

## WARP Mechanics® AP-2114 Series Versatile Application Platform

### Features & Benefits

- Up to 36 Cores of high-speed Intel processors
- Up to 3TB DDR4 RAM (24x ECC LRDIMM slots)
- 2x PCI-E 3.0 x16 slots & 1x PCI-E 3.0 x8 half-height
- 10x SAS3 2.5" hot-plug drive bays via AOC
- 2x SAS3/NVMe slots
- Connectivity options:  
4x 10GBase-T ports  
6x 12Gbps SAS  
4x 10/40Gbps Ethernet  
4x 56Gb FDR InfiniBand  
2x 100Gbps Omni-Path

For application platforms, density means getting a high ratio of CPU and RAM per RU. The **WARP Mechanics AP-2114** 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 two 2.5" NVMe high-throughput drives. These highly dense platforms are the basis for several WARP Mechanics turnkey storage server appliances.

Each AP-2114 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 affordable, the AP-2114 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-2114 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-2114 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, 56/100Gbps InfiniBand or 100Gbps Omni-Path. For out-of-band management, the AP-2114 provides onboard IPMI 2.0 via dedicated LAN port.

Customers may choose ten 2.5" hot-swap drive bays on the front of the appliance with or without an embedded 12Gbps SAS expander. Also available is the JS10N2 model that supports either 10x SAS drives or 8x SAS plus 2x 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-2114 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 six 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-2114 Series Application Platform

## Technical Specifications



### Ordering Part Number and Product Description

AP-2114-PA10	WARP AP-2114-PA10	10x SATA3 2.5" Drive Bays
AP-2114-JS10	WARP AP-2114-JS10	10x SAS3 2.5" Drives + Exp
AP-2114-JS10N2	WARP AP-2114-JS10N2	10x SAS3 2.5" + 2x 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
- 8x disk drive modules

### Rackmount Enclosure

1U packaging designed for standard 19" racks. Sliding rail kit for serviceability.

Dimensions (HWD): 1.7" (43mm) x 17.2" (437mm) x 27.82" (707mm)

Net Weight: 26 lbs (11.8 kg)

Gross Weight: 41 lbs (18.6 kg)

### Adapter Slots

2x PCI-E 3.0 FH x16 slots

1x PCI-E 3.0 HH x8 slot

### 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 10x Hot-swap 2.5" SAS3/SATA HDDs and/or SSDs per chassis. Model JS8N2 supports SAS3/NVMe in slots 9-10. 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 10x 1Gbps Ethernet
- Up to 6x 12Gbps SAS HBA
- Up to 4x 10GBase-T and 4x 10Gbps SFP+ Ethernet
- Up to 4x 40Gbps Ethernet
- Up to 4x 56Gbps Infiniband
- Up to 4x 58Gbps or 2x 100Gbps 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

750W Redundant Titanium Level (96%) Single Output Power Supplies:

100-127V/200-240V, 50-60 Hz,

Max: 62.5A (100Vac-127Vac)

Max: 62.5A (200Vac-240Vac)

### Standards Compliance and Certifications

UL, RoHS

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