



The Original Innovator  
of the iSCSI Protocol



# StoneFly USC

## Solution Brief



Built-in iSCSI or  
Fibre Channel Support



Cloud Connect to  
Azure, AWS, or  
StoneFly Cloud



Powered by  
8th gen patented  
storage OS

### Unified Storage Concentrator (USC) Gateway Appliances

Enterprise hypervisor-agnostic gateway appliances preconfigured with 8th gen storage OS and integrated with data protection, storage optimization, & advanced monitoring features.



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# About StoneFly, Inc.

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## **The Beginning**

StoneFly's journey started with the creation of the iSCSI storage protocol and the registration of the domain name "iscsi.com" in March 1996. Headquartered in Silicon Valley (Hayward, California), StoneFly was among the first to manufacture and ship iSCSI storage appliances in 2002. Ever since, StoneFly has contributed in making the iSCSI protocol into the globally standard storage protocol used by industry professionals across the globe.

## **Our Vision**

StoneFly was founded with the singular vision of delivering simple and affordable enterprise grade data management solutions to SMBs, SMEs, and large organizations worldwide.

## **Wide Range of Enterprise Products – Physical Servers & Cloud-Based Solutions**

This vision has guided innovation at every step of the way and enabled StoneFly to introduce several enterprise-grade storage solutions such as NAS, SAN, Unified (NAS, SAN and Object), and Hyperconverged Infrastructure (HCI). StoneFly also stepped into the backup and disaster recovery market with purpose-built unified server and storage hyperconverged backup solutions capable of delivering reduced RTPOs for enterprise workloads.

With more than two decades in the industry, StoneFly has now built a wide range of enterprise products and solutions that extend beyond physical solutions and also include serverless and cloud-based offerings. Our strategic technology partnerships with Veeam, Microsoft Azure, Amazon AWS, and other industry leaders has enabled us to offer cloud storage, cloud backup, cloud storage gateways, and data migration solutions to our customers worldwide.

## **Our Patents**

All StoneFly physical and virtual data management solutions are protected by StoneFly storage virtualization patents as certified by the United States Patent and Trademark Office (Patent#: 7302500, 7555586, 7558885, 8069292).

## **Our Memberships**

StoneFly is a member of the Storage Networking Industry Association (SNIA) and the founding member of the IP Storage Institute (IPSI).

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## Our Partnerships

StoneFly has longstanding partnerships with industry giants such as Veeam, Microsoft, Amazon, VMware, and several others.

A brief list of StoneFly partnerships is as follows:

### Veeam

- Veeam Technology Alliance Partner
- Veeam Cloud Service Provider (CSP)



### Microsoft

- Certified Microsoft Azure Marketplace Partner
- Microsoft Cloud Solution Provider (CSP) Partner
- Microsoft Government Cloud Service Provider Partner



### VMware

- VMware TAP Advanced Partner
- VMware Professional Solution Provider



### Amazon

- Amazon AWS Technology Partner



## Chapter 1:

# Storage Hardware Overview

StoneFly data storage solutions support a number of hardware architectures facilitating a variety of enterprise and SMB use-cases. In this chapter, we take a closer look at these storage hardware architectures, the different key components within the hardware, supported storage drives, and the maximum storage capacities of the available storage appliances.

## 1.1 Available Storage Hardware Architectures

StoneFly storage appliances support the following hardware architectures:

### 1.1.1 [Single-Node Gateway Appliance](#)

### 1.1.2 [Disaggregated Gateway Appliances \(High Availability\)](#)

#### 1.1.1 Single-Node Gateway Appliances

The single-node appliance hardware architecture delivers a cost-effective storage gateway experience. This hardware architecture contains a single chassis with high performance flash drives where the storage OS and hypervisor are hosted. This single-node gateway appliance is then connected to the customer's existing NAS or SAN storage equipment to convert it into a high-performance hyperconverged solution.



#### 1.1.2 Disaggregated Storage Systems (High-Availability)

The disaggregated storage system is a high-availability modular hardware architecture built to deliver fault-tolerance, remove single point-of-failure, and simplify scalability for enterprise-level workloads.

StoneFly disaggregated storage systems are comprised of three or more hardware chassis:

- Two USC Appliances (1U or 2U Chassis)



Dual HCI controller chassis with the storage OS (and hypervisor for HCI) installed on dedicated SSD.

