

ATHENA



RESIDENTIAL ENERGY STORAGE SYSTEM



www.magicpower.co





KEEP YOUR LIGHTS ON.

■ What is Athena?

Athena is a smart energy solution that manages all the smart devices in your house and uses them in efficient and profitable new ways.

Athena represents the latest innovation from MagicPower, it is a smart energy solution that manages all the smart devices in your home and utilizes them in efficient new ways through real-time strategies for ESS (Solar PV, Hybrid Inverter, Battery Storage), EV Charger, HVAC, Smart Plug, Smart Meter etc., maximizing your energy profits while embracing a greener lifestyle.

ATHENA
RESIDENTIAL ENERGY STORAGE SYSTEM



PROFITABLE

AMONG ALL OF OUR CLIENTS



100%
ARE SAVING



60%
ARE EARNING

EXTRA FUNCTIONS
~~EXTRA FEE~~

PARTICIPATE IN
POWER TRADING

- ✓ NORD POOL
- ✓ EPEX
- ✓ ...



Power Trading ✓ NORD POOL ✓ EPEX

Provide real-time access to multiple day-ahead and intraday electricity markets



Price Forecasting

Offer wholesale market forecasting services to reduce the risk caused by price fluctuations.



Dispatch Management

Optimize power dispatch schemes across various distributed energy resources.



Auto Bidding

Automatically use diverse strategies for selling or buying electricity to maximize profits.



Global Protocols

OpenADR, Contributor Members
OCPP 2.0.1; ISO 15118-20 (V2G)





“ Demand fees are really expensive! Capacity expansion costs a lot too. ”

Matti Virtanen
Software Engineer

Family members
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Location
Turku Suburb, Finland

Main Loads
Heatpump, electric heater, household appliances, EV charging

Installed
8kW PV + 20kWh ESS
Monthly Bill
€165 → €63, 62% reduced

By utilizing solar energy during the day and customized strategy, the Matti family reduced their electricity bill by 62%. Additionally, with the virtual capacity expansion feature, the electric car charger, heat pump, and induction cooker can be used at the same time.

Athena saves you demand fees!
You can power multiple high-demand devices at the same time without tripping the circuit.

