

PacStar 455

High-Capacity Tactical Data Storage Server



Key Features

- Intel Xeon D-1700 (Ice Lake-D) processors with 128 GB RAM for general purpose or dedicated compute tasks
- Up to 480 TB RAID storage with 8 removable E3.S NVMe SSDs
- IPMI management with Redfish Support
- 10 GbE SFP+ ports for high performance data replication and networking including on-board virtual network functions
- Integrated smart power supply with wide range DC input and worldwide AC input
- Compact design for flexible packing and transport
- Extensively tested to MIL-STD-810/461
- Best in class SWaP: Small, but powerful; only 5.3 in x 7.1 in x 5.5 in and only < 8 lb

PacStar® 455 Tactical Data Storage Server Module provides a high-performance cloud, virtualization, and storage platform for forward deploying applications or providing network attached storage in a compact, quick setup rugged form factor.

Designed for in-theater operations, vehicle-mount, early entry or forward operating base deployments for military, Homeland Security, first responders, and commercial/enterprise users, PacStar 455 provides up to a half a Petabyte of enterprise-class NVMe® storage to meets size, weight, and power (SWaP) requirements unmatched by other commercial off-the-shelf (COTS) appliances. Featuring a powerful Intel® “Ice Lake” Xeon®-D processor and removable E3.S SSDs, PacStar 455 provides the highest-capacity, highest-speed data storage solution for tactical edge applications.

PacStar 455 integrates seamlessly with other PacStar 400-Series small form factor modules within a chassis and patented interconnect technology, providing the best in small size, flexible power, and environmental ruggedness.

PacStar also offers a wide array of system packaging options for the PacStar 400-Series, including briefcase, transit case, rack mount, vehicle mount, and backpack transport, or custom-designed to meet your use case.

PacStar 455 is an ideal platform for a wide variety of edge use cases in forward deployed settings including:

- Advanced cloud replication, application virtualization or hyper-convergence
- Application performance acceleration
- General purpose NAS storage
- Satellite/GIS imagery caching
- Video serving/storage
- Cybersecurity applications with large storage requirements such as package capture, NetFlow analysis, SIEM, DLP, or threat analytics
- WAN optimization

PacStar 455 is part of the PacStar 400-Series family of small tactical 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 IQ-Core® Software to simplify setup and operation.

Specifications

Processor

- Intel Xeon-D (Ice Lake D-1700 Series)
- Up to 128GB DDR4 RAM
- TPM 2.0 security
- Virtual RAID on CPU (VROC) by Graid Technology (up to RAID 5)

Storage

- One (1) CF-Express boot disk (service panel accessible)
- Eight (8) E3.S form factor NVMe SSD cartridges, up to 60 TB capacity/ each / 480 TB total (removable, no tools required)
- NVMe provides up to 6X faster performance than SATA SSDs

Interfaces

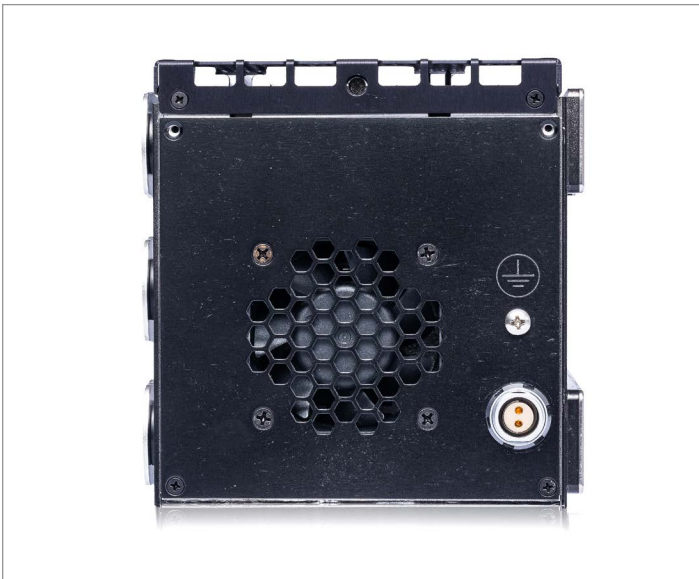
- (2) 10 Gbps SFP+
- (2) 1 Gbps RJ45 Ethernet
- (1) 1 Gbps RJ45 Ethernet (dedicated IPMI with KVM over IP display and Serial over LAN support)
- (2) USB 3.2 (Type-A)
- (1) USB 3.0 (Type-C)
- (1) DisplayPort (BMC video)

Physical Specifications

- Dimensions (WxDxH): 5.7 in x 7.1 in x 5.5 in (fits in 3-slots of PacStar 400-Series Smart Chassis)
- Weight <8.0 lb (with 8x SSD installed); <6.5 lb (without drives)
- Forced air cooling with sealed electronics
- Extensively tested to MIL-STD-810/461
- Operational temperature: -20 °C to +60 °C (reduced processor loading above 50 °C)

Power Specifications

- Wide-range DC input, 10-35 V
- Worldwide AC power input (with adapter cable)
- Regulated clean 12 V DC output, 20 W (KG-250X support)
- Power Draw (with 8 drives): 60 W (Idle), 150 W (Typical), 170 W (Peak)



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Supported Software Appliances

General Purpose Application Hosting	Hyper-Convergence and Large Scale Storage
DOD-specific mission command applications	Broadcom VMware vSAN
Containerized and Cloud Native services with Docker and Kubernetes	NetApp ONTAP Edge
Microsoft Windows Server and Microsoft Azure Local	Riverbed Virtual SteelFusion Edge
VMware ESXi	TrueNAS
VMware Kernel-based Virtual Machine hypervisor	
VMware Hyper-V hypervisor	
Cybersecurity: Firewall, VPN, Network Intrusion Detection, Threat Analytics, and Network Defense	Network Function Virtualization: Providing Routing, Switching, Network Optimization
Aruba ClearPass – Authentication	Aruba Virtual Mobility Controller (Wireless Infrastructure Controller)
Cisco ASA and Firepower – Firewall, IDS, analytics, VPN	Cisco Cloud Services Router 1000v and Catalyst 8000v
Elastic - SIEM	Riverbed Virtual SteelHead (SATCOM/WAN performance optimization)
Everfox NGFW – Firewall, IDS, VPN	Viasat NETAGILITY™ NVR-1000
Juniper vSRX – Firewall, IDS and VPN	
IQ-Core Crypto Manager – PKI, Crypto and SIEM	
Palo Alto Networks – Firewall, IDS and VPN	
Red Hat Enterprise Linux with Certificate Services - PKI	
Red Hat OpenShift	
Information Security Corp CertAgent - PKI	
Microsoft Windows Server – Domain Control, Authentication, PKI	
IP-Based Unified Communications: Voice, Video and Conferencing	Cross Domain Solutions
Cisco Unified Communications Manager	BAE XTS Guard
Haivision Kraken - Video transport, transcode, optimization	Everfox High Speed Guard, Trusted Gateway, Trusted Thin Client
REDCOM Sigma® - Complete UC suite	Owl V2CDS



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