With hardware independent gateway appliances, the disaggregated storage systems prevent downtime due to controller failure. Moreover, dual gateway appliances prevent bottlenecks by delivering multi-path access to the storage hardware chassis (HA RAID array) with the optional multipath upgrade option.

Due to the fact that the HCI controllers are in separate hardware chassis, the process of repairing them is simpler and budget-friendly. Disaggregated storage solution users can replace the malfunctioned storage controller chassis while the secondary / redundant controller continues to function.

Even in the event of a HCI controller hardware failure, the appliance continues to operate without experiencing downtime. The disaggregated high-availability hardware architecture is thus best fit for enterprises and data centers that cannot tolerate downtime, while providing easy data center management.

## 1.2 Network Ports

StoneFly XS-Series and XD-Series appliances come standard with at least two 10Gb ports per node. The standard ports vary depending on the appliance series and model.

Following is a list of the supported network ports and available network port upgrade options for StoneFly XS-Series and XD-Series single-node appliances:

### 1.2.1 Network Port Upgrades for StoneFly Single-Node Appliances

- Dual 1Gb Copper Ports
- Quad 1Gb Copper Ports
- Dual 10Gb RJ-45 Copper Ports
- Quad 10Gb RJ-45 Copper Ports
- Dual 10Gb SR Optical Ports with 10Gb SFP+ SR Optical Transceiver Modules
- Single 10Gb LR Optical Port with 10Gb SFP+ LR Optical Transceiver Module
- Dual 10Gb SFP+ Ports (Cables/Transceiver Modules Not Included)
- Quad 10Gb SFP+ Ports (Cables/Transceiver Modules Not Included)
- Dual 40Gb QSFP+ Ports (Cables/Transceiver Modules Not Included)

### 1.2.2 Network Port Upgrades for StoneFly XS/XD-Series Disaggregated (HA) Cluster Storage Systems

Quad 1Gb Copper Ethernet Ports for HA Cluster	2 per Node
Eight 1GB Copper Ethernet Ports for HA Cluster	4 per Node
Quad 10Gb RJ-45 Copper Ethernet Ports for HA Cluster	2 per Node
Eight 10Gb RJ-45 Copper Ethernet Ports for HA Cluster	4 per Node
Quad 10Gb CX4 Copper Ethernet Ports for HA Cluster	2 per Node



Quad 10Gb SR Optical Ethernet Ports with 10Gb SFP+ SR Optical Transceiver Modules for HA Cluster	2 per Node
Dual 10Gb LR Optical Ethernet Ports with 10Gb SFP+ LR Optical Transceiver Modules for HA Cluster	1 per Node
Quad 10Gb SFP+ Ports for HA Cluster	2 per Node
Eight 10Gb SFP+ Ports for HA Cluster	4 per Node
Quad 40Gb QSFP+ Ports for HA Cluster	2 per Node

**Note:** Available network port upgrades vary depending on the appliance series and available PCI-E slots in the appliance. For more information, [contact StoneFly pre-sales engineers](#).

### 1.3 Processor, System Memory & SSD for OS

This section lists the available processors, system memory and SSD options for the OS.

**Note:** Standard and compatible hardware components may vary depending on the appliance series and model. Please refer to the **Hardware Specifications** of the relevant storage solution or contact StoneFly pre-sales engineers for more information.

#### 1.3.1 Processor Options

##### *Processor Options for Single-Node & Disaggregated HA Appliances (Per Node)*

	<b>XS-Series</b>	<b>XD-Series</b>
<b>Standard</b>	10-Core Xeon Processor	Dual 10-Core Xeon Processors
<b>Upgrade Options</b>	<ul style="list-style-type: none"> <li>• 8-Core Xeon</li> <li>• 12-Core Xeon</li> <li>• 16-Core Xeon</li> <li>• 18-Core Xeon</li> <li>• 20-Core Xeon</li> <li>• 24-Core Xeon</li> <li>• 28-Core Xeon</li> </ul>	<ul style="list-style-type: none"> <li>• Dual 8-Core Xeons</li> <li>• Dual 12-Core Xeons</li> <li>• Dual 16-Core Xeons</li> <li>• Dual 18-Core Xeons</li> <li>• Dual 20-Core Xeons</li> <li>• Dual 24-Core Xeons</li> <li>• Dual 28-Core Xeons</li> </ul>

