

WARP Mechanics® AP-2214 Series Versatile Application Platform

Features & Benefits

- Up to 36 Cores of high-speed Intel processors
- Up to 3TB DDR4 RAM (24x ECC LRDIMM slots)
- 5x PCI-E 3.0 x8 slots
- 24x SAS3 2.5" hot-plug drive bays via onboard Expander and AOC
- 4x SAS3/NVMe slots
- Connectivity options:
4x 10GBase-T ports
18x 12Gbps SAS
10x 10/40Gbps Ethernet
10x 56Gb FDR InfiniBand
5x 58Gbps Omni-Path

For application platforms, density means getting a high ratio of CPU and RAM per RU. The **WARP Mechanics AP-2214** series of application platforms deliver world-class performance and energy efficiency in a package optimized for CPU and RAM density, while also including a full range of PCIe add-on cards, an optional internal switched SAS architecture, and support for up to 2.5" NVMe high-throughput drives. These highly dense platforms are the basis for several WARP Mechanics turnkey storage server appliances.

Each AP-2214 is a full-featured application-processing platform. It is possible to configure platforms in an HA relationship to form redundant application controllers, or as independent nodes in scalable server arrays. Dense, fast, and reliable, the AP-2214 platform is well-suited for large scale-out systems in which any application module in the cluster could take over for any other.

The AP-2214 may contain up to two high-power 18-core Intel® processors, yielding 36 cores and 3TB of RAM per chassis. This is reasonable density in itself, but the AP-2214 series also contains a wide range of high-speed I/O interfaces, including 4x built-in 10Gb Ethernet ports. Depending on the application, the AP may have numerous other ports for extremely dense IO connections to clients. Interface options include 1/10/40Gbps Ethernet, 6/12Gbps SAS, 56Gbps InfiniBand or 58Gbps Omni-Path. For out-of-band management, the AP-2214 provides onboard IPMI 2.0 via dedicated LAN port.

Customers may choose either twelve 3.5" or twenty-four 2.5" hot-swap drive bays on the front of the appliance with or without an embedded 12Gbps SAS expander. Also available is the J24N4 model that supports either 24x SAS drives or 20x SAS plus 4x NVMe SSD drives. Combine different drives types into high-speed all-flash storage pools for extreme performance in a single head. For larger configurations, the AP-2214 can be added to any of the WARP Mechanics storage platforms or appliances such as the ultra-dense WDS-9460 JBODs, which can scale to over five petabytes.



Wherever your business needs to go, the WARP Mechanics portfolio can get you there, faster and more cost-efficiently than any other products in their class.

WARP Mechanics® AP-2214 Series Application Platform

Technical Specifications



Ordering Part Number and Product Description

AP-2214-PA12	WARP AP-2214-PA12	12x SATA3 3.5" Drive Bays
AP-2214-JS12	WARP AP-2214-JS12	12x SAS3 3.5" Drives + Exp
AP-2214-JS24	WARP AP-2214-JS24	24x SAS3 2.5" Drives + Exp
AP-2214-J24N4	WARP AP-2214-J24N4	24x SAS3 2.5" + 4x NVMe + Exp

Major Features

- Single high-capacity application processing platform
- Up to 36 cores and 3TB RAM per AP using 64GB LRDIMM
- High-efficiency power supply
- Out of band management, remote power control & UID function

Processor Support

Dual Intel® Xeon® Processor E5-2600v4 (Broadwell) up to 160W TDP

Memory

Up to 3TB ECC LRDIMM, RDIMM
24x 288-pin DDR4 DIMM slots, 2400/2133/1866/1600MHz ECC SDRAM 72-bit

System Management

IPMI 2.0 with virtual media over LAN and KVM-over-IP support
On selected appliances, WARPware CLI management interface

Redundant Hot-Swap Components

- 2x Power supply / fan FRUs
- 12x or 24x disk drive modules

Rackmount Enclosure

2U packaging designed for standard 19" racks. Sliding rail kit for serviceability.
Dimensions (HWD): 3.5" (89mm) x 17.2" (437mm) x 28.46" (723mm)
Net Weight: 36 lbs (16.4 kg)
Gross Weight: 72 lbs (32.7 kg)

Adapter Slots

Up to 5x PCI-E 3.0 x8 slots (4x FH, 10.5" L, 1x LP)

Built-in IO ports

- 4x RJ45 10GBase-T LAN ports
- 1x RJ45 Dedicated IPMI LAN port
- 24x SAS3 ports support via expander and storage Add-on Cards
- 2x USB 2.0 ports
- 1x VGA port
- 1x RS232 COM port

Firmware/Software

Includes tools for managing firmware and advanced features. Other software options are appliance-specific.

Disk Drive Modules

Up to 12x Hot-swap 3.5" or 24x Hot-swap 2.5" SAS3/SATA HDDs and/or SSDs per chassis. Model J24N4 supports SAS3/NVMe in slots 20-23. Scalable to 1000s of drives when combined with WARP mechanics external storage enclosures.

I/O and Network Controller Options

Depending on the applications loaded, any given module may be configured with a selection of the following options:

- Up to 22x 1Gbps Ethernet
- Up to 18x 12Gbps SAS HBA
- Up to 4x 10GBase-T and 10x 10Gbps SFP+ Ethernet
- Up to 10x 40Gbps Ethernet
- Up to 10x 56Gbps
- Up to 5x 58Gbps Omni-Path

BIOS Type

128Mb SPI Flash EEPROM with AMI BIOS

BIOS Features

- Plug and Play (PnP)
- APM 1.2
- PCI 2.3
- ACPI 1.0 / 2.0 / 3.0 / 4.0
- USB Keyboard support
- SMBIOS 2.7.1
- UEFI 2.3.1

Environmental Information

Operating Temperature: 10°C to 35°C (50°F to 95°F)
Operating Relative Humidity: 8% to 90% (non-condensing)
Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)
Non-operating Relative Humidity: 5% to 95% (non-condensing)

AC Power

1000W Redundant Titanium Level (96%) Single Output Power Supplies:
100-127V/200-240V, 50-60 Hz,
Max: 66.7A (100Vac-127Vac)
Max: 83A (200Vac-240Vac)

Standards Compliance and Certifications

UL, RoHS

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