

WARP 3800 I-M "MemoryMatrix" Unified SSD Storage

Features & Benefits

- Ultra dense; 3.0PB/rack
- Up to 24 high capacity SSD modules per enclosure
- Up to 96TB read cache
- Up to 1TB RAM per controller
- 1M IOPS per controller
- Enterprise reliability, availability, & serviceability
- Industry-standard monitoring and management tools

WARPnas:

- Dual WARPnas controllers
- CIFS, NFS, iSCSI, FTP
- Interface options:
 - 1/10/40GbE ports
 - 40/56/100Gb IB ports
 - 100Gb Omnipath
- Snapshots, de-duplication, replication, & more

The **WARP 3800I-M** is an ultra-dense all-flash unified storage appliance (file/block) ideally suited for extreme performance applications where access patterns are weighted towards streaming I/O, big data analytics, or virtualization.

Truly turnkey, all software is pre-loaded and pre-configured at the factory, so only site-specific parameters need to be configured by the customer. Simply rack the appliance, cable it, and go. In fact, customers purchasing large configurations can order the system pre-racked and cabled in a WARP Mechanics supplied cabinet.

Redundant controllers may contain up to 22 cores in dual high-speed Intel processors and up to 1TB RAM per node, and each chassis holds 12-24 drive slots capable of housing read-optimized SSD or NVMe devices, depending on customer requirements. That's 2TB of RAM and 96TB of read-accelerating cache in a maximum 2-node HA configuration. When configured for maximum performance, each 2U shelf can deliver over 1M IOPS and over 100Gbps of network throughput.

Behind the controller nodes sit up to 16x all-flash storage shelves for a maximum capacity of 3.0 petabytes of high-capacity, low-latency SSD modules to achieve extreme write and read performance. With dual-parity protection, this still yields more than 2.2 petabytes of usable space.

Running powerful WARPnas software, the redundant intelligent controllers support protocols such as NFS, CIFS/SMB, iSCSI, and FTP, plus numerous features for

monitoring and reporting, mirroring and replication for disaster recovery and remote site backups, thin provisioning, upgradability to pNFS or Lustre to provide a global namespace, Ceph for object storage, to name a few.

The WARPnas file system supports advanced features such as thin provisioning, de-duplication, block-level checksums, copy-on-write, snapshots, replication, and more.

- Optimized for performance sensitive workloads
- Pay as you grow starting from 24TB
- Typical 600TB+ usable with RAID6 (~768TB raw) per rack
- Maximum 2.2PB+ usable (~3.0PB raw) with high-cap SSDs
- Supports NFS, SMB, iSCSI target mode, and FTP
- Turnkey deployment
- Enterprise support and service
- Simple but powerful GUI and CLI management
- Advanced data integrity protections
- Replication with WAN optimization



Whether you deploy it as a stand-alone storage system, or as part of a comprehensive WARP Mechanics data center architecture, the WARP 3800I-M will provide unmatched density and performance in a turnkey package.

WARP Mechanics® WARP 3800I-M "MemoryMatrix"