### 1.3.2 System Memory Options

#### *System Memory Options for Single-Node Appliances*

	XS-Series	XD-Series
<b>Standard</b>	32GB	64GB
<b>Upgrade Options</b>	<ul style="list-style-type: none"> <li>• 64GB</li> <li>• 128GB</li> <li>• 256GB</li> <li>• 384GB</li> <li>• 512GB</li> <li>• 1TB</li> </ul>	<ul style="list-style-type: none"> <li>• 128GB</li> <li>• 256GB</li> <li>• 384GB</li> <li>• 512GB</li> <li>• 768GB</li> <li>• 1TB</li> <li>• 2TB</li> </ul>

#### *System Memory Options for Disaggregated HA Appliances (Per Node)*

	XS-Series	XD-Series
<b>Standard</b>	32GB	64GB
<b>Upgrade Options</b>	<ul style="list-style-type: none"> <li>• 64GB</li> <li>• 128GB</li> <li>• 256GB</li> <li>• 384GB</li> <li>• 512GB</li> <li>• 768GB</li> <li>• 1TB (2U only)</li> </ul>	<ul style="list-style-type: none"> <li>• 128GB</li> <li>• 256GB</li> <li>• 384GB</li> <li>• 512GB</li> <li>• 768GB</li> <li>• 1TB</li> <li>• 2TB</li> <li>• 3TB (1U only)</li> </ul>

### 1.3.3 SSD for OS

StoneFly storage appliances use SSD or Flash for the HCI Controller and OS. This section describes in detail the standard and available upgrade options for the SSD dedicated for the OS.

**Note:** NVMe SSD support varies depending on appliance series (XS-Series & XD-Series) and solution. For more information, please contact [StoneFly pre-sales engineers](#).

#### *NVMe SSD for OS Options – Single-Node Appliances*

	XS-Series, Dual 2U XD-Series	Dual 1U XD-Series
<b>Standard</b>	256GB NVMe SSD for Hypervisor/OS	240GB SSD for Hypervisor/OS
<b>Upgrade Options</b>	<ul style="list-style-type: none"> <li>• 512GB NVMe SSD for Hypervisor/OS</li> <li>• 1TB NVMe SSD for Hypervisor/OS</li> <li>• 2TB NVMe SSD for Hypervisor/OS</li> <li>• 3.8TB NVMe SSD for Hypervisor/OS</li> </ul>	<ul style="list-style-type: none"> <li>• 480GB SSD for Hypervisor/OS</li> <li>• 960GB SSD for Hypervisor/OS</li> <li>• 1.9TB SSD for Hypervisor/OS</li> </ul>

*NVMe SSD for OS Options – Disaggregated HA Appliances (Per Node)*

	<b>XS-Series, Dual 2U XD-Series</b>	<b>Dual 1U XD-Series</b>
<b>Standard</b>	256GB NVMe SSD for Hypervisor/OS	240GB SSD for Hypervisor/OS
<b>Upgrade Options</b>	<ul style="list-style-type: none"><li>• 512GB NVMe SSD for Hypervisor/OS</li><li>• 1TB NVMe SSD for Hypervisor/OS</li><li>• 2TB NVMe SSD for Hypervisor/OS</li><li>• 3.8TB NVMe SSD for Hypervisor/OS</li></ul>	<ul style="list-style-type: none"><li>• 480GB SSD for Hypervisor/OS</li><li>• 960GB SSD for Hypervisor/OS</li><li>• 1.9TB SSD for Hypervisor/OS</li></ul>

## Chapter 2:

# StoneFly Storage Concentrator Virtual Machine (SCVM)

StoneFly SCVM is an 8<sup>th</sup> generation patented storage operating system that is included in all StoneFly hyper-converged solutions. In this chapter, we'll take a closer at SCVM and describe what it is, how it works and what features it offers to simplify and improve your hyper-converged experience.

