# GIGAIO | SOURCECODE™

# Gryf: Edge AI for Energy and Oil & Gas Exploration

Co-designed by GigaIO and SourceCode, Gryf™ is the world's first suitcase-sized AI supercomputer that brings datacenter-class computing power directly to energy operations. Bring real-time insight to the world's harshest environments to optimize production, safeguard operations, and minimize cost and delay.

From offshore drilling rigs to overland exploration sites, energy operations demand speed, precision, and resilience in some of the most remote and rugged places on Earth. Gryf delivers datacenter-class compute in a portable, standalone unit that enables teams to capture, process, and act on critical data — right at the edge.

Whether it's helping prevent a dangerous event offshore or validating drilling targets in real time during land-based surveys, Gryf processes data locally so teams can act faster, improve safety, and maintain control over sensitive information.

## Why Gryf for Energy

**Portable On-Prem Processing:** A self-contained unit that brings AI and high-performance computing to the edge, reducing reliance on centralized or cloud-based workflows.

**Secure by Design:** Keeps sensitive operational data on site, reducing exposure and ensuring greater control in low-connectivity environments.

**Rugged in Transit, Reliable in the Field:** Built to travel securely and operate efficiently in remote environments where traditional infrastructure is limited.

**Field-Ready Configurability:** Tailor storage, CPU, and GPU configurations to match site-specific requirements.

**Data Offload Simplicity:** Modular storage sleds allow teams to remove and transport data easily without interrupting ongoing work.

**Power Efficiency:** Ideal for settings with limited power availability — run only the resources you need, when you need them.

**Scalable Architecture:** Interconnect up to five Gryf units for datacenter-scale compute at the edge.

**Ecosystem Integration:** Leverage a growing ecosystem of industry-leading partners and open sled architecture for future-proof deployments.

# Sample Use Cases in the Field

## OFFSHORE OPERATIONS
## Real-Time, On-Prem Processing

### Challenge

Offshore rigs operate without traditional IT infrastructure, and must rely on high-latency SATCOM for data transmission. Safety and production depend on fast, accurate data processing.

### Gryf Solution

- Operates independently as an on-prem solution, delivering real-time processing of mission-critical data.
- Helps identify early warning signs of hazardous conditions like gas buildup.
- Monitors drilling activity for depth, yield optimization, and equipment performance.
- Enables faster decision-making without cloud dependency.
- Captured data can be offloaded via swappable storage sleds for analysis back onshore.
- Portable form factor reduces costly mobilization of large equipment or additional personnel — easing one of the biggest financial and logistical burdens in offshore operations.

## OVERLAND RESEARCH
## Speed + Precision = Greater Accuracy

### Challenge

Exploratory teams often work in remote, power-limited areas for short durations, with limited visibility into whether data collection was successful until they return.

### Gryf Solution

- Configure compute, GPU, and storage resources to match mission needs.
- Pre-process data onsite to validate success before leaving the field.
- Operate within tight power budgets — turn on only what's needed.
- Transportable enough to ship back with personnel, no palletization required.
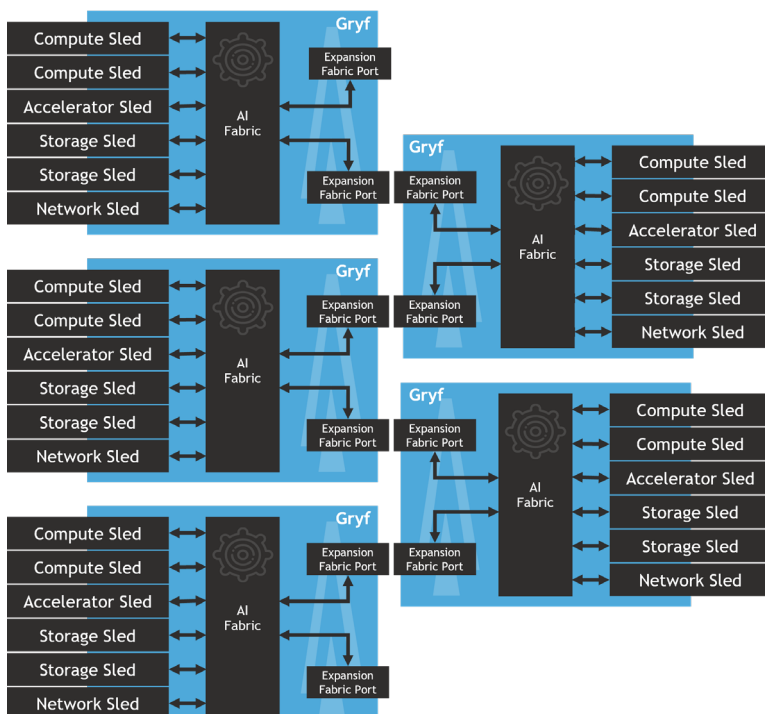