INTELLIGENT

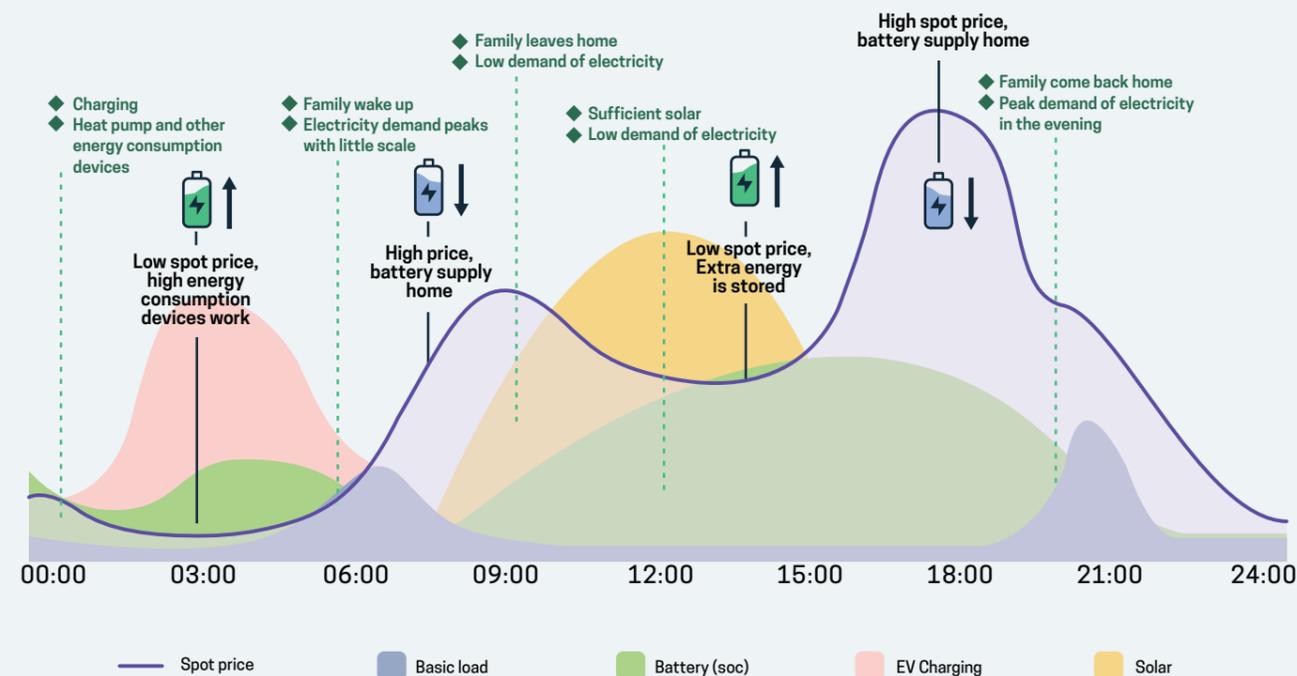


✓ **92%** LOAD PREDICTION ACCURACY

↑ **50%** INCREASE CAPACITY OF YOUR HOUSE AUTOMATICALLY

CUSTOMIZABLE MODES / STRATEGIES

Dynamic Tariff Management by AI, navigating clean energy volatility with smart time shifting



Generate intelligent strategies based on real-time electricity prices, user configurations, user habits, and weather forecasts (photovoltaic power generation predictions) and transmit them to Athena, to control relevant devices to operate according to the strategies.

Dynamic intelligent strategies are generated at 30-minute intervals, shorter than most other products' intervals on the market.

Efficient Energy Strategies

Athena helps users automatically optimize home energy use efficiently to cut grid costs.

Automated Strategies

Athena optimizes the reduction and control of electricity consumption, maximizes home energy revenue by participating in the energy market, and sells excess power at high prices.

Specific Devices Strategies

Athena runs strategies for electric vehicles, solar system, battery storage, heat pumps, or dynamic wholesale-based smart tariffs.



“ No more midnight laundry to cut costs! ”

Anna Mäkinen
Retired Teacher

Family members
2

Location
Lappeenranta, Finland

Main Loads
Heat pump, household appliances, water heater

Installed
5kW PV + 10kWh ESS
Monthly Bill
€90 → €26, 70% reduced

By utilizing solar energy during the day, the Lauri and Anna household reduced their electricity bill by 70%. Anna used to decide their daily schedule based on real-time electricity prices, but with the Athena system, she no longer needs to set an alarm to do laundry at 11 PM.

Athena helps you check real-time electricity prices and automatically gives out saving tips every 30 minutes.

WORRY-FREE



1 APP FOR ALL
TO CONTROL YOUR WHOLE HOUSE

100+
INTEGRATED BRANDS



LOCAL
OFFICE & SERVICE



ANYTHING GOT FROM US IS **OUR DUTY**



» **High Device Compatibility**
Integrated 100+ Equipment Brands

» **Connect the PV energy storage system and smart power load**

All Smart Devices that meet the communication protocol requirements

- ◆ ESS
- ◆ Solar PV System
- ◆ Hybrid Inverter
- ◆ Battery Storage
- ◆ EV Charger
- ◆ Heat Pump (HVAC)
- ◆ Smart Plug
- ◆ Smart Meter
- ◆ ...

“ No more switching between apps to turn my devices on and off! ”

Nina Meier
Financial Analyst

Family members
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Location
Zurich, Switzerland

Main Loads
Household appliances, heat pump, EV charging

Installed
6kW PV + 12kWh ESS
Monthly Bill
€93 → €21, 78% reduced

The Nina family reduced their electricity bill by 78%. With the use of the Athena system, Nina no longer needs to check various apps for the heat pump, charging station, and electricity trading platform daily to decide on the usage schedule and plan.

One app for all! With Athena, it's easy. You don't have to open one app to turn off the AC and another to turn off the heat pump.