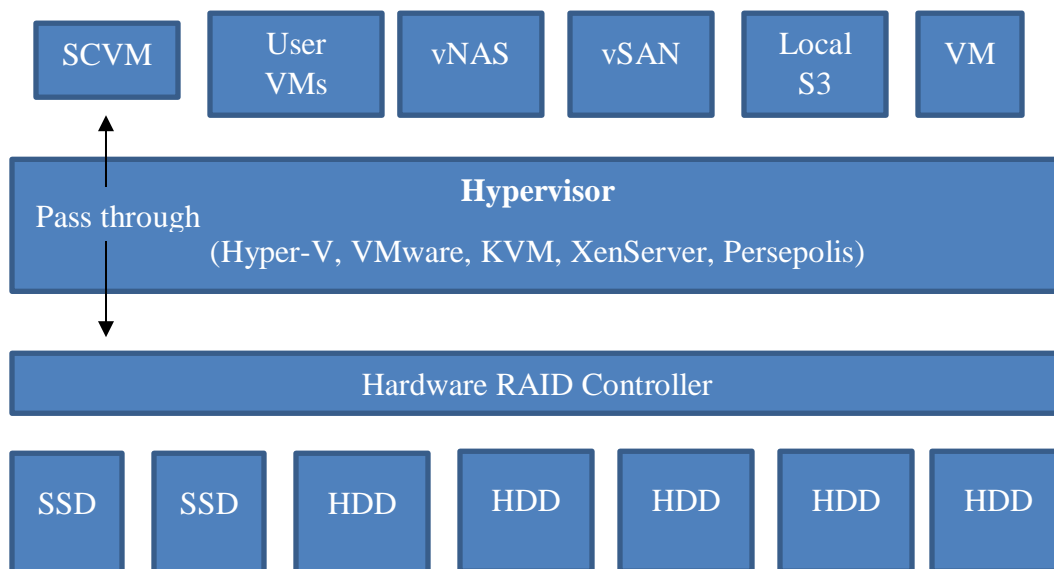
## 2.1 What is SCVM?

StoneFly SCVM is a storage operating system that enables users to provision NAS, SAN, & object storage on their HCI appliance. Besides storage virtualization and provisioning, SCVM also comes with an array of data protection and data storage optimization features that are poised to deliver great value-for-the-money experience.

SCVM also enables users to integrate cloud storage repositories (Microsoft Azure, AWS, StoneFly cloud, any other S3 compatible cloud) with their HCI appliances; giving users access to highly scalable and affordable target repositories for data storage, retention and archiving.

### 2.1.1 SCVM Deployment

**Note:** SCVM is standard on all StoneFly HCI appliances. StoneFly customers do not have to install the Virtual Machine (VM) on our HCI solutions. Users only need to configure the management network for the VM.



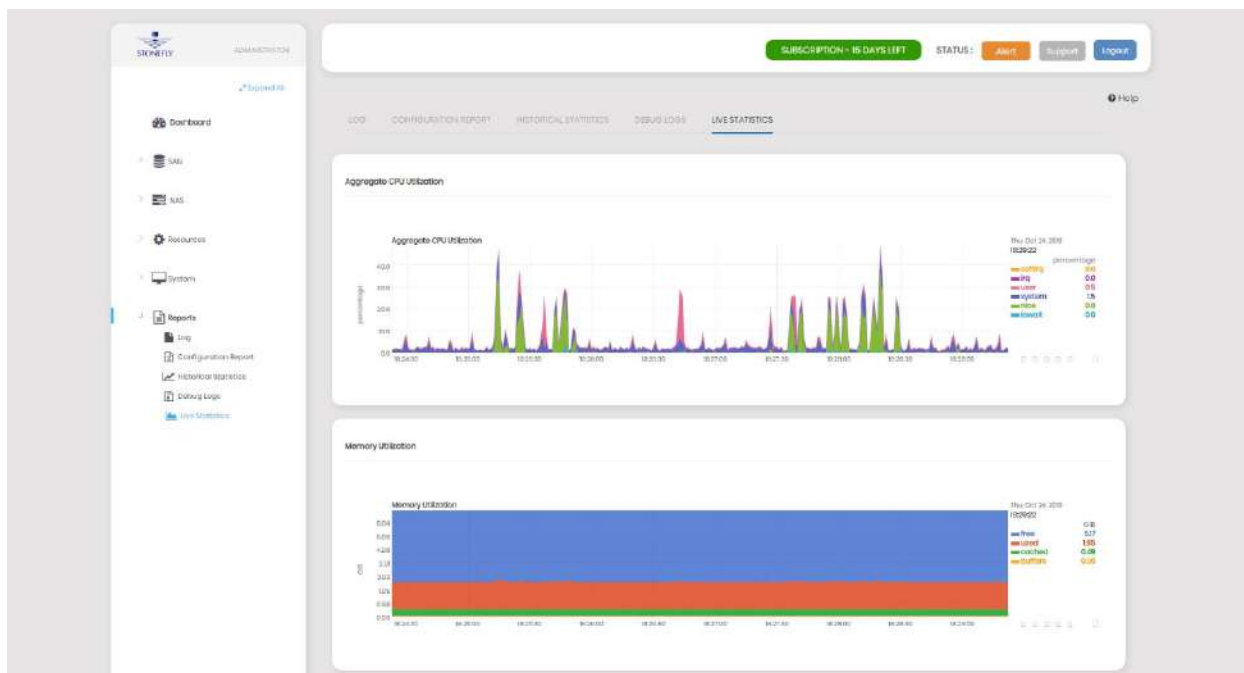
SCVM is deployed as a VM on industry standard hypervisors such as Hyper-V, VMware, KVM, XenServer (Citrix), or StoneFly Persepolis.

