

Versio™ IOX Scale-Out NAS

Multi-Petabyte-Scalable, High-Performance, High-Availability Online Storage



Versio™ IOX Scale-Out NAS is a powerful, easy-to-manage storage system optimized to support high-bandwidth, high-volume, high-availability requirements for end-to-end media workflow operations. An evolution of Imagine's existing shared storage offerings, Versio IOX Scale-Out NAS is designed for larger, higher performance and advanced production environments, including news sports and live-event applications,

Versio IOX Scale-Out NAS offers the highest performance storage solution with multi-petabytes of storage, as well as the highest levels of scalability, availability and digital asset protection. As the only N+1 Parity-Stack Petabyte M&E solution on the market, Versio IOX Scale-Out NAS provides high availability at a fraction of the cost of other available storage systems. In addition, this high availability is exceptionally energy efficient for a greener product.

Versio IOX Scale-out NAS Storage solution powered by EditShare EFS, the scale-out file system and storage software platform provided by Imagine's technology partner EditShare, a leader in intelligent shared storage and media management solutions. The file system features multiple controller active/active pairs, which contribute their attached storage to a single namespace storage pool. As more controllers and storage are added, increased performance and capacity is achieved without adding shares, mountpoints, or volumes. Versio IOX provides the fastest client recovery in the event of catastrophic storage loss and the highest level of service SLA on the market.

Versio IOX Scale-Out NAS is especially suitable for media workflows and advanced production environments where extremely large quantities of data for are used. This high-density storage system allows an unlimited number of metadata servers for infinite performance and redundancy, with no disruption to on-air operations.

Versio IOX Scale-Out NAS delivers numerous real-world benefits:

- Flexible capacity & bandwidth – Allows scaling of storage & bandwidth as business needs grow, without affecting existing media or interrupting on-air operations
- High availability — Provides high workflow protection for continuous broadcast operations, with enhanced recovery mode in the event of multiple and simultaneous failures
- Faster time to air – True shared storage access facilitates collaboration and eliminates file copying, providing a fast-turnaround editorial environment
- Reduced capital expenditures — Provides an economical, high-availability NAS Solution, yet allows pay-as-you-go expansion
- Time saving – Save time administering as single system regardless of size
- Easy to manage – Allows unattended drive rebuilds, supports remote monitoring and diagnostics, and includes an informative web user interface for storage statistics and health status
- Reduces operational costs — Supports inexpensive Ethernet connectivity for all server nodes and clients; no Fibre Channel needed

- Exceptional performance — Hardware RAID features storage pools and tiering, to avoid performance degradation

Features

- Multi-Petabyte levels of storage; filesystem scales from 16 TB to **virtually unlimited multiple PBs**
- Highest guaranteed levels of availability
- Parity-Stack High-Availability Multi-Petabyte solution designed for media and entertainment industry (M&E)
- Tiering and Storage Pools
- Fastest client recovery at less than 20 ms in the event of a catastrophic storage stack loss
- Enterprise-grade hardware for 24x7 operations
- Green operation – High energy efficiency
- Best-of-class SLA support offering 6 hours or less replacement time and on-site support.
- Imagine-patented Intrinsic Mirroring™ protection available
- Inexpensive Ethernet Connectivity for all server nodes and clients
 - 1, 10, 25, 40, and 100 GbE as your storage cluster needs dictate
 - High-performance, cost-effective, no fibre channel needed
- Native file system drivers for Windows, OS X, and Linux
- EditShare EFS Filesystem developed from the ground up for high-availability requirement media workflows – no data disruption tolerated!
- Supports collaborative content creation with Avid Media Composer, Adobe Premiere & After Effects, Final Cut Pro X, Davinci Resolve, Autodesk Flame/Smoke, ProTools, Logic, and more
- Multi-node, fault-tolerant design
- Single Namespace, no matter how many nodes
- Configurable “Storage Groups” for mixing SSDs and HDDs in the same namespace

