



PacStar 451-NR

High-speed NVMe storage and Intelligent Platform Management Interface (IPMI) for remote management

The PacStar® 451-NR includes support for high-speed NVMe® storage and Intelligent Platform Management Interface (IPMI) for remote management. It provides a high-performance computing and virtualization platform for hosting one or more software applications or virtual appliances in a compact, quick setup, rugged form factor.

Designed for in-theater computing, executive communications, vehicle-mount, early entry, forward operating base or remote deployments for military, Homeland Security, first responders, and commercial/enterprise users. The PacStar 451-NR meets size, weight, and power (SWaP) requirements unmatched by other COTS appliances. The PacStar 451-NR is available with a wide variety of pre-loaded, pre-secured, and pre-qualified software applications or virtualized appliances appropriate for use in tactical C5ISR/EW applications. These include, but are not limited to:

- Virtualized and software defined networking and WAN, routing, switching
- VPN, TLS encryption, PKI
- Cybersecurity: firewalls, IDS, threat analytics, SIEM, NetFlow
- Unified communications
- Video encoding, transcoding and analytics
- Tactical cloud deployment
- Mobile device and wireless network management
- Hyper-convergence and storage
- General-purpose application hosting

The PacStar 451-NR is available in a variety of configurations with Xeon processors in 4-core, 8-core, 12-core, and 16-core variants. Flexible storage and I/O options, including high-performance NVMe SSD storage, 6x faster than legacy SATA storage, and IPMI for remote and out-of-band management, let you select the right configuration for your needs. The PacStar 451-NR module footprint offers the best in small size, flexible power, and environmental ruggedness.

PacStar offers a wide array of system packaging options for the PacStar 400-Series, including briefcase style, transit case style, 19" rack mount, vehicle-mount, and backpack style transport options

Key Features

- A wide variety of appliance options available including networking technologies from Aruba Networks, Cisco Systems, Forcepoint, Haivision, Information Security Corp, Juniper, Palo Alto Networks, Peraton Labs, and more
- Intel Xeon processing platforms in 4-core, 8-core, 12-core, and 16-core variants
- (2) SFP+ 10 GigE ports
- IPMI management
- 2x 4TB NVMe drives
- TPM 2.0
- Compact, snap-together design enables quick expansion with other PacStar 400-Series modules for flexible packing and transport
- KG-250X/XS compatible power output port
- Extensively tested to MIL-STD-810/461 by independent labs. Reports available on request.
- Continuous runtime with hotswappable batteries
- Small, but powerful: only 5.3" x 7.1" x 1.7" and 2.7 lbs.
- Optionally managed by PacStar IQ-Core® Software for easy setup and configuration

Specifications and standards

Physical Specifications

- Dimensions 5.3" x 7.1" x 1.7"
- Weight 2.7 lbs.
- Patented snap-together connector provides DC pass-through for powering additional PacStar 400-Series products
- Offering maximum performance using two small fans, externally mounted to the heat sink, so sealing boundaries are not violated
- Operational temperature range (-20C to 60C), 128 GB version is (-20C to 50C)
- Extensively tested to MIL-STD-810/461 by independent labs. Reports available on request. For more information, see: pacstar.com/testing.

Storage Options

- Dual, user removable, 1.3" NVMe SSD drive cartridges (up to 4TB per cartridge, 8TB total)
- Optional, single embedded 240GB NVMe "boot drive"
- NVMe provides up to 6X faster performance than SATA SSDs

Power Specifications

- Wide range DC input, 10-35V
- World-wide AC power input (with adapter cable)
- Battery snap-together connectors for 1-2 each AN/PRC-152/148 snap on radio batteries; hot-swappable with 2+ hours runtime per battery
- Regulated clean 12V DC output, 20 watts (KG-250X/XS support)

Interface Specifics

- 2 SFP+ 10 GigE and 2 RJ45 10/100/1000 Ethernet ports with IPMI
- 2 USB 3.2 ports
- DisplayPort
- KVM over IP display (IPMI)
- Serial over LAN (IPMI)



Supported Software Appliances

Network Function Virtualization: Providing Routing, Switching, Network Optimization

Cisco Cloud Services Router 1000v and Catalyst 8000v

Cisco Integrated Services Router 5921

Aruba Virtual Mobility Controller (Wireless Infrastructure Controller)

Riverbed Virtual SteelHead (SATCOM/WAN performance optimization)

VIASAT NETAGILITY™ NVR-1000

Cybersecurity: Firewall, VPN, Network Intrusion Detection, Threat Analytics, and Network Defense

Aruba ClearPass – Authentication

Cisco ASA and Firepower – Firewall, IDS, analytics, VPN

Cisco Stealthwatch - Cyber Analytics

Elastic - SIEM

Forcepoint NGFW – Firewall, IDS, VPN

Juniper vSRX – Firewall, IDS and VPN

PacStar IQ-Core Crypto Manager – PKI, Crypto and SIEM

Palo Alto Networks – Firewall, IDS and VPN

Peraton Labs SecureIO

Red Hat Enterprise Linux with Certificate Services - PKI

Information Security Corp CertAgent - PKI

Microsoft Windows Server – Domain Control, Authentication, PKI

IP-Based Unified Communications: Voice, Video and Conferencing

Blackberry SecuSUITE – Complete UC suite

Cisco Unified Communications Manager - Complete UC suite

REDCOM Sigma® - Complete UC suite

Haivision Kraken - Video transport/transcoding and optimization

General Purpose Application Hosting

VMware ESXi, XEN, KVM, and Hyper-V Hypervisors

General-purpose Windows servers - can host a nearly unlimited array of applications (Exchange, SQL Server, Sharepoint, etc.)

Linux Services - Can host a nearly unlimited array of applications

DoD-specific mission command applications

Hyper-Convergence and Large Scale Storage

VMware vSAN

Riverbed Virtual SteelFusion Edge

TrueNAS



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