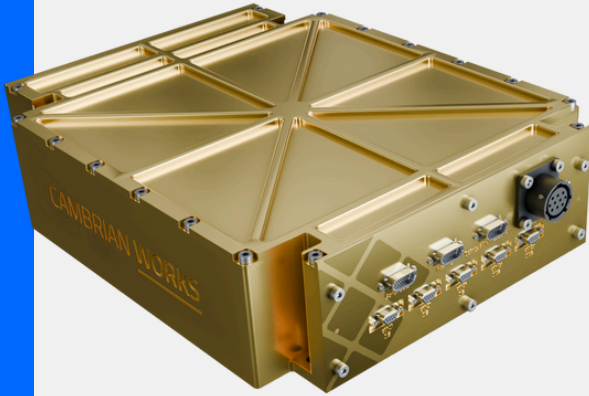# GigRouter

(Model GR-002007)

AI and Machine Learning Ready

GigRouter is built with an NVIDIA AGX Orin processor for state-of-the-art AI/ML computing coupled with K3S management. This allows apps to be deployed in parallel.
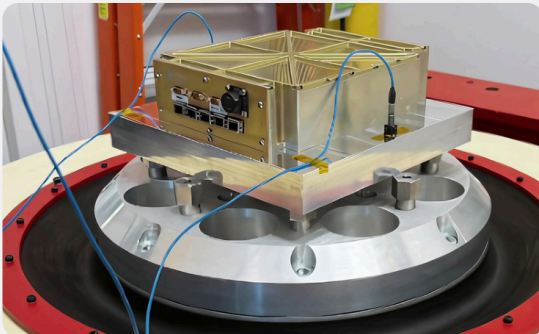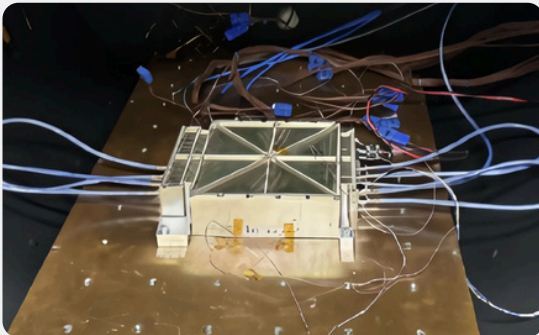
Networking Ready

Network software packages for internal satellite routing and inter-satellite communications. Compatible with many protocols such as MPLS, IPv4, and IPv6. No need to rewrite software for data routing through space.

Space Ready

GigRouter has completed NASA GEVs vibration and thermal vacuum testing. GigRouter can operate GPU and CPU intensive loads in a high temperature vacuum environment.

Rapid Development

The multitude of standard interfaces, like 2x 10-GigE, 7x 1-GigE, and Serial, allows you to develop rapidly and focus on your mission and schedule.

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Dimensions	Mass (with enclosure)	OS	Input Voltage Range
267 x 200 x 61 mm	**3.23kg (Measured)**	**Ubuntu-based optimized BSP**	**18V to 36V**

Data Interfaces	Storage	Power Consumption*	Container Orchestration
2x 10-Gbps Ethernet **7x 1-Gbps Ethernet** **1x RS-422** **1x RS-422 (Debug)** **4x GPIOs**	**Flash Memory** • **64GB eMMC** • **2x 8TB SSD (16TB total)**	**26 Watts (Idle)** **38 Watts (Max Data)** **40 Watts (Max CPU)** **65 Watts (Max GPU)** **94 Watts (Max)** ***Power Mode Adjustable**	**Kubernetes (K3S)**

CPU	RAM	Radiation Lifetime	
12-core Arm Cortex-A78AE 64-bit	**64GB 256-bit LPDDR5**	**24 Years in 550km 90°** **8 Years in 1000km 90°** **5 Years in GEO with added 2mm shielding**	

GPU	Base plate temperature (in vacuum)	
2048-core NVIDIA Ampere architecture GPU with 64 Tensor Cores	**< 60 °C to maintain CPU temperature < 75 °C at 35 W nominal power**	

Seamless Space Links

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www.cambrianworks.com