Details

- High performance with flexible capacity and bandwidth
 - Allows scaling of storage independently of bandwidth
- Minimum cluster configuration, stackable IOX up to 800 TB useable storage
- Allows any parity topology
- Allows a single and/or redundant metadata hosts
- Supports a mirrored configuration with at least 650 TB system
- Tolerant to fault
- On-air scalability to multiple petabytes of online shared storage with RAID-601 storage protection
- Parity Stack Solution for greatest reliability and high availability
- Tens of gigabits per second of assured streaming bandwidth, even during degraded or rebuilding modes
- Fastest client recovery for uninterrupted service to on-air playback servers or to editing applications
- Automatic drive rebuilds require no operator action and result in no performance degradation
- High drive density with standard Hard Drive, Self-Encrypted Hard Drive, and Solid-State Drives (SSD)
- Support for Windows, macOS, and Linux client connections via Ethernet
- Tiering — Overall stack performance boost by single tray/LUN of SSD or 15k rpm high-performance HDD
- Storage Pools — Allow data on in LUNs to be partitioned and bandwidth managed by user or workflow operational groups

- High drive density with the following available options:
 - 3.5" 10TB SAS 7.2K Hard Drive
 - 3.5" 8TB SAS 7.2K Hard Drive
 - 3.5" 6TB SAS 7.2K Hard Drive
 - 3.5" 4TB SAS 7.2K Hard Drive
 - 3.5" 2TB SAS 7.2K Hard Drive
 - 3.5" 4TB SAS 7.2K Self Encrypted Hard Drive
 - 3.5" 2TB SAS 7.2K Self Encrypted Hard Drive
 - 2.5" 2TB SAS 7.2K Hard Drive
 - 2.5" 1TB SAS 7.2K Hard Drive
 - 2.5" 1.8TB SAS 10K Hard Drive
 - 2.5" 600GB SAS 15K Hard Drive
 - 2.5" 1.2TB SAS 10K Self Encrypted Hard Drive
 - 2.5" 3.2TB SAS Solid State Drive (SSD)
 - 2.5" 1.6TB SAS Solid State Drive (SSD)
 - 2.5" 800GB SAS Solid State Drive (SSD)
 - 2.5" 400GB SAS Solid State Drive (SSD)
 - 2.5" 200GB SAS Solid State Drive (SSD)

Specifications

Specifications and designs are subject to change without notice

GENERAL INFORMATION	
Core Chasis	Active/Active controller module pair per enclosure 2x SAS I/O ports per module connecting to the controller node 1 x 4-lane 6Gb mini-SAS connector per module
Store Chasis	Dual SAS Connector modules with two 4-lane 6Gb mini-SAS connectors per module
Management/Status Reporting (some optional components and plugins require additional license)	HPE Storage Management Utility (SMU). Management access, out-of-band: WEB GUI, CLI. Interface Types: USB 100/1000 Ethernet. Protocols Supported SNMP, SMI-S, SSL, SSH, SMTP, FTP, HTTP, Telnet HPE OneView for VMware vCenter vStorage API for Array Integration in vSphere VMware Site Recovery Manager(SRM) Plugin HPE StoreFront Manager for Microsoft Hyper-V HPE MSA Remote Snap software
Maximum Stack Configuration	3.5" Controller & Expansion — 8 enclosures, total 96 drives 2.5" Controller & Expansion — 8 enclosures — total 199 drives
Maximum Single Volume Configuration	Maximum 64 LUNs (128 LUNs mirrored) IOX Storage Pools — 1 stack of up to 8 enclosures NAS — up to 8 pools, total 64 enclosures
Protection Levels	RAID-6
Hot-Swappable Components	Disk drives, PSU/cooling modules, Core RAID Controllers, Expansion SAS modules, and all cabling
Physical	Height: 8.9 cm (3.5") 2 EIA Units Width: 44.7 cm (17.6") IEC Rack Compliant Depth: 24-bay 2.5" Controller array: 19.5 in / 49.5 cm Depth: 25-bay 2.5" Expansion array: 22.3 in / 56.7 cm Depth: 12-bay 3.5" Controller/Expansion: 22.5in. / 57.2 cm Weight (no controllers): 12-bay 3.5" Controller/Expansion: 31 lbs. (DC-pwr model: 32.6 lbs) Weight (no controllers): 24-bay 2.5" Controller array: 29.1 lbs (DC-pwr model: 30.7lbs) Weight (no controllers): 25-bay 2.5" Expansion array: 38 lbs

