

## Zenaji AEON

The Zenaji Aeon Battery is a leap forward in battery storage. Zenaji Aeon Batteries offer the most robust, safest, longest life and most cost-effective solution available in the world today. The Zenaji Aeon Battery is designed for use in domestic, commercial and off-grid energy storage installations.

#### **CHARGING**

- 50A Max Continuous Charge (25°C ± 5°C)
- 120A Max Pulse Charge (10s, 25°C ± 5°C)
- 55.5V Cutoff Voltage

#### **DISCHARGING**

- 50A Max Continuous Charge (25°C ± 5°C)
- 120A Max Pulse Charge (10s, 25°C ± 5°C)
- 42V Cutoff Voltage

#### **CAPACITY & LIFE**

- 1.93 KWh (40Ah) Energy Capacity
- 100% Depth of Discharge
- 22,000 Cycle life (1C, 25°C ± 5°C)

#### **MECHANICAL**

- 1600 (h) x 155 (w) x D 145 (170 w/ wall plate) (d) mm
- 36 kg Weight
- -40°C to 60°C Operating Temperature
- Outdoor IP65 Ingress Rating

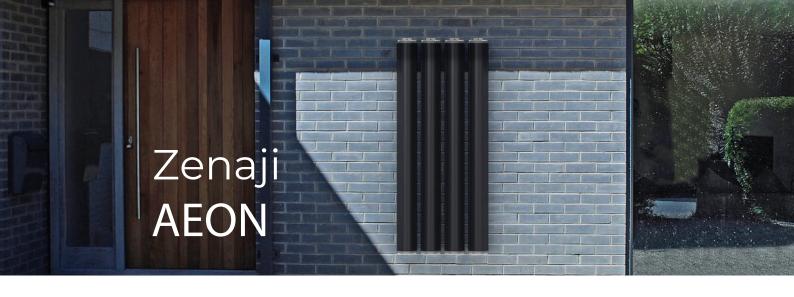
#### **ELECTROCHEMICAL**

- Lithium Titanate (LTO) Chemistry
- 48.3V Nominal Voltage
- 96% Round Trip Efficiency (1C, 25°C ± 5°C)









Our Aeon Battery provides an economically viable lifetime solution for your home energy storage.

#### A SCALABLE BATTERY SYSTEM THAT MAKES ECONOMIC SENSE

The Aeon Battery offers the most robust, safest, longest life and most cost effective solution available today. With a no frills design, the Aeon Battery is easy to install, can be expanded in the future to provide you with peace of mind in your storage investment.

#### LIFETIME SOLUTION

The Aeon battery lasts for 22,000 cycles and has a tough weatherproof aluminium case providing a lifetime energy storage solution.

#### SUPERIOR PERFORMANCE

Each Aeon Battery provides 1.93kWh of energy storage. Superior cycling performance allows 3 cycles a day to take full advantage of your energy production and off peak energy pricing plan.

#### **SMART DESIGN**

Simple inside or outside installation, easily mounted on a wall, with a space efficient design and modern aesthetics (comes with mounting brackets).





HORIZONTAL MOUNT



SIMPLE LOCK SECURITY



**VERTICAL MOUNT** 



The most suitable battery chemistry for solar or wind storage today is LTO (Lithium Titanate).

#### **NON-LTO**

Commonly LFP (Lithium Iron Phosphate) and NMC (Nickel Manganese Cobalt) chemistries have been used. These batteries are very energy dense and lightweight, and therefore suited for use in mobile devices such as phones and cars but are not suited to use for long term larger scale power storage required for solar or wind installations.

This is because they have a very limited lifespan and cannot be cycled often enough to make them economically viable. In fact, they will need replacing before they have paid for themselves.

#### **GROWING TECHNOLOGY**

Over the past few years, we have worked with LTO battery manufacturers and they have achieved remarkable results in both increasing energy density and reducing costs.

We have selected the best solution for energy storage and engineered a vastly superior battery design that is not only simple to install, maintain and upgrade but more importantly, spans a lifetime of over 20 years standard use delivers a domestic battery that makes economic sense.





