

Gryf: High Performance Edge Infrastructure for Media & Entertainment

SOLUTION BRIEF



Co-designed by GigaIO and SourceCode, Gryf™ resides on set to decrease post-production time for media and entertainment. Highly compact and mobile, the Gryf supercomputer can incorporate transcoding, encoding, multi-mode presentation, and high performance storage composability onsite, following an 8K TV capture session.

Powered by GigaIO's AI fabric, Gryf unifies edge-to-core infrastructure, which translates into shortened post-production time. Gryf's combination of portability, ruggedness, and high performance makes it a versatile tool for television broadcasting, especially in scenarios that require mobility, rapid deployment, and processing of large volumes of data in real time. Its capabilities are particularly beneficial for live broadcasting, on-site editing, AI-driven analytics, and ensuring broadcast continuity in challenging environments.











Gryf makes it possible to handle tasks such as green screen video capture, incorporating game action via tools such as Unreal Engine, and lightning/pixel smoothing on set, which reduces rework and maximizes post-production. Pooled GPUs from Gryf's composable infrastructure enhance virtual production efforts. And its mobile nature makes it ideal to deploy in parallel in order to support concurrent episodic development.



Gryf is also highly effective at outdoor venues, which typically have challenging high-speed connection points, such as NASCAR race tracks, NHL arenas, or college football stadiums. Gryf can create 360-degree virtual camera environments, sending only changed pixels back and forth to production studios via NVIDIA Deep Learning Super Sampling (DLSS). M&E teams can monetize individual competitors at events in this regard.



Gryf's high-performance computing and storage capabilities can be utilized in television broadcasts in several ways:

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On-site Live Broadcasting
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Rapid Content Processing and Editing
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Remote Production
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AI & Real-time Analytics
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Enhanced Graphics and Visual Effects
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Streaming and Content Distribution
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Disaster Recovery and Redundancy
- 
Virtual Production and Augmented Reality

On-site Live Broadcasting

Gryf’s portable and ruggedized design makes it an ideal solution for live broadcasting, especially in remote locations or during outdoor events (like sports or news coverage). It can process and store high volumes of video data on site, reducing the need for extensive remote infrastructure.

Enhanced Graphics and Visual Effects

The powerful GPU and AI accelerators in Gryf can be used for generating high-quality graphics and visual effects on the fly, which is crucial for dynamic and visually appealing broadcasts.

Rapid Content Processing and Editing

Gryf’s high compute power enables fast processing of video content. This is particularly useful for editing and rendering tasks in a mobile broadcasting unit, as it allows for quicker turnaround of broadcast-ready content.

Streaming and Content Distribution

When streaming live events, Gryf can easily handle the high data throughput required for streaming high-definition or 4K video content, ensuring smooth and high-quality broadcasts.

Remote Production

With its ability to handle complex computing tasks on site, Gryf supports remote production workflows, reducing the need to transport footage back to a central studio for post-production.

Disaster Recovery and Redundancy

In scenarios where broadcasting infrastructure faces disruption (such as in natural disasters), Gryf’s portability and ruggedness make it a reliable backup solution to ensure continuity of broadcast services.