DISK DRIVES

Drive Types and Sizes	High drive density with the following available options: 3.5" 10TB SAS 7.2K Hard Drive 3.5" 8TB SAS 7.2K Hard Drive 3.5" 6TB SAS 7.2K Hard Drive 3.5" 4TB SAS 7.2K Hard Drive 3.5" 2TB SAS 7.2K Hard Drive 3.5" 4TB SAS 7.2K Self Encrypted Hard Drive 3.5" 2TB SAS 7.2K Self Encrypted Hard Drive 2.5" 2TB SAS 7.2K Hard Drive 2.5" 1TB SAS 7.2K Hard Drive 2.5" 1.8TB SAS 10K Hard Drive 2.5" 600GB SAS 15K Hard Drive 2.5" 1.2TB SAS 10K Self Encrypted Hard Drive 2.5" 3.2TB SAS Solid State Drive (SSD) 2.5" 1.6TB SAS Solid State Drive (SSD) 2.5" 800GB SAS Solid State Drive (SSD) 2.5" 400GB SAS Solid State Drive (SSD) 2.5" 200GB SAS Solid State Drive (SSD)
Cache	6GB per controller
Read/Write Cache	4GB per controller
Mean Time Between Failures (MTBF)	1.2 million hours or higher
Annual Failure Rate (AFR) at full 24/7 operation	0.73% (at full 24x7 operation)
Transfer Rate, Sustained	147 Mb/s or higher
Power Consumption (idle)	9.0 W or lower

ENVIRONMENTAL

Input Power Requirements	110VAC 3.32A, 344-390 W; 220VAC 1.61A, 374-432W
Maximum Input Power	100-240 VAC, 50/60 Hz., 4.5-1.9A; 48-60 VDC 10.4A/8.3A
Power Supply Efficiency	Bronze Rated - high efficiency 82% @ 20% load 86% @ 80% load 85% @ 100% load
Heat Dissipation	1622 BTUs/hour
Operational Temperature	41° to 104° F (5° to 40° C)Note: Derate 2° C for every km, up to 3000 meters
Non-Operational Temperature	-40° to 158° F (-40° to 70° C)
Operational Humidity	10% to 90% RH @ 104° F (40° C), non-condensing
Non-Operational Humidity	Up to 93% RH @ 104° F (40° C), non-condensing
Operational Shock	3G's for 11 ms
Non-Operational Shock	15G's 11 ms, ½ sine
Operational Vibration	5 to 500 Hz, 0.14 g shaped
Non-Operational Vibration	3-365-3Hz, 1.22 g, z-axis, 0.85 g, X&Y axis shaped spectrum
Declared Acoustics Noise Levels	Sound Power: LWAd=6,75 B Sound Pressure: LpAm — 55 dBA

REGULATORY / CERTIFICATION

Compliance	NEBS Level 3
Safety	UL 60950-1, 1st edition (United States) CAN/CSA-C22.2 No.60950-1-03 (Canada) EN 60950-1 (European Union) IEC 60950-1 (International) EN 60950-1 (GS Mark, Germany) CCC Mark China (PRC)
Electromagnetic Compatibility Emissions	VCCI:2008-04 Class A (Japan) EN 55022 Class A (EU); CISPR 22 (International Class A) AS/NZS CISPR 22 Class A (Australia, New Zealand) VCCI Class A (Japan) KN 22 Class A (S. Korea) FCC 15:109(g) Class A (USA) ICES-003:2004 Class A (Canada)
Harmonics / Flicker Immunity	EN61000-3-2 (EU) EN 61000-3-3 (EU) EN 55024 (EU) KN 24 (S. Korea)
RoHS and WEEE	RoHS-6/6 Compliance, China RoHS, WEEE
Country Approvals	United States, Australia/New Zealand, Canada, China (PRC), European Union (EU), Germany, Japan, South Korea, Taiwan

