

VOYAGER/HPC

High Performance Computing

VoyagerHPC is a rugged, high performance computing (HPC) edge server designed for the next generation of advanced mission software, cloud, and data intensive applications at the edge.

VoyagerHPC is built on the power efficient 3rd Gen AMD EPYC™ 7713P (64 core) processor, providing data center compute performance at the tactical edge.

VoyagerHPC is mounted and powered in a rugged and intelligent Voyager 8+ 750 chassis with wide ranging AC and DC input. The Voyager 8+ 750 is battery backed to support rapid deployment and operation in DDIL environments.



KEY FEATURES

- AMD EPYC™ 7713P (64 cores) processor with 512 GB RAM
- Four removable E1S NVMe self encrypted (SED) SSDs
- VIK+ SED removable NVMe device for boot or write cache operations
- High aggregated networking capacity — 4 x 25 GbE and 3 x 2.5 GbE interfaces
- High-speed PCIe Gen 4 expansion interface to extend the HPC module with NVIDIA GPU or NVMe storage capabilities
- Powered by AC or DC sources via a Voyager 8+ 750 chassis
- Secure management via Klas-maintained OpenBMC embedded firmware
- High-speed PCIe Gen 4 expansion interface to extend the HPC module with NVIDIA GPU or NVMe storage capabilities



SECURE



PORTABLE



RUGGED

Specifications



VoyagerHPC

ORDERING INFORMATION

- Part No: KLAS-VOY-HPC-A

CPU

- AMD EPYC™ 7713 processor
 - Max frequency: 3.675 GHz
 - Max cores: 64
 - Max threads: 128
 - TDP: 225 W
 - RAM: 512 GB

STORAGE

- 4 x E1S 9.5mm NVMe SED SSDs
- 1 x VIK+ NVMe (1 TB) boot or write-cache device
- 1 x 256 GB NVMe internal boot device (optional)

NETWORKING AND INTERFACES

- 4 x 25 Gbps SFP28 interfaces
- 3 x 2.5 Gbps RJ45 Ethernet ports
- 1 Gbps RJ45 interface for management
- 1 x serial console / RJ45 and USB serial (micro-USB format)
- 1 x USB-C
- 2 x USB-A

EXPANSION INTERFACE

- PCIe Gen 4 expansion interface (supports expansion modules of NVIDIA GPU or NVMe storage)
- 24 x PCIe Gen 4 lanes

SECURITY

- TPM 2.0
- AMD Infinity Guard
 - Secure Boot
 - Transparent Secure Memory Encryption
 - Shadow Stack
 - Secure Encrypted Virtualization
 - SEV Encrypted State
 - SEV Secure Nested Paging
 - Virtual machine scalability

ELECTRICAL SPECIFICATIONS

- DC input power: 12 VDC (450 W)

PHYSICAL SPECIFICATIONS

- 208 mm x 188 mm x 162 mm (8.2" x 7.4" x 6.4")/3 x Voyager chassis slots
- ~6 kg/ 13.23 lb (without SSDs)

CONSTRUCTION

- Aluminium chassis with integrated active cooling

TEMPERATURE RANGE

- Operating: 32°F to 122°F (0°C to 50°C)
- Storage: -40°F to 185°F (-40°C to 85°C)

COMPLIANCE

Designed to meet:

- MIL-STD-810
- MIL-STD-461
- FCC Part 15 B
- CE
- RoHS, REACH

MANAGEMENT

- Klas-maintained OpenBMC
- BIOS & hypervisor CLI over console

Voyager 8+ 750 Chassis & Transit Case

ORDERING INFORMATION

- Part No: KLAS-VOY-CHAS8P-B

PHYSICAL SPECIFICATIONS

Chassis and transit case:

- 478 x 571 x 257 mm (18.8" x 22.5" x 10.1")
- 21.35 kg (47 lb) (excluding batteries)

Chassis only:

- 423 x 448 x 200 mm (16.6" x 17.6" x 7.9")
- 14.45 kg (31.9 lb)

ELECTRICAL INPUT

- 21-34 VDC (50 Amp maximum)
- 90-264 VAC (< 10 Amp at 100 VAC)
- Max input of 10 Amp allowed for NEMA sockets

ELECTRICAL OUTPUT

- 8 x 12 VDC at 240 W and 28 VDC at 120 W
- 750 W max (710 W available at slots)
- 2 x AC outputs available when AC input is present present

UPS

- 3 x BB-2590 batteries

COMPUTE MODULE

- Intel Atom x5-E3930 dual core processor with 1.3 GHz core frequency up to 1.8 GHz
- 2 MB L2 cache
- 2 GB 2133 MT/s LPDDR4 onboard memory and 16 GB eMMC onboard flash
- Rugged SMARC compute card
- 1 GbE and console port interface
- LCD display
- Klas-maintained OpenBMC

TEMPERATURE RANGE

- Operating: -10°C to 50°C (14°F to 122°F)
- Storage: -10°C to 85°C (14°F to 185°F)

COMPLIANCE

Designed to meet:

- IP67 case
- MIL-STD-810H
- MIL-STD-461G



Klas-Maintained OpenBMC

VoyagerHPC and Voyager 8+ 750 are managed via a separate Baseboard Management Controller system on chip, providing remote, out-of-band administrative access via a 1 GbE management interface using Klas-maintained OpenBMC firmware. Klas-maintained OpenBMC supports common IT use cases including Keyboard, Video, and Monitor (KVM) access, hardware configuration, and OS installation.