# COMPETITOR BATTERY COMPARISON

Battery Comparison	4x Zenaji Aeon	Tesla Powerwall 2	LG Chem RESU HV 10	Sonnenschein @ Home Lithium	AllinOne Soltaro 5kw / 9kWh
		Product Info	ormation		
General Battery Type	LTO	Lithium-ion	Lithium-ion	Lithium-ion	Lithium-ion
Battery Chemistry	Lithium Titanate	NMC	NMC	NMC	Li Iron Phosphate
		Cost and Ef	ficiency		
Total Cost (with Inverter)	\$14,970	\$15,270	\$12,810	\$13,679	\$11,500
Cost per kWh(\$)	\$0.09	\$0.40	\$0.47	\$0.55	\$0.39
Usable Storage Capacity	7.7 KWh	13.5 KWh	9.3 KWh	6.8 KWh	8.1 KWh
Maximum Daily Cycles	3	1	1	1	1
		Operating Tempe	rature Range		
Low	-40 °C	-20°C	-10°C	0°C	-20°C
High	60°C	50°C	45°C	45°C	60°C
		Warranty and	l Lifespan		
Warranty Years or Cycles	20 yrs or 22,000	10 yrs or 3,650	10 yrs or 3,650	10 yrs or 5000	10 yrs or 3,650
Lifespan	20+ years	10 years	10 years	10 years	10 years
Capacity @ 10y	96.8%	70.0%	60.0%	70.0%	70.0%

Product Name	4x Zenajix Aeon A48-40-01	Tesla Powerwall 2	LG Chem RESU HV 10	Sonnenschein @ Home Lithium	AllinOne Soltaro 5kw / 9kWh
		Capacity at Nun	nber of Cycles		
0	100.0%	100.0%	100.0%	100.0%	100.0%
500	99.5%	95.9%	94.5%	96.0%	95.9%
1,000	99.1%	91.8%	89.0%	92.0%	91.8%
1,500	98.6%	87.7%	83.6%	88.0%	87.7%
2,000	98.2%	83.6%	78.1%	84.0%	83.6%
2,500	97.7%	79.5%	72.6%	80.0%	79.5%
3,000	97.3%	75.3%	67.1%	76.0%	75.3%
3,500	96.8%	71.2%	61.6%	72.0%	71.2%
4,000	96.4%	67.1%	56.2%	68.0%	67.1%
4,500	95.9%	63.0%	50.7%	64.0%	63.0%
5,000	95.5%	58.9%	45.2%	60.0%	58.9%
5,500	95.0%	54.8%	39.7%	56.0%	54.8%
6,000	94.5%	50.7%	34.2%	52.0%	50.7%
6,500	94.1%	46.6%	28.8%	48.0%	46.6%
7,000	93.6%	42.5%	23.3%	44.0%	42.5%
7,500	93.2%	38.4%	17.8%	40.0%	38.4%
8,000	92.7%	34.2%	12.3%	36.0%	34.2%
8,500	92.3%	30.1%	6.8%	32.0%	30.1%
9,000	91.8%	26.0%	1.4%	28.0%	26.0%
9,500	91.4%	21.9%	0.0%	24.0%	21.9%
10,000	90.9%	17.8%	0.0%	20.0%	17.8%
10,500	90.5%	13.7%	0.0%	16.0%	13.7%
11,000	90.0%	9.6%	0.0%	12.0%	9.6%
11,500	89.5%	5.5%	0.0%	8.0%	5.5%
12,000	89.1%	1.4%	0.0%	4.0%	1.4%
12,500	88.6%	0.0%	0.0%	0.0%	0.0%
13,000	88.2%	0.0%	0.0%	0.0%	0.0%
13,500	87.7%	0.0%	0.0%	0.0%	0.0%
14,000	87.3%	0.0%	0.0%	0.0%	0.0%
14,500	86.8%	0.0%	0.0%	0.0%	0.0%
15,000	86.4%	0.0%	0.0%	0.0%	0.0%
15,500	85.9%	0.0%	0.0%	0.0%	0.0%
16,000	85.5%	0.0%	0.0%	0.0%	0.0%
16,500	85.0%	0.0%	0.0%	0.0%	0.0%
17,000	84.5%	0.0%	0.0%	0.0%	0.0%
17,500	84.1%	0.0%	0.0%	0.0%	0.0%
18,000	83.6%	0.0%	0.0%	0.0%	0.0%
18,500	83.2%	0.0%	0.0%	0.0%	0.0%
19,000	82.7%	0.0%	0.0%	0.0%	0.0%
19,500	82.3%	0.0%	0.0%	0.0%	0.0%
20,000	81.8%	0.0%	0.0%	0.0%	0.0%
20,500	81.4%	0.0%	0.0%	0.0%	0.0%
21,000	80.9%	0.0%	0.0%	0.0%	0.0%
21,500	80.5%	0.0%	0.0%	0.0%	0.0%
22,000	80.0%	0.0%	0.0%	0.0%	0.0%