## Stack Your Gryfs

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.

# GIGAIO

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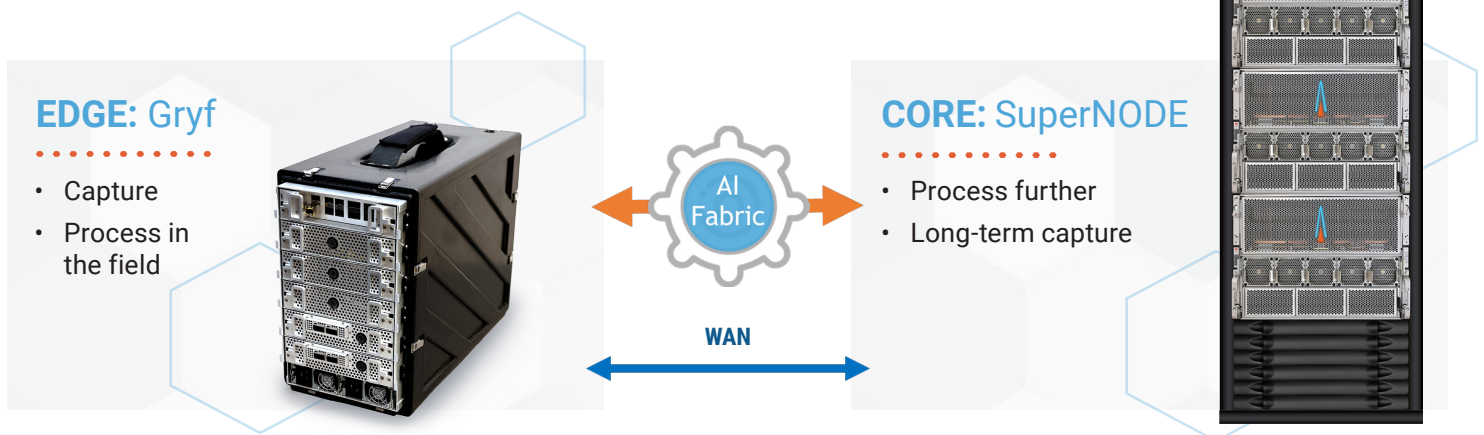| | | |
|---|---|---|
| **Portable Data Center Performance** | **Mix Compute, GPU, Storage, and Network** | **Configurable, Field-Ready, Rugged Design** |
| **AI & Real-time Analytics** | **Faster Data-Driven Decisions** | **Performance Data Analyzed in the Field** |
| **No Need to Send Data to a Remote Data Center** | **Disaster Recovery and Redundancy** | **Advanced Data Processing at the Edge** |

## The Gryf Advantage

Gryf is a portable, on-prem solution that enables real-time data processing in remote environments. Contained within a compact form factor, it reduces reliance on cloud or centralized infrastructure, supports faster decisions, improves safety, and keeps sensitive data secure. With datacenter-class GPUs and petabyte-scale storage, Gryf is the new standard for edge AI in energy and oil & gas.

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.

**EDGE: Gryf**

- Capture
- Process in the field

**AI Fabric**

**WAN**

**CORE: SuperNODE**

- Process further
- Long-term capture

Gryf is the world's first suitcase-sized AI supercomputer that brings datacenter-class computing power directly to energy operations, enabling real-time resource analysis and production decisions through its configurable, field-ready design that processes data at the wellhead.

## WHAT'S YOUR EDGE?

## Learn more at gigaio.com/products/gryf