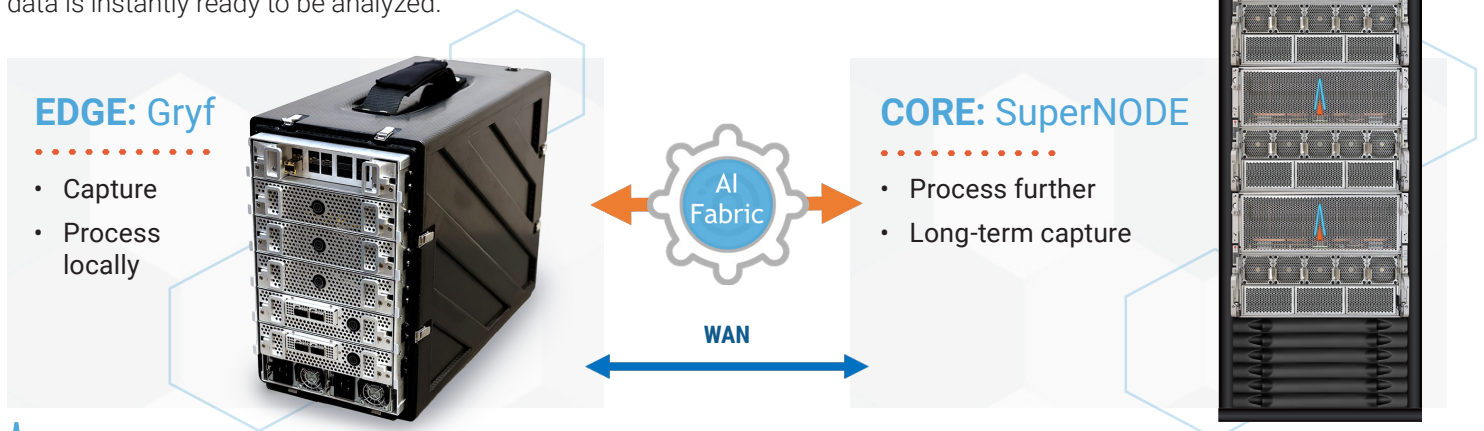
AI and Real-time Analytics

With its AI capabilities, Gryf can be used for real-time video analytics during live broadcasts. This includes audience measurement, content moderation, or even instant replays and highlights generation in sports broadcasting.

Virtual Production and Augmented Reality

Gryf’s computing power can support virtual production and augmented reality applications in broadcasting, allowing for more creative and interactive content.

The diagram below shows the ruggedized Gryf, which can be deployed at the edge (left), and a SuperNODE™, located back in the core datacenter (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 datacenter, simply plug Gryf into a SuperNODE and the data is instantly ready to be analyzed.



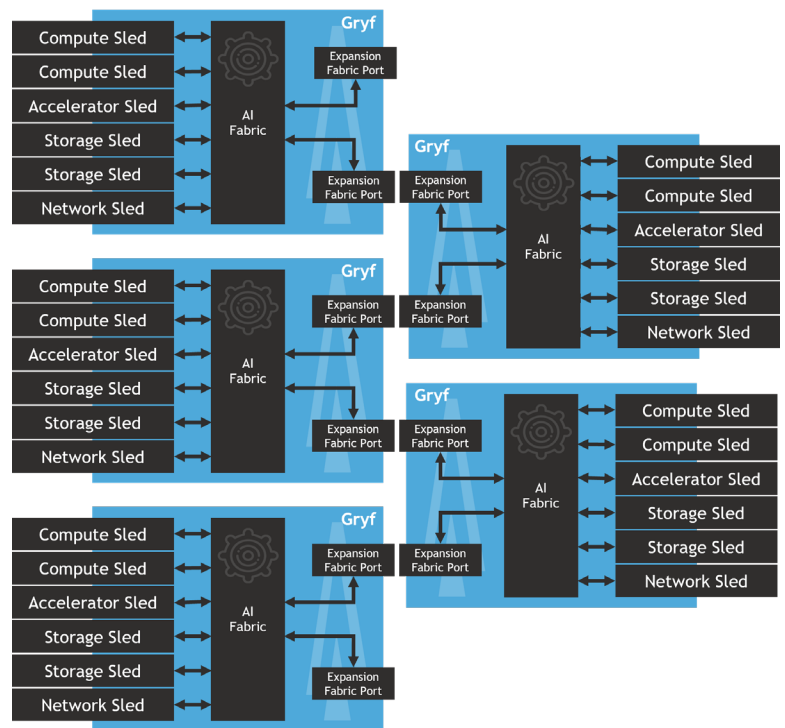
Gryf includes disaggregated GPUs, NVMe storage, networking, and CPU/memory.

- 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 Gryf units, 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 facilitates virtual production activities, enhances interactive video editing, and maximizes GPU asset utilization. Gryf can run on set at the edge and process data in real time.

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.

Gryf is the world's first suitcase-sized AI supercomputer that brings datacenter-class computing power directly to production locations, enabling real-time content analysis and creative decisions through its configurable, set-ready design that processes media locally.

WHAT'S YOUR EDGE?

Learn more at gigaio.com/products/gryf