### **APPLICATIONS & MARKETS**

In addition to domestic energy storage, we have identified a number of markets that could effectively leverage the benefits of Aeon Battery Storage:

#### **OFF-GRID SYSTEMS**

Small off-grid systems such as 24/7 pumping systems and rural homes require battery storage to provide a dependable power supply.

Zenaji's Aeon battery is perfectly placed to take advantage of this market using all the benefits of LTO Technology to supplement solar, wind or conventional generator systems.

#### CARAVAN / CAMPING

There is an ever increasing demand for batteries in the caravan and campling markets, for use from charging phones to powering full kitchen systems.

These markets have the difficulty of infrequent use, which currently causes the most popular batteries, Lead Acid, to die very quickly if not constantly monitored and charged.

LTO batteries have a very long shelf life and a high tolerance for low discharge, making them suitable for markets with long periods between use.

#### UTILITY SCALE / MICRO-GRID

With a high cycle life, high C-rate and 100% DOD (Depth of Discharge) LTO battery technology is highly suited to cycling mutliple times per day at a high rate to store and release energy generated by Renewable energy to provide a stable, consistent power supply for Utility and Micro-Grid systems.





#### HIGH-USE / LARGE ELECTRIC VEHICLES

High use and large vehicles, such as buses and heavy duty vehicles used for mining require a power system that is quick to charge and can handle the constant, intense load required day-in, day-out. The nature and stability of LTO batteries allows them to be used harshly without suffering the additional loss to cycle life or performance that other chemistries would suffer under similar conditions.

#### **4 WHEEL DRIVE**

The 4 Wheel Drive and off-road markets are continually on the lookout for products that provide a performance boost that is simple and effective. LTO provides a simple, long term solution with high performance for the rigourous use batteries receive in these environments.

#### **FORKLIFT BATTERIES**

Forklifts are used vigourously throughout the day but currently have a large down time due to the time to charge Lead Acid batteries, often requiring several hours to reach full capacity.

LTO cells reduce this down time to a single hour, with the added benefit of a larger capacity, meaning a longer time of use between charges.

#### MARINE ENERGY STORAGE

Submarines require batteries for auxilliary power and silent operation. Currently Lead Acid batteries are used but they have a low energy density, require replacing frequently and emit gas. While other Lithium ion chemistries such as NMC and LiPo have a high energy density and power output they are too fragile & dangerous for use in a high risk environment where safety is paramount.

Our batteries emit no gas, have high power and energy density and are the safest and most stable on the market.

# **LARGER & SPECIALTY APPLICATIONS**

Zenaji has developed 30 kWh (Kilowatt/hour) solutions for:

- Light Commercial / Industrial
- Larger Residential
- **Telecommunications**
- Emergency / Portable Power
- Large Scale UPS
- Data / Processing Centres
- Farming and Micro-grid

Zenaji has designed 1 MWh (Megawatt/hour) solutions for heavy industry applications including:

- Solar Farms
- Wind Farms
- Hospital Backup
- Communities / Substation

Our modular design approach enables us to solve unique power problems.



## Financing or Leasing?

Zenaji offers a variety of financial and leasing options.

To become a partner or find out more about

#### Zenaji Energy Storage Systems

please contact us or visit our website.

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# Zenaji

Zenaji Pty Ltd is an Australian company specialising in the research and development of battery storage systems.

We have developed a battery system and various battery solutions that are different to any other on the market through years of research, testing and experience.

The advanced Zenaji Aeon Battery is designed for superior, safer performance and to last a lifetime.

The 27 KW battery has been designed for larger residential use and light industrial and commercial applications.

The Megawatt battery has been designed for larger scale applications.

Zenaji can also design and tailor any solution to fit your needs.

The future looks very bright.