**Note:** Hypervisor availability may vary depending on the StoneFly product series selected.

The storage OS comes with an easy-to-use management GUI that enables users to provision desired resources on the HCI appliance. This makes StoneFly HCI solutions the complete package containing the virtual platform, target repository, and software-defined networking.

The SCVM passes through the hypervisor or virtualization environment interacting directly with the RAID controller and gives users the ability to fully utilize their HCI appliances. These capabilities truly enhance the user experience and improve the ROI and TCO of the infrastructure.

## 2.1.2 SCVM Dashboard – Real-time Graphical Performance Reporting



**StoneFly SCVM Dashboard**

SCVM truly puts users in control of their infrastructure with real-time graphical reporting about metrics such as:

- Aggregated CPU Utilization
- System Memory Utilization
- Aggregate Disk Read/Write Activity
- Aggregate Network Usage

## 2.2 Enterprise-Grade Features of StoneFly SCVM

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StoneFly SCVM is equipped with state-of-the-art features that facilitate data protection and effective storage utilization. Here is a brief list of those features:

### 2.2.1 Data Protection Features of SCVM

- Detachable Air-Gapped NAS volume provisioning that can be “turned off” or “turned on” (spin up) at user’s discretion
- Backup Vault – Isolated Linux-based virtual appliance
- Immutable delta-based, read-only & mountable snapshots
- Built-in anti-virus & anti-ransomware for NAS volumes
- Threat scan & detection
- WORM (Write-Once Read-Many) Storage Provisioning
- NAS Erasure Coding
- Advanced AES 256-bit encryption

### 2.2.2 Storage Optimization Features of SCVM

- Thin Provisioning – quick storage provisioning with space reclamation
- Deduplication – reduced storage space consumption & efficient storage capacity usage
- Flash Cache™ - SSD Caching
- Cloud Connect – with support for Azure blob, AWS S3, StoneFly private cloud & other S3 compatible clouds

## 2.3 SCVM Resources

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To learn more about SCVM, visit the StoneFly website: <https://stonefly.com/hyper-converged/scvm-virtual-storage-appliance>

To view SCVM demo videos or how-to videos, please refer to the **Technical Videos** section on the StoneFly website: <https://stonefly.com/resources/technical-videos>

StoneFly SCVM is also available as a standalone VM. To purchase SCVM licenses or to start a free trial go to: <https://stonefly.com/subscription>

For more details, please [contact StoneFly sales](#).

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## Chapter 3:

# StoneFly USC Storage Gateway Appliances

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In this chapter, we'll describe our on-premises storage gateway solutions, the available models and the hardware specifications of different appliance series and models.

## 3.1 SAN Gateway Appliances

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StoneFly Unified Storage Concentrator (USC) gateway appliances enable users to leverage their existing iSCSI (Dell EMC, HPE, etc.), Fibre Channel (FC), or Infiniband appliances into a unified pool of storage resources integrated with enterprise-grade features to facilitate a variety of use-cases.

With the USC gateway appliances, users can also integrate cloud storage tiers with existing infrastructure and modernize their data storage experience by leveraging desired cloud storage repositories such as Azure, AWS, StoneFly private cloud or any other S3 compatible cloud.

