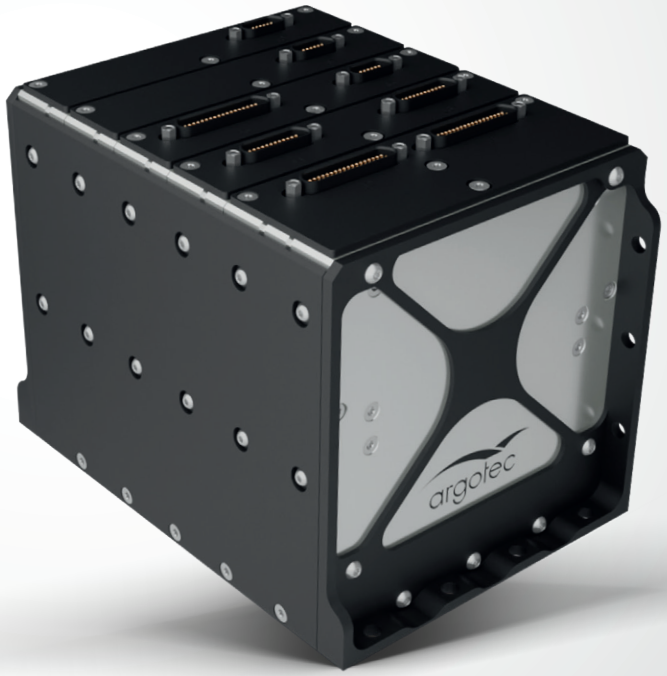
ARGOTEC PRODUCTS
DATA SHEET

CURIE PCDU

A Suite of Compact and Robust PCDUs for Power-demanding Missions and Services in Deep Space



Curie was born from the legacy of Volta, the PCDU that enabled LICIACube & ArgoMoon Missions, and offers versatile solutions that can be tailor-made at production to support a wide range of needs - from pioneering deep space science to next-gen commercial services in GEO.
It encompasses high performance and robustness condensed into a small-scale form factor and makes high-power payloads and technologies in harsh environments no longer a challenge.

A VERSATILE SUITE OF TAILOR-MADE POWER SYSTEMS

Curie is an all-purpose set of products which can be tailored at production time to fit custom power requirements, while maintaining high commonalty between its variants.

Such adaptability enables quicker build and integration times of all the product permutations, minimizing both direct and indirect costs.

ENABLING SCIENCE REQUIRING POWER-HUNGRY PAYLOADS

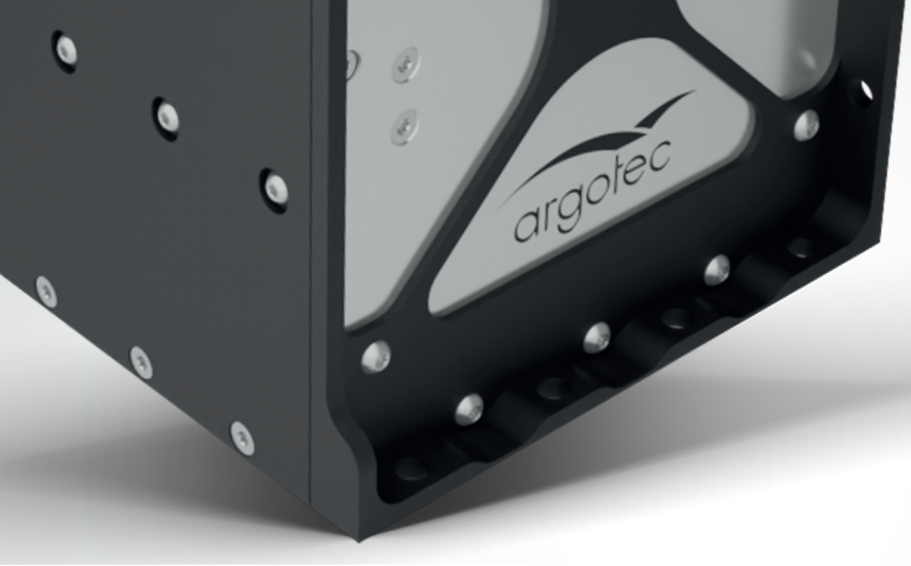
Curie can robustly supply small, power-hungry probes for exploration and science mission, supporting advanced technologies like Electric Propulsion that were previously limited by power constraints.

Its 250+ W version is unlocking next generation ESA CubeSat Deep Space missions with unprecedented power and radiation robustness demands, such as HENON.

BIG-SATS ARCHITECTURE IN A CUBE-SAT SIZE

Curie implements features typical of large spacecraft power architecture while maintaining a miniaturized form factor, with extended power capabilities, robustness and lifetime.

This enables downsizing in the next-gen commercial applications, including the emerging market for the new-class and small-scale GEO Sat for Telecom services.



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TECHNICAL SPECIFICATION

PROCESSING UNIT	Radiation Tolerant FPGA
TID & SEL SENSITIVITY THRESHOLDS	TID_{th} 30 krad SEL immune up to 38 MeV*cm^2/mg
OUTPUT RAILS	2× Unregulated LCL-protected 28 V 5× Unregulated OCP-protected 28 V 5× Regulated OCP-protected 12 V 4× Regulated OCP-protected 5 V
DIGITAL I/F	1× CAN TMTC I/F 2× RS422 TMTC I/F 1× JTAG Programming I/F
MASS	2.5 kg
VOLUME	140 × 100 × 100 mm
CONNECTORS TYPE	Space Grade MicroD Connectors
QUALIFICATION	TRL 6
CAPABILITIES	Latch-Up Current Limiting (LCL) protection mechanism Fully configurable Over-Current Protection (OCP) mechanism 250 W Power Conversion and Distribution Maximum Power Point Tracking (MPPT) Battery Charge Regulation (BCR) Configurable Fault Detection Isolation and Recovery functionalities End Of Life Management Firecode Input Signal (0-3.3 V)

argotec
SPACE FOR AMBITIONS