

WARP 26200 Cube Unified Storage Appliances

Features & Benefits

- Internal SAS or SATA drives:
 - 10x 3.5" HDD max
 - 22x 2.5" SSD max
- Up to 60TB per node internal capacity; 200TB+ with JBODs
- Expandable via 3x SAS HBA ports; 6Gbps or 12Gbps
- IPMI 2.0 out of band management
- Multiple interface options:
 - 1/10/40 Gbps Ethernet
 - 40/56 Gbps FDR

WARPware:

- Advanced data integrity beyond RAID, preventing corruption & data loss
- Unified Storage: CIFS, NFS, iSCSI, FTP, & more
- Snapshots, de-duplication, replication, & more

Just because a job is running outside of a large data center, doesn't mean its data is expendable or that the system can perform badly. Small to Medium Businesses or Enterprises, and distributed workforces in large organizations, often need to push storage to the edge of performance and capacity, even at workers' desks.

The **WARP 26200** "Cube" series is optimized for Enterprise performance, scalability, and features, but since the storage can reside outside of a data center, it comes at an SMB/SME price point.

For example, capturing video on location or editing at branch offices requires portable, yet fast, scalable, and reliable storage. Cloud storage is impractical because it has *massively* high latency and low throughput, and is far too expensive beyond a few terabytes. Portable USB drives and SOHO NAS appliances *historically* filled this role, but sacrifice reliability and performance.

With up to ten 3.5" drives, or as many as twenty-two 2.5" drives *inside* the enclosure, this platform is an ultra-dense solution. Up to 60TB of disk, or over 40TB of enterprise high-performance SSD, are packed into a form factor that easily fits on or under a desk.

Connections include built-in dual 1Gb Ethernet ports and a dedicated IPMI management interface – which competing appliances categorically lack. Then add your choice of 4x 1GbE, 2x 10GbE, 2x 40GbE, or 2x 40/56Gbps InfiniBand interfaces for fast data access.

Unlike *commodity* systems, the WARP 26200 is expandable to **over 200TB** capacity via JBOD enclosures: unprecedented in a compact desktop format.



Running the powerful WARPware storage operating system, the **Unified Storage** appliance supports protocols such as NFS, CIFS/SMB, iSCSI, and FTP, and advanced features such as thin provisioning, de-duplication, block-level checksums, copy-on-write, snapshots, replication, and more.

The appliance is supported by WARP Mechanics and resellers, so you have a single point of contact for total system support.

Whether you deploy a stand-alone portable storage system, or as part of a comprehensive WARP Mechanics global enterprise storage architecture, the WARP 26200 provides unmatched density and performance.

Example WARP 26200 Configurations

StorageCube VTL Backup or Replication Target

- Up to 200TB raw capacity with expansion chassis
- 4x 1Gbps or 1x 10Gbps Ethernet

HybridCube Balanced Performance Primary Storage

- 60TB raw capacity; plus 4TB SSD cache
- 2x 10Gbps or 1x 40Gbps Ethernet

MemoryCube Maximum Pure Flash Performance

- 40TB pure SSD capacity; optional NV-RAMs
- 2x 40Gbps Ethernet or 2x 56Gbps Infiniband

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Technical Specifications



Ordering Part Number and Product Description

DS-010203(-S, -H, -M) • Dense Desktop Storage • WARP 26200

Scalability/Capacity

Up to 10 HDD/12 SSD modules – 60 TB if using 6TB modules. Cascading of enclosures for additional capacity will commonly be limited by the SAS HBA used. Practical configurations of 200TB with expansion chassis are possible. Selected *system*-level configurations have no known upper limit. (ZB range.)

Throughput Performance

Theoretically, one chassis with 22x SSD modules supports a burst rate of 144 Gigabytes per second. *Practically*, bandwidth tends to be limited by the installed drive modules, CPU speed, or PCIe bus. Sustained bandwidth is therefore more likely to be in the range of 1 to 8 Gigabytes per second (10 to 80 Gbps) depending on selected drives, interfaces, and controller types.

I/O Controllers

Three external 6Gb SAS ports (SFF-8088) per node; 12Gbps SAS available as an upgrade. Per-node built-in 2x 1GbE NIC + dedicated IPMI LAN, 2x PCIe 3.0 x8 slots and 2x PCIe 2.0 x4 slots, which can accept SAS, FC, IB, or Ethernet cards.

BIOS Type/Features

64Mb SPI Flash EEPROM with AMI BIOS; DMI (SMBIOS) 2.7; ACPI 4.0; PCI 2.3

Cube Form Factor Enclosure

Dimensions: 13.5" W x 12.1" H x 15.3" D (344mm W x 307mm H x 389mm D)
Weight without HDDs Single Shipping Pack: 20.98 lbs (9.51 kg) max
Weight w/ 10 HDDs Single Shipping Pack: 38.18 lbs (17.31 kg) typical

Firmware/Software

WARP Mechanics WARPware hosts include tools for managing firmware and advanced features such as IPMI and SCSI Enclosure Services (SES).

Disk Drive Modules

Independent point-to-point connections to each SAS or SATA drive module.
Form factor: 3.5" HDDs; 2.5" supported for SSDs. Rotational speeds: 5400 RPM, 7200 RPM, 10K RPM, and 15K RPM.

Environmental Health Monitoring

Onboard voltage monitors for CPU core, +3.3V, +5V, +/-12V, +3.3V Stdbv, VBAT, Memory, VCORE for CPU. CPU/System overheat LED and control, Thermal Trip support & Thermal Monitor 2 (TM2) support. Fan status monitoring. PECl (Platform Environment Configuration Interface) 3.0 support.

Maximum External SAS Cable Length

Up to 2m. Within selected WARP end-to-end systems, longer distances are supported via SAS switches, or by using WARPware storage clustering heads.

Host/Expansion Interfaces

1/10/40GbE, 40/56GbIB, 3x6Gbps SAS 2.0 SFF-8088 connections. SAS ports can be used for host connections or a combination of host and expansion. When used in certain end-to-end WARP systems, they may be connected to SAS switches.

Major OEM Hardware Component Providers

Seagate, WD, Intel, LSI, Mellanox, and Supermicro

Warranty Information

Standard one year; up to three years via normal renewable support; up to five years via custom quotation. Contact WARP to discuss special requirements.

AC Power

Input voltage: Auto ranging, 110-220V AC
Maximum system continuous DC output power rating 1000W
Standard: NEMA 5-15P USA 3 pin to C13 Power Cord
Optional: IEC320 C13 to IEC320 C14 or C20 Datacenter Power Cord

Operating Environment

Temperature: 5° to 35°C
Relative humidity: 10% to 80% (non-condensing)
Humidity gradient: 10% per hour
Altitude: -200 to 10,000 ft.
Shock: 5G at 11ms, 1/2 sine wave pulse
Vibration: 0.15Grms

Non-Operating Environment

Transit Non-Operating
- Temperature: -40° to 60°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration: 0.75G
- Shock: 10G at 11ms, 1/2 sine wave pulse

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