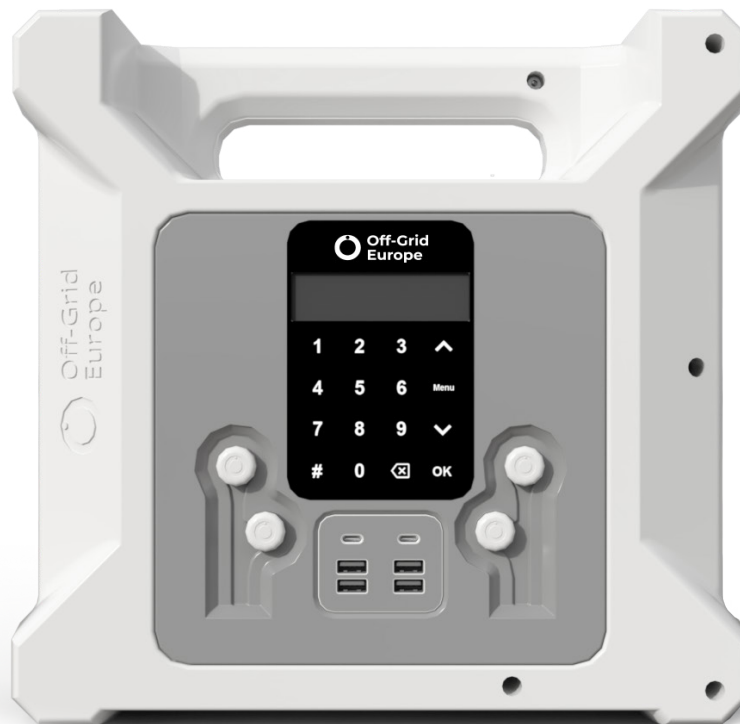




Solar Home System.

**Smart Power. Local Voice.
Global Impact.**

640Wh 12V LFP Battery
280 Wp PV
Linux-Based Platform
LLM-Enabled AI Integration



Solar Home System.

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The Off-Grid Europe Solar Home System (SHS) is designed for emerging markets, combining cutting-edge technology, reliability, and ease of use. With a focus on safety and resilience, this system is built to meet the energy needs of communities in the most challenging environments.



640Wh 12V LFP Battery

Provides dependable energy for lamps, tablets, mobile phones, and other 12V applications. Designed for durability and optimized for harsh conditions.



Versatile Power Connectors

Ensures security and prevents unauthorized access, maintaining the integrity of the system while delivering power reliably.



LLM-Enabled AI Integration

The world's first Large Language Model (LLM)-enabled SHS. Interacts with users in over 200 local languages, offering real-time answers and guidance for medical, technical, educational, and personal support.



Data Tracking and Efficiency

Stores up to 10 years of power usage data, allowing users to monitor energy consumption and optimize efficiency over time.



Local Voice Recognition

Seamless, hands-free interaction with local language support. Empowering users with easy access to information and services.



Local Economy Creation

Designed for easy servicing, enabling local communities to handle aftercare and repairs. This creates sustainable job opportunities and fosters the growth of a local economy around system maintenance.

Datasheet.

Features

Rugged IP65 Enclosure	Fully sealed against dust and water jets for use in harsh outdoor conditions.
Tamper-Resistant Design	Enclosure includes mechanical interlocks to deter unauthorized access.
Optimized for Portability	Compact form factor with integrated handle for easy transport.
Impact-Resistant Housing	Durable shell designed to withstand transport, handling, and field use.
UV-Resistant Materials	Long-term durability under direct sun and temperature fluctuations.
Thermal Management	Includes an integrated aluminium heat sink for heat dissipation, enabling safe operation in high ambient temperatures.
Appliance Compatibility	Powers a wide range of 12V appliances including refrigerators, inverters, lamps, and more. If it runs on 12V and draws less than 25A, the SHS can handle it.

Safety and Protection Features

Reverse Polarity Protection	Mechanical and electrical safeguards in connector design to prevent damage from incorrect cable connections.
Built-In Short-Circuit Protection	The connectors and internal layout are designed to prevent short circuits, keeping the system safe even if cables are plugged in incorrectly.
Safe User Access Port	Custom-designed connectors guide correct usage and allow advanced users to safely modify or extend the system without opening the enclosure.

Software & System Intelligence

Integrated LLM Model Option	Enables real-time, offline voice interaction in over 200 local languages using an integrated large language model (LLM).
PayGo Integration	Compatible with PayGo systems for secure, flexible energy access and payment control.
Powerful Internal Processor	Linux-based processor supports voice functions, system upgrades, and intelligent features.
Connectivity Options	Supports GSM/WiFi for monitoring, updates, and hybrid connectivity.
Monitoring & Control	Supports OGC/IoTEM protocols for system insights, usage tracking, and fleet management.
Display	Integrated screen for service menus, PayGo interaction, battery status (SOC), clock, system alerts, and more.

Solar PV

Max PV Capacity	260 Wp
Max PV Voltage	100 V
Power conversion	MPPT
Conversion Efficiency	95%

Storage and Battery

Chemistry and Capacity	LFP 640 Wh
Battery Usable Capacity (80 %)	512 Wh
Cycle Capacity	6000 Cycles

Output

USB Type A (2 Ports with data)	5 V @ 2 A = 10 W
USB Type A (2 Ports)	5 V @ 3 A = 15 W
USB Type C (2 Ports)	65 W
12 V Output	25 A

Dimensions & weight

Solar Home System size (length x width x height)	340 mm x 144 mm x 330 mm
Weight	9 kg

Empowering Communities Through Technology

More than just a power solution, the Off-Grid Europe SHS creates opportunities for education, economic growth, and long-term sustainability. By providing energy access, enabling local support, and fostering economic development, this system is helping to build a future where communities thrive independently.

Unlock the Potential of Renewable Energy and Knowledge

Let's make the future of off-grid living smarter, more connected, and sustainable.

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