

XDS4

Premium Plug-and-Play AC-Coupled Energy Storage System

(A true mid–high-end ESS for Europe’s professional market)

1. Industry-Leading Safety Architecture (Battery-Level & System-Level)

✓ Tier-1 Do-Fluoride (DFD) LiFePO₄ Battery Cells

XDS4 uses DFD-branded automotive-grade LFP cells, ensuring high cycle life, superior thermal stability and consistent performance.

✓ Built-in Thermal Sensor + Aerosol Fire-Suppression Capsule

Each 2.4 kWh battery module includes:

Real-time internal thermal sensor

Independent aerosol fire-suppression module

Rapid thermal runaway mitigation design

This provides active safety, not merely passive protections.

✓ Full IEC/EN Safety Certification + SGS 100% Verification

The XDS4 platform complies with:

IEC/EN 62109-1

EN50549-1

CE EMC + LVD

✓ German-Deployed APP Server (EU Data Safety & Faster Response)

The XDS4 control system operates on a German-based cloud infrastructure, ensuring:

Higher cybersecurity compliance

Faster signal response

Better uptime stability for dynamic tariff markets

No reliance on overseas servers

→ XDS4 is one of the safest and most robust AC-coupled ESS systems in Europe.

2. Smart EMS & Dynamic Tariff Optimization (Advanced APP Level)

✓ True Dynamic Pricing Integration (Tibber / ANWB / ENTSO-E)

The APP automatically reads hourly/dynamic electricity prices and executes:

Smart charging during low-price hours

Smart discharging during peak-price hours

Algorithmic decision-making for maximum savings

✓ PV Surplus Charging & Real Zero-Export Control

Native integration with:

P1 smart meter

Shelly (3EM / Pro series)

PV inverters and microinverters

Home energy loads

The system instantly adjusts charging power based on grid import/export values.

✓ Load Management & Appliance Scheduling

Optimizes home energy consumption by controlling:

Heat pump

Water boiler

EV pre-charging

High-load appliances

✓ Cloud + Edge Dual Architecture

Even during Wi-Fi outages, XDS4 continues executing time-critical optimization and safety strategies.

→ This is a true Home Energy Management System (HEMS), not a basic timer-based battery.

3. High-Power AC Output & Real Household Capability

✓ 2.4 kW Continuous Output Per Unit

More than double the typical 0.8–1.2 kW entry-level balcony batteries.

This allows powering:

Kitchen appliances

Pumps

Heating equipment

Small HVAC

Peak shaving for high consumption homes

✓ Low Noise, High Efficiency, Fast Switching

Designed specifically for European residential use.

→ XDS4 is not a “balcony-only battery”—it is a full household-capable ESS.

4. Modular & Scalable Architecture (Corrected to 2.4 kWh Modules)

Battery Module Capacity: 2.4 kWh per pack

Maximum per stack (1 inverter):

Up to 5 modules $\times$ 2.4 kWh = 12 kWh

Single-phase expansion:

Up to 3 systems → 36 kWh

Three-phase expansion:

Up to 9 systems → 108kWh

Full flexibility:

Suitable for apartments, single-family homes, and small commercial sites

Perfect for BE/NL/DE markets requiring dynamic tariff optimization + larger household loads

→ XDS4 scales beyond the consumer/balcony class into true residential ESS territory.

5. European Environmental Adaptation

Operating temperature: -20°C to $+45^{\circ}\text{C}$

Storage: -40°C to $+70^{\circ}\text{C}$

IP65 waterproof housing

Altitude support: up to 4000 m

Designed for Northern European winter performance

6. Manufacturing Quality & Channel-Friendly Commercial Model

✓ 7,000 m² factory with EU-grade QC

Full process control: cell → pack → inverter → aging → final QA.

✓ 100% function testing for each unit

Critical for batch stability.

✓ OEM / ODM capability

Brand customization

APP UI customization

Firmware customization

Special EMS integration (e.g., JULLIX, SmartDHOME)

✓ Stable pricing – no uncontrolled price dumping

Unlike low-cost brands, the XDS4 is protected from uncontrolled online undercutting.

→ Built for serious distributors and installers who need stability, consistent quality, and strong long-term product reliability.

7. Positioning Summary

XDS4 is a premium AC-coupled plug-and-play energy storage system engineered for safety, intelligence, high power, expandability and long-term reliability.

It is not positioned as a low-cost balcony battery.

It is designed for installers and customers who value:

- Tier-1 battery safety
- German-hosted APP servers
- Dynamic tariff optimization

- Higher usable power
- Larger capacity expansion
- Commercial-level stability

In short: XDS4 is a mid–high-end European ESS platform for professionals, not an entry-level consumer product.