PacStar 453 NVIDIA GPU Enhanced Server Module

PacStar 453 NVIDIA GPU enhanced server provides a high-performance virtualization and compute platform for hosting intensive applications such as graphics, video processing, and artificial intelligence in a compact, quick setup, rugged form factor

Designed for tactical, expeditionary vehicle-mount, forward operating base, and early-entry deployments for military, Homeland Security, first responders, and commercial/enterprise users, PacStar 453 is ideal for applications that need high performance computation in remote or distributed locations. PacStar 453 meets size, weight, and power (SWaP) requirements unmatched by other COTS appliances.

PacStar 453 is the optimal platform for tactical and distributed deployment of video and AI applications performing:

- Video: encoding, decoding, transcoding, analytics, object detection
- Natural language understanding and translation
- Cybersecurity: threat analytics, vulnerability detection, and defensive adversarial ML
- Sensor fusion, health monitoring, EW signal processing, augmented reality
- Autonomous systems operations, navigation, predictive maintenance
- Decision support
- Virtual desktop infrastructure

PacStar 453 is based on the powerful and proven PacStar 451 platform that features Intel Xeon D processing, with 128 GB RAM, 30.72 TB storage, and 10 GigE SFP+ ports, combining high-power, general-purpose computing with a PCIe connected NVIDIA GPU with 896 CUDA cores.

Key Features

A wide variety of supported software options available including technologies from Aruba Networks, Cisco, Digital Barriers, Kinetica, VMware, and more

Intel 6th generation Xeon D processing platform with 12-cores

NVIDIA GPU with 896 CUDA cores

(2) SFP+ 10 GigE ports

TPM 2.0

Compatible with existing PacStar 400-Series modules, chassis, and accessories

KG-250X/XS compatible power output port

Compact design for flexible packing and transport

Small, but powerful: only 5.3" x 7.1" x 3.4" and 3.5 lbs.

Performance Specifications

- Intel Xeon D 12-Core processor, up to 128 GB RAM
- NVIDIA Quadro T1000, Turing architecture, 128-bit 4GB GDDR6, 896 CUDA cores, 2.6 TFLOPS FP32 peak performance
- Dual, user-removable 2.5" SSD (7 mm), SATA 6Gb/s, up to 15.36 TB each, 30.72 TB total
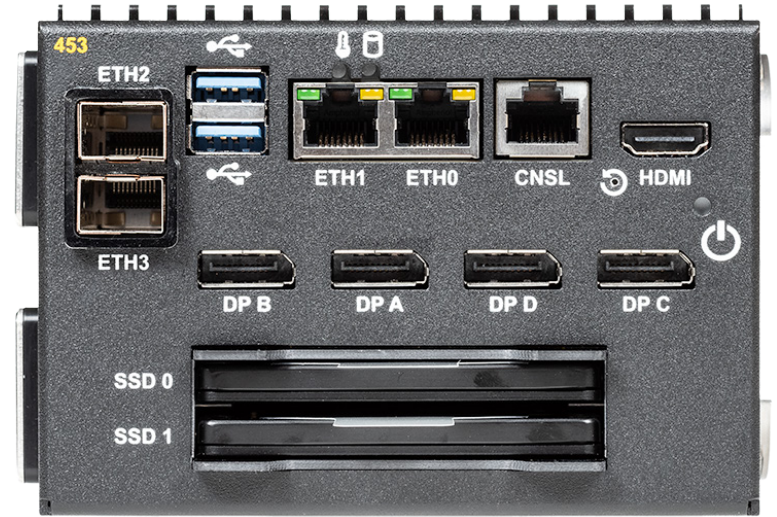
Physical Specifications

- Dimensions 5.3" x 7.1" x 3.7"
- Weight 3.5 lbs.

Connectors

- (2) 10 Gbps SFP+
- (2) 1 Gbps RJ45
- (1) RS-232 RJ45
- (2) USB 3.1
- (1) HDMI (onboard video)
- (4) DisplayPort (GPU video)

Power Specifications

- Wide range DC input, 11-35V
- World-wide AC power input (with adapter cable)
- Power draw: 110 watts at maximum load

PacStar 453 is part of the PacStar 400-Series family of small communications modules. It is designed for maximum compute and networking capabilities in the smallest rugged form factor on the market. PacStar 400-Series includes routing, switching, and advanced network services with built-in configuration flexibility and robust power options for austere environments. These solutions are driven by PacStar IQ-Core® Software to simplify setup and operation.

PacStar 453 is utilized in the industry-leading PacStar Modular Data Center solution.

PacStar products are covered by multiple patents. Additional patent(s) pending. See www.pacstar.com/patents for details.