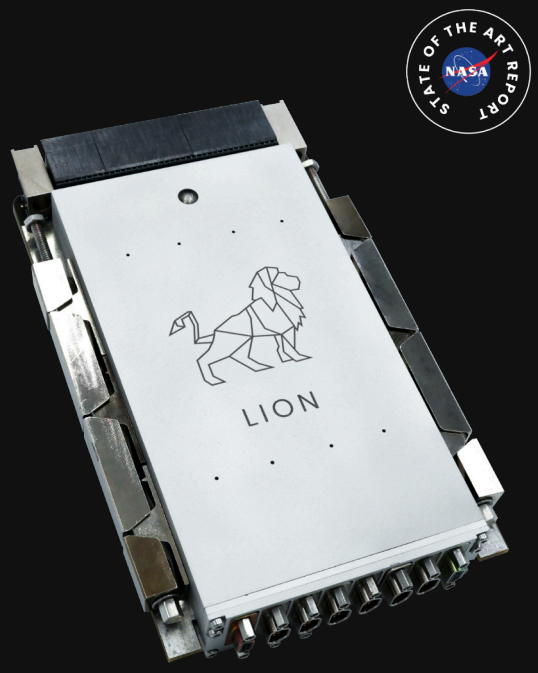
Hardware

Lion DPU

Edge Processing for Satellites Utilising ADHA



Lion is a backplane-based DPU in ADHA 3U* form factor designated to satellites up to 600 kg. Designed for the ESA Mission Class III and IV, it utilizes Kintex Ultrascale FPGA to deliver enhanced resilience and processing power for critical applications. Lion DPU features a configurable front panel, providing tailor-made setups with SpaceWire and SpaceFiber interfaces. With a standardized design that supports seamless integration, Lion enables faster, cost-effective mission development and adaptability across diverse satellite programs. Available in 2027.

*Advanced Data Handling Architecture (ADHA) is a pioneering ESA initiative that simplifies satellite data handling with standardized, interoperable modules. By enabling seamless integration across suppliers and reusability across missions, ADHA reduces development time and costs while enhancing flexibility and scalability. ADHA is poised to drive a new era of high-performance, adaptable satellite systems for EO missions.

Recurrence

Core modules can be reused in various missions, with different performance/ interface requirements

Improved quality

By reusing the same modules, quality of the end-to-end solution can be increased over time due to growing heritage

Scalability

Increased performance can be supported by the data handling system, simply by adding additional modules

Flexibility

New functions and interfaces can be integrated without requiring the redesign of core modules

Technical Sheet

Processing Cores	Kintex Ultrascale KU060
Supervising Circuit	Gaisler GR716B
Memory	•16 GiB DDR4 with ECC •1Gb bitstream storage
Backplane Interfaces	•Can work as ADHA Extended Peripheral module or as ADHA Peripheral Module •4x SpaceWire + 4x SpaceFiber on ADHA P4 connector •12x SpaceFiber on ADHA P6 connector •2x CAN on ADHA P1 connector
Front Panel Interfaces	Mission specific. Baseline configuration: 4x SpaceWire + 8x SpaceFiber
Specifications	•Supply voltage 12V •Power Consumption up to 30W - depending on workload and specified processing speed
Form-Factor	ADHA 3U module

Contact Us

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