The USC gateway appliances are available as:

- USC SAN Gateway – Single-Node Appliance : XS-Series & XD-Series
- USC-HA High Availability Disaggregated Gateway Appliance: XS-Series & XD-Series

### 3.1.1 Enterprise-Grade Features of StoneFly USC Gateway Appliances

#### Standard SCVM Virtual Storage Appliance Features

- Logical Volume Creation and Patented Advanced Storage Virtualization Services
- 200 iSCSI Volumes Supported with 1022 Concurrent Host iSCSI Sessions
- iSCSI Port Teaming, Failover and Load-Balancing
- Volume-Level Access Control and Dynamic Volume Management
- Support for iSCSI, SNMP Traps, UPS, Nagios, RAID Monitoring, Call Home, VMware VAAI
- Real-Time Graphical Performance Monitoring with Tracking & Utilization Reporting
- Automated Online Volume / Storage Expansion
- Licensed to Support up to 200 iSCSI Hosts

#### Advanced SCVM Virtual Storage Appliance Features

- StoneFly Snapshot Services with 2520 Delta-Based Snapshots per Subsystem
  - Mountable Read-Write Snapshot Volumes
  - Snapshot Schedule Utility, Command Line Interface Utility
  - StoneFly Real-Time Synchronous Mirroring of iSCSI Volumes and Nodes (Campus Mirroring)
  - Multi-Site/Multi-Appliance Replication and Unified Central Management System
  - Thin Provisioning with Space Reclamation
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- Tiered Storage Architecture with Hardware and Software Support
- Available Upgrade Options (Not Included Standard): Asynchronous Replication (One-to-Many & Many-to-One), Hardware-Enabled Volume Encryption, Fibre Channel SAN Target Bundle, NAS (Support for CIFS/SMB and NFS Protocols), Block-Level Data Deduplication, Flash Cache SSD Caching, VSS Support

For details, visit the StoneFly website: <https://stonefly.com/hyper-converged/san-gateway-appliances>

### Hardware Specification - StoneFly USC Single-Node Appliance Models: XS-Series

	1U Rackmount	2U Rackmount
<b>Hypervisor</b>	VMware vSphere, Microsoft Hyper-V, Citrix, KVM, StoneFly Persepolis	
<b>Processor</b>	10-Core Xeon Processor (Standard) / 8, 12, 16, 18, 20, 24 or 28-Core Xeon Processor (Optional)	
<b>System Memory</b>	32GB (Standard) / Up to 768GB (Optional)	32GB (Standard) / Up to 1TB (Optional)
<b>NVMe SSD for OS</b>	256GB NVMe SSD for OS / Up to 3.8TB NVMe SSD for OS (Optional)	
<b>Network Ports</b>	Two Bonded 10Gb RJ-45 Ethernet Connections (Backwards Compatible with 1Gb)	
<b>Available Slots</b>	Up to 2 PCI-E Slots Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage	Up to 4 PCI-E Slots Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage
<b>Interface Options</b>	Optional Support for 1Gb RJ-45, 10Gb RJ-45, SFP+, CX4, SR Optical, LR Optical, 40Gb QSFP+, 12Gb SAS, 16Gb FC	
<b>Management</b>	Gigabit Management Port and Intelligent Platform Management Interface (IPMI) with KVM-Over-LAN	
<b>Power Supplies</b>	Redundant 80-PLUS Platinum Hot-Swappable PS	Redundant 80-PLUS Titanium Hot-Swappable PS
<b>Power Output/Input</b>	500W (100-240Vac)	800W (100-127Vac) / 1000W (200-240Vac)
<b>Form Factor</b>	1U Rackmount	2U Rackmount
<b>Dimensions (H x W x D)</b>	1.7" x 17.2" x 25.6"	3.5" x 17.2" x 25.5"