ONE APP FOR ALL

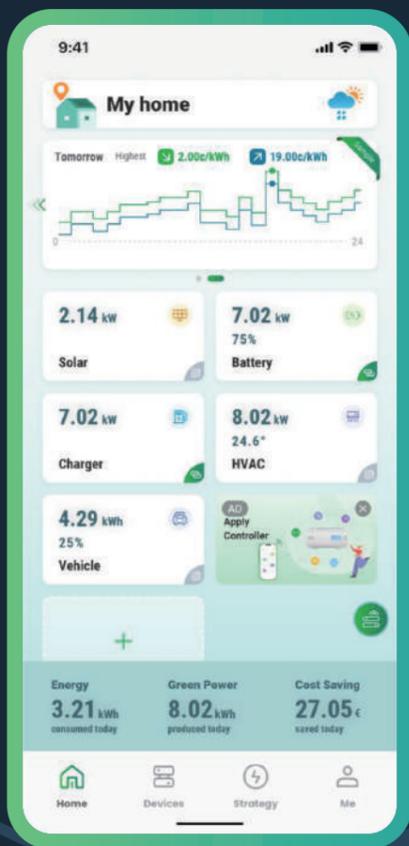
HEAT PUMP

HVAC

SMART PLUG

EV CHARGER

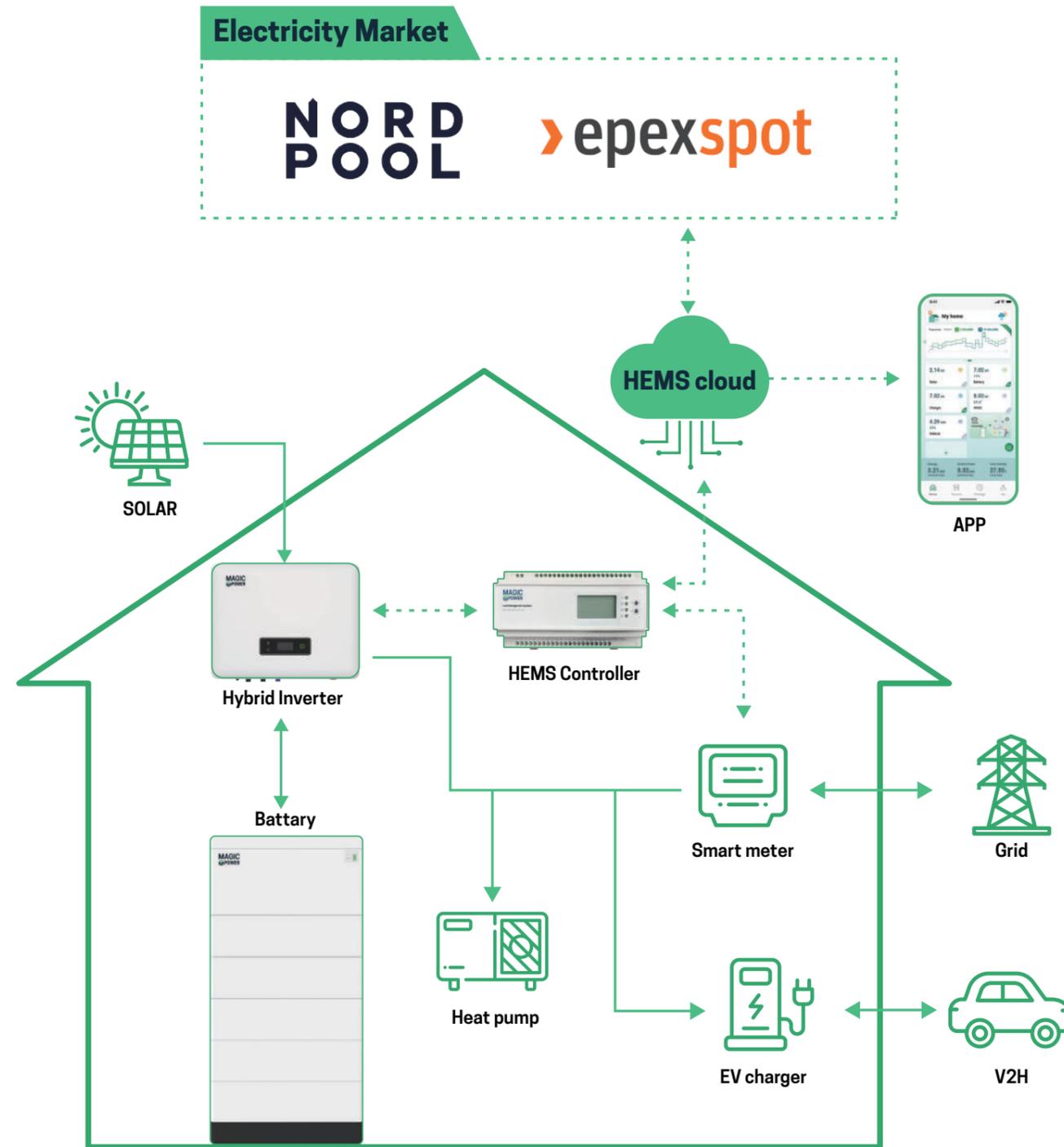
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Support multiple communication protocols

RS485 EEBUS
Modbus SG ready

How does Athena work?





