

Gryf: The Expeditionary High Performance Compute Platform

SOLUTION BRIEF



Co-designed by GigalO and SourceCode for portability and scalability, Gryf™ sets a new standard for on-demand configurability in the field. Powered by GigalO's AI fabric, Gryf can dynamically deploy any mission application, for actionable real-time intelligence — anywhere.

Challenges for the Modern Warfighter

Sophisticated Enemy Threats:

Counteract increasingly advanced adversaries with superior edge computing power.

Data Deluge at the Edge: Efficiently process vast amounts of data generated by drones, sensors, augmented reality (AR), and UAVs.

Unreliable Communications:

Maintain operational effectiveness even with potential communication breakdowns.

Data Value Decay: Ensure timely data processing to maximize its value and actionable intelligence.



Intelligence is only as good as it is timely, and data from drones, satellite images, and sensors hold the key to staying one step ahead of adversaries. Yet using static infrastructure and moving data to compute is no longer effective or timely.

Your Edge For Mission Success

Gain real time advantage over adversaries, increase your chances of mission success, and reduce mission losses by bringing the power of a supercomputer to the tactical edge. Gryf delivers the capabilities of a datacenter in the airline cabin-friendly form factor of carry-on luggage that is designed for rapid deployment with flexible configurations, even under tough real-world operating conditions.

Your Mission, Your Data: Processed At the Edge

Utilize real-time intelligence by collecting, storing, analyzing, and processing massive amounts of data instantaneously. Provide your team overmatch with AI-enhanced ISR, cybersecurity, wargaming, modeling and simulation, etc. for mission applications with extensive data collection, even with undesirable communications.

Current efforts to deploy infrastructure at the edge have been plagued by network inefficiencies, lack of process consistency, time lag to critical updates, and disjointed workflows. Now GigalO's patented AI fabric enables data processing in real time, and facilitates actionable intelligence anywhere.



Trusted by the US Government.

Gryf is made in the US and trusted by large DoD and state department organizations across the country.

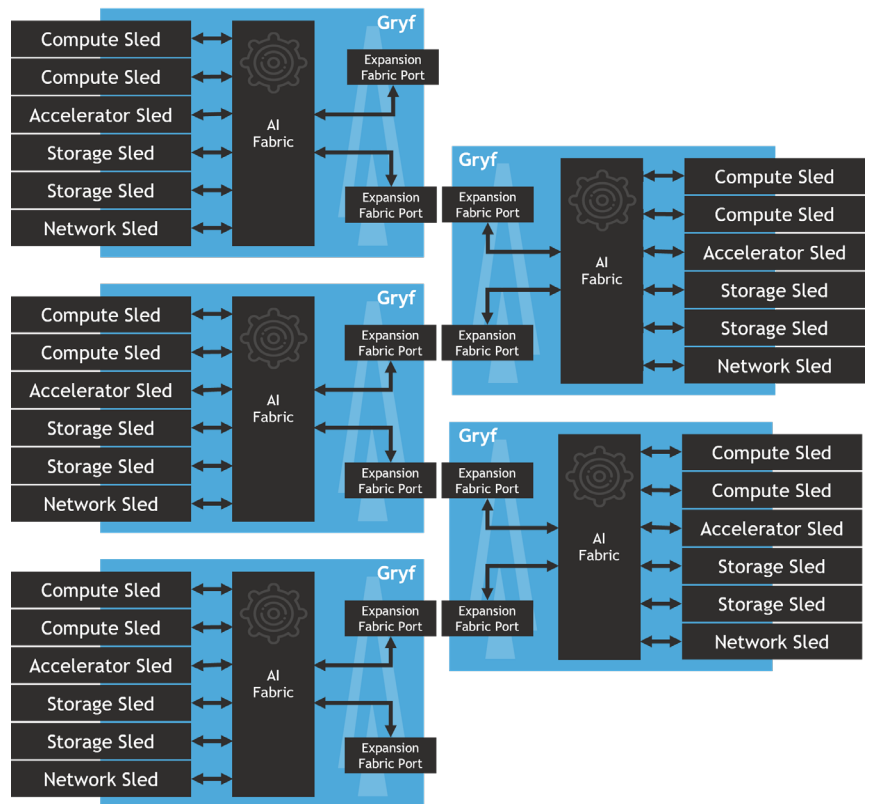
Gryf includes disaggregated GPUs, NVMe storage, and CPU/memory. It is designed to:

- ⬡ Expedite data analytics at the edge. Configurations can be optimized for each application’s workload demands.
- ⬡ Make the captured data and data analysis output at the edge available over GigaIO’s AI fabric. Workflows are optimized where the data is located.
- ⬡ Combine all resources once Gryf is in the same facility as SuperNODE™ and make them dynamically available to any application. The NVMe drives in Gryf become available for processes running in SuperNODE without moving data.
- ⬡ Move data over Ethernet from the edge to the core and vice versa, if bringing Gryf to the core is not an option.



