# NUCLEUS GPU AI ENABLED RECORDER WITH AMPERE

## BUILT FOR DATA-INTENSIVE APPLICATIONS, OPTIMIZED TO LEVERAGE NVIDIA GPU CO-PROCESSING

Nucleus GPU AI Enabled Recorder with Ampere is a rack-mount system built for data-intensive applications, and is available in a variety of configurations and form factors to meet your exact needs. Whether you need powerful NVIDIA GPU AI co-processing, expansive data storage, or a combination of both, Nucleus GPU AI Enabled Recorders are the right tool for high-speed data ingest, processing, and recording as well as AI / Machine Learning analytics and Large Language Models (LLM).

**2 to 4 Nvidia dual-wide GPUs to enable higher bandwidth and improved data-transfer rates, as well as advanced AI / machine learning applications**

**Professional-grade Ampere processors and high-speed memory for data-heavy processing**

**Front-removable SSDs up to 30.72TB each**

## AI AND DATA SCIENCE

Transform any enterprise into an AI organization with NVIDIA AI, the world's most advanced platform with full stack innovation across accelerated infrastructure, enterprise-grade software, and AI models. By accelerating the entire AI workflow, projects reach production faster, with higher accuracy, efficiency, and infrastructure performance at a lower overall cost.

## MACHINE LEARNING

Machine learning helps businesses understand their customers, build better products and services, and improve operations. With accelerated data science, businesses can iterate on and productionize solutions faster than ever before all while leveraging massive datasets to refine models to pinpoint accuracy.

# Nucleus GPU AI Enabled Recorder with Ampere

## 1U FORM FACTOR



**STORAGE**

Options for up to 10 all-flash NVMe drives on front panel and four drives on middle panel to enable extensive storage and high-throughput performance, *-or-* up to 4 front-removable NVMe SSDs totaling up to 120TB total

**NVIDIA GPU CO-PROCESSING**

2 to 4 front-accessible Nvidia dual-wide GPUs for co-processing to enable higher bandwidth and improved data-transfer rates as well as advanced AI / machine learning

## 2U FORM FACTOR



**DEPLOYABLE**

Operate the system from within the rugged, TSA-compliant travel case for quick setup anywhere.

**STORAGE**

Up to 8 NVMe SSDs supporting up to 240TB total

**NVIDIA GPU CO-PROCESSING**

Options for NVIDIA RTX A2000 / RTX 4000 SFF ADA and A2 Tensor Core GPU(s) for Artificial Intelligence (AI)/ machine learning at the Edge

## 3U FORM FACTOR



**STORAGE**

Up to 8 front-removable NVMe SSDs supporting up to 240TB total

**NVIDIA GPU CO-PROCESSING**

Up to two Nvidia dual-wide GPUs for co-processing to enable higher bandwidth and improved data-transfer rates as well as advanced AI / machine learning

| | |
|---|---|
| **Available CPUs** | Single socket Ampere® Altra® Processor from 32 to 128 Cores up to 250W TDP |
| **Memory** | 3200 MHz RAM to 2TB |
| **GPU Expansion** | • Up to (2) Nvidia dual-wide GPUs<br>• Options for NVIDIA A2 Tensor Core GPU(s)  for Artificial Intelligence (AI)/machine learning at the Edge |
| **Storage** | • 1U form factor: Removable drive bays for up to (4) NVME 2.5" drives capacities up to 30.72TB each per high endurance data recording SSD<br>• 2U & 3U form factor: Removable drive bays for up to (8) NVME 2.5" drives capacities up to 30.72TB each per high endurance data recording SSD |
| **Sustained Read / Write** | NVME to 3.5GB/second per drive |
| **Network** | Quad 4x1G Copper Intel® i210 Gigabit Ethernet Controller 2x 10G SFP+ (Other network options available) |
| **AI** | Options for NVIDIA A2 Tensor Core GPU(s)  for Artificial Intelligence (AI)/machine learning at the Edge |
| **Security** | Secure Boot UEFI compliant BIOS, Boot Guard, TPM2.0 |
| **Remote Management** | IPMI, HTML5 and API based out of band management with MAC addresses identification, one time boot on next reboot option, PXE boot option, Redfish compatible Out of Band (OBB) management connection |
| **Operating Systems** | • Ubuntu 22.04 and (24.04 May release)<br>• Red Hat  8, 9  Enterprise Linux, CentOS and Rocky Linux<br>• Windows Server 2025 (Insider Preview)<br>• Windows 11 24H2 |
| **Power Supply** | 1+1 Redundant 800W 80 PLUS Platinum Power Supply<br>Rating: 100-127Vac/200-240Vac, 10A/5A, 50/60Hz |
| **Environmental** | • Operating temperature: 10°C – 35°C<br>• Non operating temperature: -40°C – 70°C<br>• Non operating humidity: 20% – 90% (Non condensing) |
| **Warranty** | 1 year parts and labor; 2nd and 3rd year warranties available |
| **Purpose-Built Solutions** | Private label branding options. Purpose built application integration and configuration control management services. |

**NEXT COMPUTING**

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