Ordering Information

VER-HW-NAS-SINGLE	VERSIO 1RU SCALE-OUT NAS STORAGE CONTROLLER FOR SINGLE-STACK STORAGE CLUSTER
VER-HW-NAS-STORE	VERSIO 1RU SCALE-OUT NAS STORAGE CONTROLLER; PURCHASE 1X PER STACK OF IOX SCALE-OUT STORAGE
VER-SW-NAS-STORE	VERSIO SCALE-OUT NAS STORAGE NODE SOFTWARE LICENSE. PURCHASE TO ADD TO EXISTING IOX-SAN SYSTEMS
VER-HW-NAS-META	VERSIO SCALE-OUT NAS METADATA SOFTWARE LICENSE. PURCHASE TO ADD TO EXISTING IOX-SAN SYSTEMS
VER-SW-NAS-META	VERSIO SCALE-OUT NAS METADATA SOFTWARE LICENSE. PURCHASE TO ADD TO EXISTING IOX-SAN SYSTEMS
VER-SW-NAS-PET-CAP	VERSIO SCALE-OUT NAS HDD CAPACITY LICENSE. PURCHASE 1X PER ROUNDED-UP IOX STORAGE PETABYTE USEABLE CAPACITY AFTER THE FIRST 1000TB OF HDD-CAP LICENSES
VER-HW-RAID-2X12E	2-PORT 12GBPS PCIE EXT SAS RAID CONTROLLER FOR IOX SCALE OUT NAS STORAGE NODE
VER-SW-NAS-HDD-CAP	VERSIO SCALE-OUT NAS HDD CAPACITY LICENSE. PURCHASE 1X PER IOX STORAGE TERABYTE USEABLE CAPACITY
VER-SW-NAS-SSD-CAP	VERSIO SCALE-OUT NAS SSD CAPACITY LICENSE. PURCHASE 1X PER IOX STORAGE TERABYTE USEABLE CAPACITY
VST3512S	VERSIO IOX STORAGE EXPANSION KIT. 2U ENC., 12 3.5" SLOTS. ORDER 12 3.5" DRIVES PER CAPACITY REQMNT
VST2525S	VERSIO IOX STORAGE EXPANSION KIT. 2U ENC., 25 2.5" SLOTS. ORDER 25 2.5" DRIVES PER CAPACITY REQMNT
VST37A00	VERSIO IOX STORAGE 3.5" 10TB SAS 7.2K HARD DRIVE FOR VST3512-SERIES ENCLOSURE
VST37800	VERSIO IOX STORAGE 3.5" 8TB SAS 7.2K HARD DRIVE FOR VST3512-SERIES ENCLOSURE
VST37600	VERSIO IOX STORAGE 3.5" 6TB SAS 7.2K HARD DRIVE FOR VST3512-SERIES ENCLOSURE
VST37400	VERSIO IOX STORAGE 3.5" 4TB SAS 7.2K HARD DRIVE FOR VST3512-SERIES ENCLOSURE
VST37200	VERSIO IOX STORAGE 3.5" 2TB SAS 7.2K HARD DRIVE FOR VST3512-SERIES ENCLOSURE
VST27200	VERSIO IOX STORAGE 2.5" 2TB SAS 7.2K HARD DRIVE FOR VST2525-SERIES ENCLOSURE
VST27100	VERSIO IOX STORAGE 2.5" 1TB SAS 7.2K HARD DRIVE FOR VST2525-SERIES ENCLOSURE
VST2A180	VERSIO IOX STORAGE 2.5" 1.8TB SAS 10K HARD DRIVE FOR VST2525-SERIES ENCLOSURE
VST2F060	VERSIO IOX STORAGE 2.5" 600GB SAS 15K HARD DRIVE FOR VST2525-SERIES ENCLOSURE
VST2A12E	VERSIO IOX STORAGE 2.5" 1.2TB SAS 10K SELF ENCRYPTED HARD DRIVE FOR VST2525-SERIES ENCLOSURE
VST2S320	VERSIO IOX STORAGE 2.5" 3.2TB SAS SOLID STATE DRIVE (SSD) FOR VST2525-SERIES ENCLOSURE
VST2S160	VERSIO IOX STORAGE 2.5" 1.6TB SAS SOLID STATE DRIVE (SSD) FOR VST2525-SERIES ENCLOSURE
VST2S080	VERSIO IOX STORAGE 2.5" 800GB SAS SOLID STATE DRIVE (SSD) FOR VST2525-SERIES ENCLOSURE

VST2S040	VERSIO IOX STORAGE 2.5" 400GB SAS SOLID STATE DRIVE (SSD) FOR VST2525-SERIES ENCLOSURE
VST2S020	VERSIO IOX STORAGE 2.5" 200GB SAS SOLID STATE DRIVE (SSD) FOR VST2525-SERIES ENCLOSURE
VST35C12	VERSIO IOX STORAGE 2RU 3.5" 12-DRIVE SPARE ENC. 2X PWR SUP; RAID CONT. OR SAS EXP. MODULE SOLD SEP
VST25C24	VERSIO IOX STORAGE 2RU 2.5" 24-DRIVE SPARE ENC. INC. 2X PWR SUP; RAID CONT. SOLD SEPARATELY
VSTSAS1M	VERSIO IOX STORAGE - 1M SAS CABLE
VSTSAS2M	VERSIO IOX STORAGE - 2M SAS CABLE