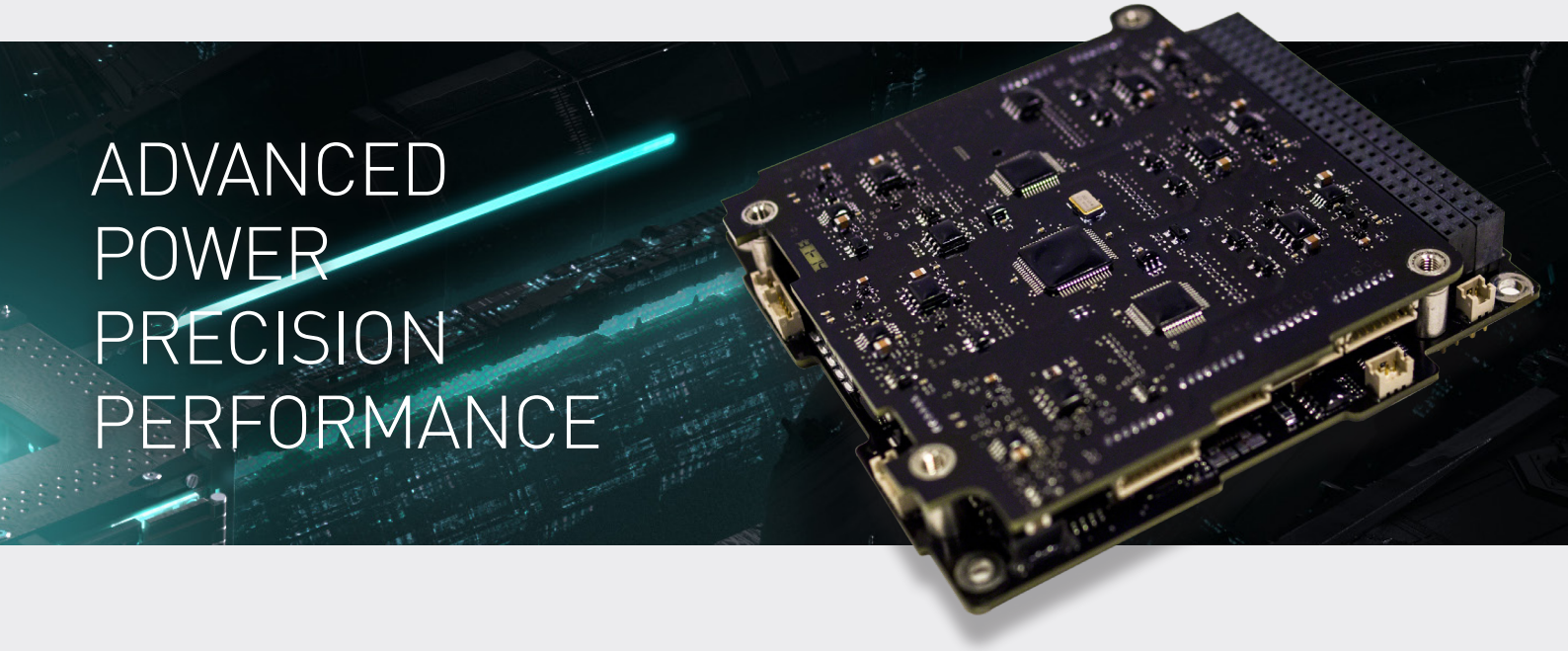
AAC CLYDE SPACE

Power Conditioning & Distribution Units

STARBUCK-NANO
STARBUCK-NANO-PLUS



Designed to be robust and reliable with performance failsafes, the flight proven STARBUCK-NANO range are one of the most flown power system ranges in the world. The STARBUCK-NANO is designed to support 1U, 2U and 3U CubeSats with body-mounted solar panels. The STARBUCK-NANO PLUS features an extended number of Battery Charge Regulators (BCRs) to support high-power CubeSats, from 3U spacecraft with deployable panels, right up to high performance 12U missions. Each power generation section is self-sufficient and does not require support from any other section within the EPS, the redundant solid-state isolation switches make it more reliable during launch operations.

Employing Maximum Power Point Tracking enables a highly efficient battery charge mechanism, that maximizes the power generation from the CubeSat solar arrays. Analog components and multiple inbuilt protection methods are employed to ensure safe operation during transport, launch and a full range of EPS telemetry via the I2C network. These features make the STARBUCK-NANO range the most robust solution on the CubeSat market.

POWER

With 8.2V max power voltage, 3.3V, 5V, and 12V regulated power buses and Power Distribution Modules with 10 Latching Current Limiters for advanced power management. Power converters required for a CubeSat mission are integrated within a single PC104 card.

PERFORMANCE

The most flown CubeSat system in history; the AAC Clyde Space Starbuck-NANO range are powerful electrical power systems that support platform sizes from 1U up to 12U, optimized for Low Earth Orbit (LEO). Developed with an extensive system knowledge and experience across many missions meaning there is almost certainly a system ready to meet your needs.

RELIABILITY

The STARBUCK-NANO range with its high-quality manufacturing, autonomous protections, watchdogs and failsafe in both hardware and firmware, provides solid foundations for mission assurance, allowing spacecraft designers to focus on everything else needed to make the mission a success.

TECHNICAL SPECIFICATIONS

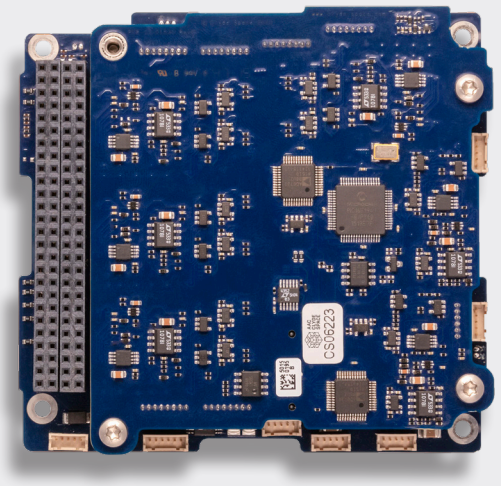
General	
Design Life	5 years in LEO
Regulated Power Buses	3.3V, 5V, and 12V
Latching Current Limit (LCL)	10 Configurable
Interfaces	I2C
Max. Battery Voltage	8.2V
Operating Temperature	-40°C to 85°C
Storage Temperature	-50°C to 100°C
Vacuum	10^-5 torr
Radiation Tolerance	10 KRad
Vibration	To [RD-3]

Product Information			
Product	NANO-PICO	NANO	NANO-PLUS
Integrated Battery	Yes 10 or 20Wh	No	No
Intended Use	1U CubeSat	2U and 3U CubeSat with body panels	3- 12U CubeSat with deployable panels
Mass (typical)	86 g	86 g	148 g
Length	95.89 mm	95.89 mm	95.89 mm
Width	90.17 mm	90.17 mm	90.17 mm
Height*	16.2 mm	16.2 mm	20.82 mm

Each of the power systems are specialized for platform and solar panel size. The STARBUCK-NANO range can support both body mounted as well as deployable solar panel configurations and supports Lithium Polymer Battery configurations.

Compatible with AAC Clyde Space PHOTON solar panel and OPTIMUS battery ranges, meeting ISS Crewed Flight design requirements when combined.

To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact:
enquiries@aac-clydespace.com



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