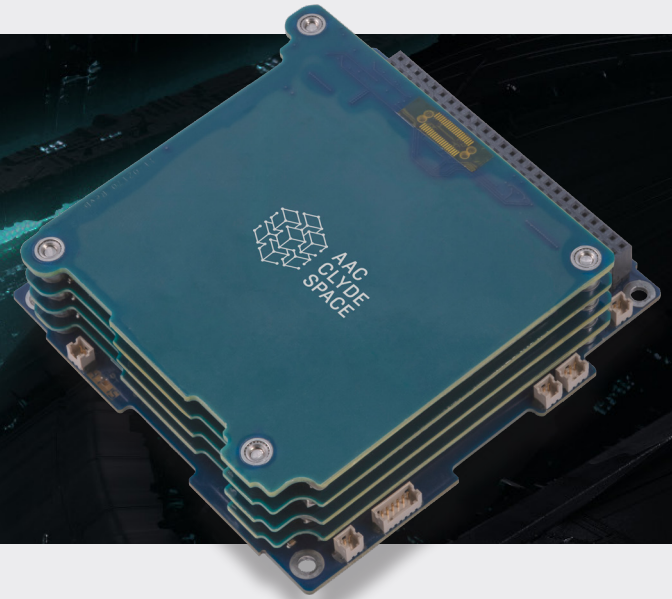




## Battery OPTIMUS

MAXIMUM  
POWER  
MISSION  
ASSURED



OPTIMUS batteries offer high capacity with low mass and volume. Our high quality lithium polymer batteries are optimized for Low Earth Orbit (LEO) missions with a maximum altitude of 850km. Utilized over a large number of missions; especially US CubeSat missions, these New Space solutions have an excellent track record spanning almost two decades as one of the most flown and reliable spacecraft batteries. In order to ensure consistent quality levels the batteries undergo rigorous testing, including tests performed by ESA and NASA.

The battery systems all have autonomous integrated heater systems to enhance operation at low temperatures. Each system has multiple protection systems in place at a cell, battery, and system-level which will automatically respond to external fault conditions in order to protect the battery and wider system from irrecoverable damage. The OPTIMUS Battery range is compatible with International Space Station deployment safety requirements and can be compatible with a wide variety of launch platforms, including manned missions, when integrated into suitable platforms.



### POWER

The highly scalable OPTIMUS battery range is available in 30Wh, 40Wh, and 80Wh capacity, with larger capacity available on request. Our inbuilt protections such as undervoltage protection, over-voltage protection and string over-current protection are based on over a decade of design heritage, guaranteeing power efficiency and consistency.



### PERFORMANCE

Battery selection is critical to the success of the mission. Having already demonstrated excellent performance on-orbit on over 100 missions spanning almost two decades, our battery range ticks all the right boxes.



### RELIABILITY

Qualified to NASA standards EP-Wi-032. Additional qualification and acceptance testing can be provided for manned flight in order to meet the necessary safety conditions.

# TECHNICAL SPECIFICATIONS

## General

Material	Lithium Polymer
Storage Temperature	Recommended: -10°C to +10°C 1 Year: -20°C to +20°C 3 Months: -20°C to +45°C 1 Month: -20°C to +60°C
Vacuum	10-5 torr
Operating Temperature	-10°C to +50°C
Vibration	To [RD-2]

## OPTIMUS Range

Model	OPTIMUS-30	OPTIMUS-40	OPTIMUS-80
Capacity	30 Wh	40 Wh	80 Wh
Mass (typical)	268 g	335 g	670 g
Length	95.89 mm	95.89 mm	95.89 mm
Width	90.17 mm	90.17 mm	90.17 mm
Height*	21.55 mm	27.35 mm	56.94 mm
Charge/Discharge Current	1.95 A	2.6 A	5.2 A

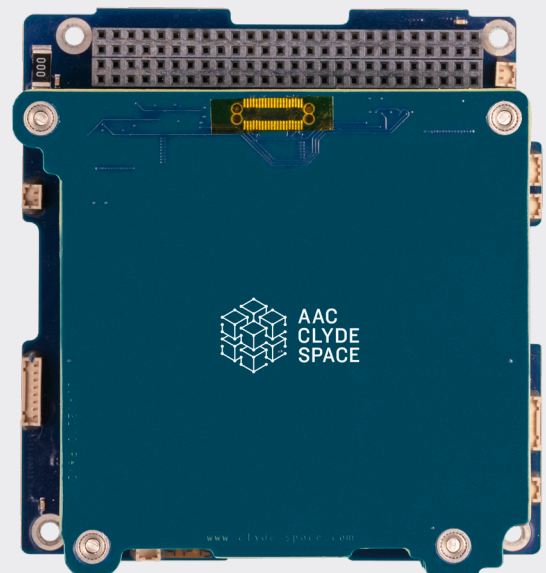
\*Height from top PCB to lowest component

## General Electrical Characteristics

EoC Voltage	8.26 V (typical)
Full Discharge Voltage	6.2 V (typical)
Charge Voltage Limit	8.4 V (max)
Discharge Voltage Limit	6.2 V (min)
Charge/Discharge Current Rate	1.53 (fraction of capacity) discharge voltage limit: 3V
Quiescent Power Consumption	< 0.1 W (30 Wh & 40 Wh) < 0.2 W (80 Wh)
Interfaces	Standard CubeSat PC104
Power Buses	3V3 and 5V
Serial Ports	I2C

The batteries are designed for integration with spacecraft that have an EPS compatible with lithium ion polymer technology and can easily be combined with the STARBUCK EPS range.

To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:  
**[enquiries@aac-clyde.space](mailto:enquiries@aac-clyde.space)**



## #SPACEISAWESOME

[www.aac-clyde.space](http://www.aac-clyde.space)

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