	RAL 9005
Status indicator (type)	LED
Installed batteries (5U)	7
Max. batt. capacity (5U)	7
Installed PixiiBoxes	18
Max. PixiiBox capacity	18

Battery

Battery ID	LFP 314Ah 16S 5U 19in A
Battery chemistry	LFP
Cells in series (qty)	16
Battery block capacity (Ah)	314Ah
Battery block capacity (kWh)	16.08kWh
Max. depth of disch. (DoD)	90%
Max. charge/discharge cur.	157/157A
Max. C-rate	0.5C
Rack height (Units)	5U
Over-current protection	Breakers, Electronic
Dimensions (HxWxD)(mm)	219.5x440x780
Net. weight (battery block)	125kg
Battery connection type	Quick
Cycle life (cycles @%DoD) [1]	7600 (90%)

1. Temp. 25 ± 5°C and C-rate 0,5, EOL: 70% SoH

Warranty and compliance

Battery standards

IEC/EN 62619, UL1973, UL9540A, UN38.3

Warranty (years/cycles)	10/10000

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Value stacking - The BESS that pays for itself

Value stacking is the art of combining multiple battery services in a BESS to unlock its full potential. By combining cost-saving services – like peak shaving and PV self-consumption – with income-generating opportunities, such as selling battery capacity in electricity markets, you can significantly reduce your electricity bill and tap into new revenue streams.

Cost-saving services

Backup power options available

Stay powered during outages. Add an off-grid backup box to secure critical appliances and keep your home running, even when the grid goes down. Sold separately.

Active power compensation

Optimize grid performance by dynamically adjusting active power flow to balance supply and demand in real-time. This service reduces energy losses, enhances system efficiency, and supports grid stability, helping to maintain power quality and meet operational and regulatory requirements.

Arbitrage*

Buy and store electricity when prices are low, and use it when prices rise. This strategy helps reduce costs by supporting loads from the battery during expensive peak hours.
**This functionality is accessible via third-party EMS integration.*

Community battery

A shared energy storage system that allows multiple users, to store and use excess renewable energy. It helps participants maximize solar self-consumption, lower energy costs, and reduce reliance on the grid. By supporting local energy sharing and grid stability, it also creates opportunities for financial returns through wholesale electricity trading.

DC coupled solar

Integrate solar energy systems through direct DC coupling, ensuring maximum efficiency for off-grid systems.

Income-generating services

Ancilliary services

Generate income from the BESS by providing essential grid-stabilizing services, such as frequency regulation and reserve capacity. By participating in energy markets, you help maintain grid balance while earning revenue from high-demand services that support reliable grid operations

Balance market participation

Rent out battery capacity to support grid stability through frequency regulation. Help grid operators to maintain grid stability and create new revenue streams.

FCAS (Frequency Control Ancillary Services)

Rent out battery capacity to provide immediate support in the frequency control market, helping stabilize the grid. This service prevents outages, supports virtual power plant initiatives, and generates revenue for the battery owner.

FCR-D (Frequency Containment Reserves – Disturbance)

Rent out battery capacity to provide rapid-response support during grid disturbances. By helping balance frequency fluctuations in real-time, The battery contribute to grid stability while earning income from short-term, high-value energy services.

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