Local Controller

Edge computing enables quick system dispatch and reduces latency, creating diversified modes for each home.



Extensibility

Athena supports multiple communication protocols, making it convenient for customers to establish the whole-house management system more quickly.



Data Security

Athena complies with European regulations and encrypts data using proprietary protocols to safeguard customers' data security.



Easy to Setup

Athena can easily locate users' target retailers by simply inputting the home postal code.

Inverter Parameters

Model	MQK-E3-8k-3p	MQK-E3-10k-3p	MQK-E3-12k-3p
PV Input			
Recommended Max. input power[kW]	12.0	15.0	18.0
Start-up voltage[V]	135	135	135
Max. DC input voltage[V]	1000	1000	1000
Rated DC input voltage[V]	620	620	620
MPPT voltage range[V]	200-950	200-950	200-950
No. of MPPT trackers	2	2	2
No. of DC inputs per MPPT	1/1	1/1	1/1
Max. input current	15/15	15/15	15/15
Max. short-circuit current	20/20	20/20	20/20
Battery Side			
Battery type	Lithium Battery (with BMS)		
Battery voltage range[V]	135-750		
Maximum charging/discharge current[A]	25/25		
Grid Side			
Rated output power[kW]	8.0	10.0	12.0
Max. output apparent power[kVA]	8.8	11.0	13.2
Max. input apparent power[kVA]	16.0	16.5	16.5
Max. charging power of battery[kW]	8.0	10.0	12.0
Rated AC voltage	3L/N/PE; 220/380V;230/400V;240/415V		
Rated AC frequency[Hz]	50/60	50/60	50/60
Max. output current[A]	13.3	16.5	20.0
Power factor	0.8 leading ...0.8 lagging		
Max. total harmonic distortion	<3% @Rated output power		
DCI	<0.5%In	<0.5%In	<0.5%In
Back-up Side			
Rated output power[kW]	8.0	10.0	12.0
Max. output apparent power[kVA]	8.8	11.0	13.2
Max. output current[A]	13.3	16.5	20.0
UPS switching time	<10ms	<10ms	<10ms
Rated output voltage	3L/N/PE; 220/380V;230/400V;240/415V		
Rated output frequency[Hz]	50/60	50/60	50/60
Voltage harmonic distortion	<3% @Linear load		
Efficiency			
Max. efficiency	98.2%	98.2%	98.2%
European efficiency	97.4%	97.4%	97.4%
General Data			
Over voltage category	PV: II Main: IIIYes		
Dimensions [W*H*D mm]	534×418×210		
Weight[kg]	26.0		
Protection degree	IP65		
Standby self-consumption[W]	<15		
Topology	Transformerless		
Operating Temperature Range[°C]	-30~60		
Relative Humidity[%]	0~100		
Operating Altitude[m]	3000 (>3000m derating)		
Cooling	Natural Convection		
Noise Level[dB]	<25		
Display	OLED & LED		
Communication	CAN, RS485, WiFi/LAN (Optional)		
Certification	EN 61000(Eur EMC), IEC 62109(Eur Safety), IEC 62477-1 (Safety), EN 50549-1 (Europe)		

Powering Every Need

From 1 to 2000 kWh



■ MagicPower's Main Business

Residential Energy Storage Systems

We provide comprehensive whole-house energy management solutions, featuring products like hybrid inverters, stackable battery packs, and all-in-one energy solar energy storage. With energy storage as the core, our solutions adapt to the critical electricity demands of entire households.

C&I Energy Storage Integration and Services

We specialize in integrating energy storage on both the power supply and grid sides, widely applied in scenarios such as new energy grid integration, frequency regulation, and demand-side response.

We offer C&I energy storage solutions, including container energy storage systems and outdoor energy storage systems. Simultaneously integrating solar and storage charging as a unified solution, constructing a reliable energy infrastructure.



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