Stack Your Gryfs

This diagram shows how you can stack up to five Gryfs, interconnected across GigaIO’s AI fabric. This configuration allows any server to access any other server or resource device within the fabric. Gryfs can be reconfigured in real time to meet application requirements.



Deploying this Edge-to-Core solution reduces time to results and eliminates stagnant intelligence. When it comes to keeping adversaries at the gate, it is critical to have the very best, most time-sensitive intelligence. This is only possible when the mission’s applications can run at the edge and process data in real time in order to get actionable results. Optimize workflows by reducing the time required to get relevant intelligence into the hands of those in the field.

This solution has been designed to deliver maximum return on investment. Gryf and SuperNODE, connected by GigaIO’s AI fabric, provide numerous possibilities for server configurations without forklift upgrades, and offer a smaller footprint and lower power draw, depending on application need.

Future Sleds

- 5G Sled
- CSfC Sled
- Secure Wifi Sled
- Cyber Offensive Sled

Have ideas for a future sled? Additional capabilities?

Please let us know!

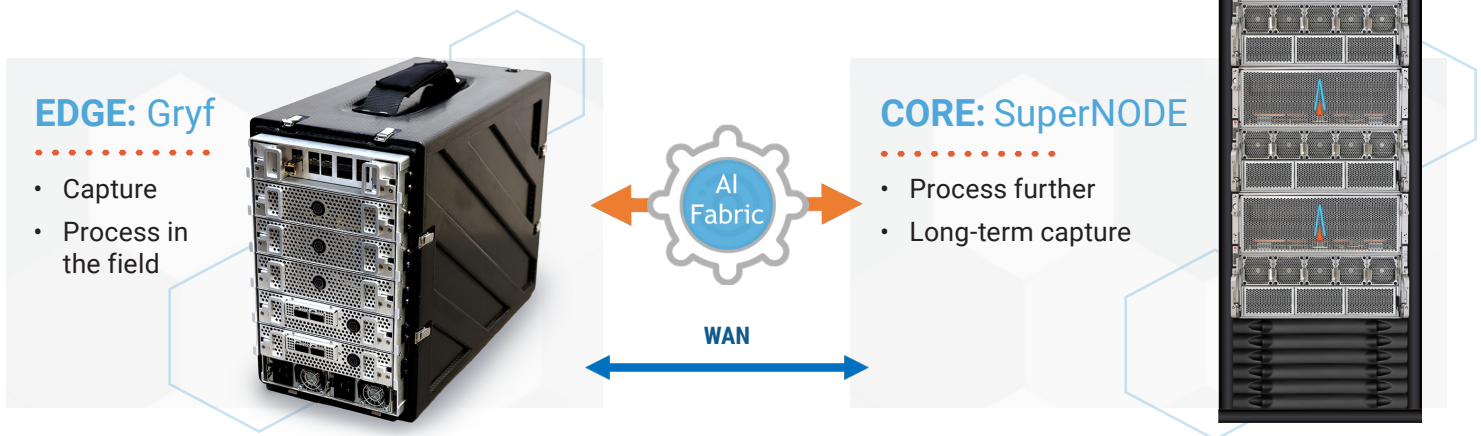
Portable Data Center Performance	Advanced Mission Intelligence at the Edge	Intelligence Data Analyzed in Theater
Optimized AI-enhanced Capabilities	Faster Data-Driven Decisions	Performance Data Analyzed in the Field
Configurable, Mission-Ready, Rugged Design	Mix Compute, GPU, Storage, and Network	No Need to Send Data to Remote Intelligence Center

Get Data Center Performance in a Configurable, Field-Ready, Rugged Design

Gryf can process the vast amounts of sensor data collected in real time because all data is processed on site, without any of the latency that comes with sending data to a remote data center. Gryf’s composable infrastructure allows for dynamic reconfiguration on the fly to meet changing field requirements, which ensures optimal resource utilization and provides the ability to scale via multiple interconnected Gryf units. This scalability allows Gryf to handle extremely large datasets and complex analytics tasks, making it suitable for a wide range of sports and team sizes.

How Gryf Delivers Real-time Onsite Insights

The diagram below shows the ruggedized Gryf, which can be deployed at the edge (left), and a SuperNODE, located back in the core data center (right). The unique value of GigaIO’s AI fabric is its ability to combine these into one seamless and dynamic environment. No longer do you need to copy data over when returning to the data center, simply plug Gryf into a SuperNODE and the data is instantly ready to be analyzed.



Gryf is the world’s first suitcase-sized AI supercomputer that brings datacenter-class computing power directly to tactical edge operations, enabling real-time intelligence analysis and mission-critical decisions anywhere in the field.

WHAT’S YOUR EDGE?

Learn more at gigaio.com/products/gryf