

## WARP Mechanics® AP-3214 Series Versatile Application Platform

### Features & Benefits

- Up to 36 Cores of high-speed Intel processors
- Up to 1.5TB DDR4 RAM (24x ECC LRDIMM slots)
- 6x PCI-E 3.0 x8 slots
- 12x 3.5" or 24x 2.5" SAS3 hot-plug drive bays via onboard Expander
- Up to 4x SAS3/NVMe
- Connectivity options:
  - 12Gbps SAS3
  - 1/10/40Gbps Ethernet
  - 56/100Gbps InfiniBand
  - 58/100Gbps Omni-Path
- Transparent Supply Chain

For application platforms, density means getting a high ratio of CPU and RAM per RU. The **WARP Mechanics AP-3214** 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 2.5" NVMe high-throughput drives. These highly dense platforms are the basis for several WARP Mechanics turnkey storage server appliances.

Each AP-3214 is a full-featured application-processing platform. High memory capacity, networking, storage, and I/O flexibility combine with innovative design to provide an exceptional and reliable server for business IT, appliance, data center, cloud and high performance computing applications. The AP-3214 series components are sourced through authorized suppliers to show traceability of supply chain with the Intel® Transparent Supply Chain. This establishes accountability of manufacturing, and helps to fight the infiltration of counterfeit components.

An AP-3214 unit may contain up to 36 processor cores, with up to 1.5TB of RAM per chassis. In addition to the onboard 1Gb/10GbE ports, it supports a wide range of high-speed I/O interfaces. Multiple I/O modules are available with 1/10/40GbE, FDR/EDR InfiniBand, and OmniPath. For storage intensive appliances, it can be configured with up to 24x x4 12Gbps SAS connections: more than a terabit of IO bandwidth.

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-3214 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 (6PB) per rack.



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-3214 Series Application Platform

## Technical Specifications



### Ordering Part Number and Product Description

AP-3214-PA12	WARP AP-3214-PA12	12x SATA3 3.5" Drive Bays
AP-3214-JS12	WARP AP-3214-JS12	12x SAS3 3.5" Drives + Exp
AP-3214-JS24	WARP AP-3214-JS24	24x SAS3 2.5" Drives + Exp
AP-3214-J24N4	WARP AP-3214-J24N4	24x SAS3 2.5" + 4x NVMe + Exp

### Major Features

- Single high-capacity application processing platform
- Up to 36 cores and 1.5TB RAM per AP using 64GB LRDIMM
- High-efficiency power supply
- Out of band management, remote power control & UID function
- Intel® Transparent Supply Chain

### Processor Support

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

### Memory

Up to 1.5TB ECC LRDIMM, RDIMM

24x 288-pin DDR4 DIMM slots, 2400/2133/1866/1600MHz ECC SDRAM 72-bit

### PCIe Architecture

Ethernet:

- Dual RJ45, Network Connectors supporting 10GBaseT & 1GBaseT
- Single RJ45, Dedicated 1GbE server management port

I/O Modules:

- One proprietary multi-port IO Module (10Gb SFP+/40Gb QSFP/FDR QSFP)
- One proprietary internal (x8 PCIe) supporting Intel® RAID Module

Riser Card 1 (2x PCIe 3.0):

- one x16 Electrical, x16 (Mech), one x8 Electrical, x8 (Mech)

Riser Card 2 (2x PCIe 3.0):

- two x8 Electrical, x16 (Mech), one x8 Electrical, x8 (Mech)

Riser Card 3 (1x PCIe 2.0, 1x PCIe 3.0):

- one x4 Electrical, x8 (Mech), one x8 Electrical, x8 (Mech)
- Note: the x4 slot may hold the Intel RES3FV288 12Gb SAS expander

### Redundant Hot-Swap Components

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

### Rackmount Enclosure

2U chassis designed for standard 19" racks. Sliding rail kit for serviceability.

Chassis: 17.25" (438.15mm) W x 28" (711.20mm) L x 3.44" (87.38) H

Packaging: 22.72" (577mm) W x 38.70" (983mm) L x 10.23" (260mm) H

Max Net Weight: 65 Lbs (29.5 Kg)

Max Gross Weight: 82.55 lbs (37.5 kg)

Power: 1100W AC 80 PLUS Platinum (optional 750W AC & 750W DC available)

Up to 2, supporting 1+0, 1+1 Redundant Power and 2+0 Combined

Fans: Six managed Hot-swap system fans

### Firmware/Software

WARP Mechanics controller firmware supports SES 3.0 for in-band and IPMI 2.0 for out-of-band management. WARPware hosts include tools for managing firmware and advanced features.

### 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 8-11. Optional 2.5" Rear mount 6Gbps SATA Hot-swap drives. 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 20x 1Gbps Ethernet
- Up to 18x 12Gbps SAS HBA
- Up to 2x 10GBase-T and 18x 10Gbps SFP+ Ethernet
- Up to 12x 40Gbps Ethernet
- Up to 12x 56Gbps FDR or 1x 100Gb EDR
- Up to 6x 58Gbps or 1x 100Gb Omni-Path

### System Management

BMC Management:

- Integrated Baseboard Management Controller, IPMI 2.0 compliant
- Dedicated RJ45 management port
- Remote KVM Management and device mapping via Intel® RMM4-Lite accessory

BIOS Type: UEFI BIOS

Intel® Transparent Supply Chain:

- Includes Statement of Conformance and Platform Certificate
- TPM Version 1.2

### Environmental Information

Temperature: +10°C to +35°C, max. change rate <10°C per hour.

Acoustic noise, Sound power: 7.0BA with HDD stress at ambient (23 +/-2°C)

Shock: Half sine, 2g peak, 11 mSec

ESD: +/-12 KV except I/O port +/- 8 KV

System Cooling: 1600 Watt Max – 5459 BTU/hour

### AC Power

Voltage: 90 Hz to 132 V and 180 V to 264 V

Frequency: 47 Hz to 63 Hz

Source Interrupt: No loss of data for power line drop-out of 12 mSec

Surge Non-operating and operating: Unidirectional

Line to earth only:

- AC Leads 2.0 kV
- I/O Leads 1.0 kV

DC Leads 0.5 kV

### Standards Compliance and Certifications

IEC/EN/UL/CSA 60950-1, 2nd Edition

RoHS and WEEE compliant

EN55022 :2006 + A1 :2007

EN55024-IT product family standard for Immunity

Meet the requirements of IECs-003

Manufactured under an ISO 9002 registered quality system

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