Technical Specifications



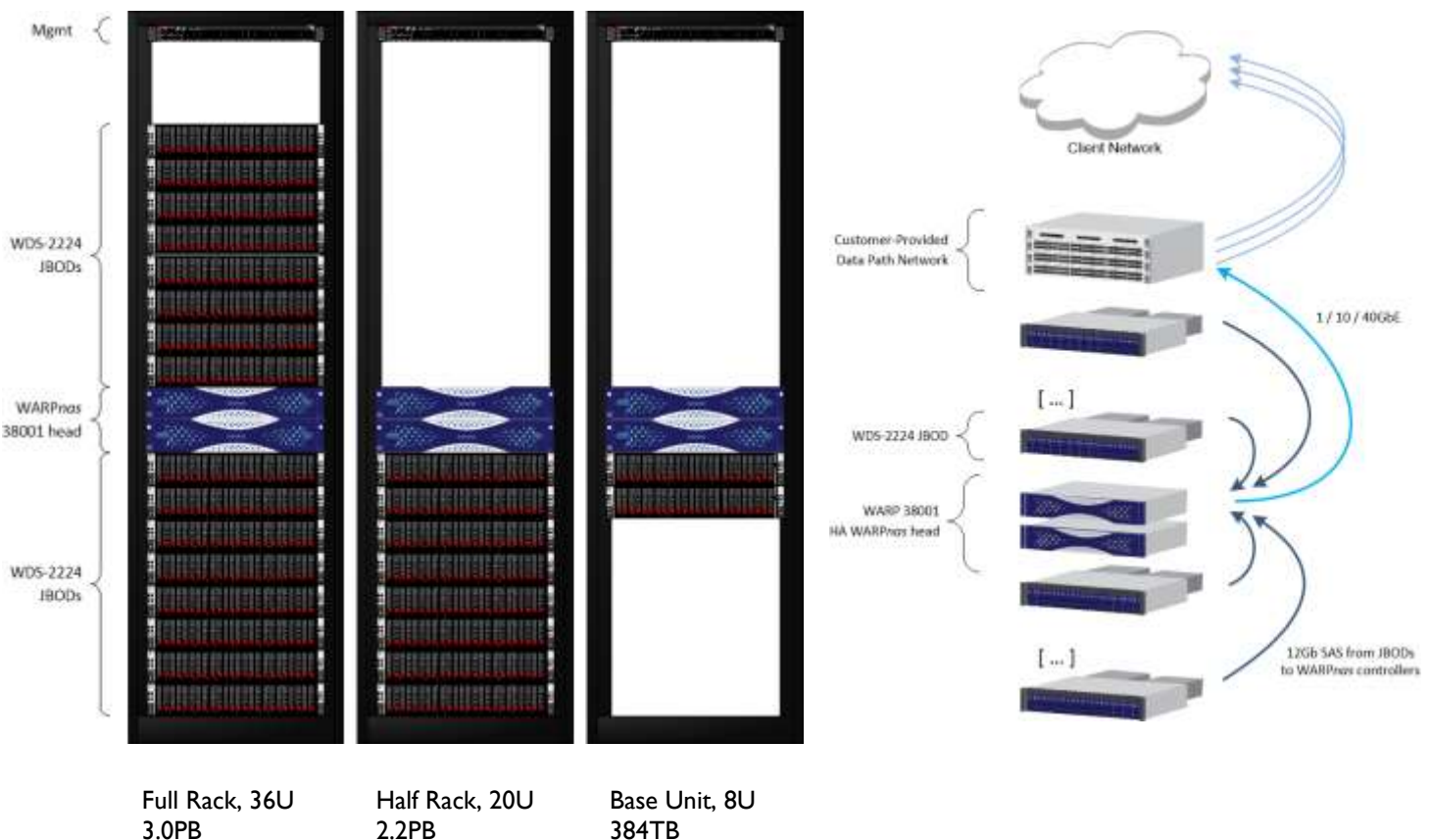
The appliance is constructed using WARP Mechanics hardware platforms, a variety of WARP-tuned and certified SSD modules, WARP software, and fully-embedded partner software.

The WARP 3800I-M intelligent controllers leverage widely deployed, industry-standard hardware with the latest components such as CPU, memory, and IO bus. Each appliance includes up to two controllers. With each expansion enclosure attached, another 48TB of enterprise SSD storage capacity is added. Each 3800I-M head can be outfitted with multiple network interface types for the intended environment, such as 1/10/40Gb Ethernet, or 40/56Gb Infiniband, and even 100Gbps EDR and Omnipath.

A customer can start with a single 3800I-M head using only a portion of its drive slots. The starting point is just a few TB of main storage. Yet it can grow to multiple petabytes without architectural changes or even downtime. Simply scale vertically by adding more JBODs connected to the head.

It is also possible to scale outward by adding controller heads for additional performance *and* capacity. Plus, the exact same head units may also be deployed in parallel using a WARP-certified filesystem such as Lustre or Ceph. This can produce a scale-out storage solution delivering more than a Terabyte per second (>100Terabits/s).

This system can be combined with the other WARP Mechanics appliances such as the HybridMatrix and StorageMatrix systems. Using tiering software, data can be migrated between the systems as its business value changes over time.



Copyright © 2016 WARP Mechanics Ltd. All Rights Reserved

WARP Mechanics, WARPware, the WARP Mechanics logo, the WARP Mechanics icon, and SmartStorage System are trademarks of WARP Mechanics Ltd. in the United States and other countries. Other brand, product, or service names may be trademarks or service marks of, and are used to identify, products or services of their respective owners. This document is supplied "AS IS" for information only, without warranty of any kind, expressed or implied. WARP Mechanics reserves the right to change this document at any time, without notice.