### Hardware Specification - StoneFly USC Single-Node Appliance Models: XD-Series

	1U Rackmount	2U Rackmount
<b>Hypervisor</b>	VMware vSphere, Microsoft Hyper-V, Citrix, KVM, StoneFly Persepolis	
<b>Processors</b>	Dual 10-Core Xeon Processors (Standard) / Dual 8, 12, 16, 18, 20, 24 or 28-Core Xeon Processors (Optional)	
<b>System Memory</b>	64GB (Standard) / Up to 3TB (Optional)	64GB (Standard) / Up to 2TB (Optional)
<b>SSD for OS</b>	240GB SSD for OS (Standard) / Up to 3.8TB SSD for OS (Optional)	256GB NVMe SSD for OS / Up to 3.8TB NVMe SSD for OS (Optional)
<b>Fast Storage</b>	N/A	256GB up to 3.8TB PCI-E Based NVMe SSD for Fast Data Storage (Optional)
<b>Network Ports</b>	Three Bonded 10Gb RJ-45 (Backwards Compatible with 1Gb) or Two Bonded 10Gb SFP+ Ethernet Connections	Two Bonded 10Gb RJ-45 Ethernet Connections (Backwards Compatible with 1Gb)
<b>Available Slots</b>	Up to 2 PCI-E Slots Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage	Up to 6 PCI-E Slots Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage
<b>Interface Options</b>	Optional Support for 1Gb RJ-45, 10Gb RJ-45, SFP+, CX4, SR Optical, LR Optical, 40Gb QSFP+, 12Gb SAS, 16Gb FC	
<b>Management</b>	Gigabit Management Port and Intelligent Platform Management Interface (IPMI) with KVM-Over-LAN	
<b>Power Supplies</b>	Redundant 80-PLUS Platinum Hot-Swappable PS	Redundant 80-PLUS Titanium Hot-Swappable PS
<b>Power Output/Input</b>	750W (100-240Vac)	800W (100-127Vac) / 1000W (200-240Vac)
<b>Form Factor</b>	1U Rackmount	2U Rackmount
<b>Dimensions (H x W x D)</b>	1.7" x 17.2" x 29.7"	3.5" x 17.2" x 25.5"

## Hardware Specification - StoneFly USC-HA Disaggregated Cluster SAN Gateway Appliance Models: XS-Series

	Dual 1U Rackmounts	Dual 2U Rackmounts
<b>Hypervisor</b>	Supports Cluster-Enabled High-Availability Hypervisor: VMware vSphere, Microsoft Hyper-V, Citrix, KVM, StoneFly Persepolis	
<b>Processor</b>	10-Core Xeon Processor in Each Node (Standard) / 8, 12, 16, 18, 20, 24 or 28-Core Xeon Processor in Each Node (Optional)	
<b>System Memory</b>	32GB per Node (Standard) / Up to 768GB per Node (Optional)	32GB per Node (Standard) / Up to 1TB per Node (Optional)
<b>NVMe SSD for OS</b>	256GB NVMe SSD for OS in Each Node / Up to 3.8TB NVMe SSD for OS in Each Node (Optional)	
<b>Network Ports</b>	Four Bonded 10Gb RJ-45 Ethernet Connections per Cluster (Backwards Compatible with 1Gb)	
<b>Available Slots</b>	Up to 2 PCI-E Slots per Node Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage	Up to 4 PCI-E Slots per Node Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage
<b>Interface Options</b>	Optional Support for 1Gb RJ-45, 10Gb RJ-45, SFP+, CX4, SR Optical, LR Optical, 40Gb QSFP+, 12Gb SAS, 16Gb FC	
<b>Management</b>	Gigabit Management Port and Intelligent Platform Management Interface (IPMI) with KVM-Over-LAN per Node	
<b>Power Supplies</b>	Redundant 80-PLUS Platinum Hot-Swappable PS per Node	Redundant 80-PLUS Titanium Hot-Swappable PS per Node
<b>Power Output/Input</b>	500W (100-240Vac) per Node	800W (100-127Vac) / 1000W (200-240Vac) per Node
<b>Form Factor</b>	Two 1U Rackmounts	Two 2U Rackmounts
<b>Dimensions (H x W x D)</b>	1.7" x 17.2" x 25.6" per Node (3.5" Total Rack Height for Two-Node Cluster)	3.5" x 17.2" x 25.5" per Node (7" Total Rack Height for Two-Node Cluster)

## Hardware Specification - StoneFly USC-HA Disaggregated Cluster SAN Gateway Appliance Models: XD-Series

	Dual 1U Rackmounts	Dual 2U Rackmounts
<b>Hypervisor</b>	Supports Cluster-Enabled High-Availability Hypervisor: VMware vSphere, Microsoft Hyper-V, Citrix, KVM, StoneFly Persepolis	
<b>Processors</b>	Dual 10-Core Xeon Processors in Each Node (Standard) / Dual 8, 12, 16, 18, 20, 24 or 28-Core Xeon Processors in Each Node (Optional)	
<b>System Memory</b>	64GB per Node (Standard) / Up to 3TB per Node (Optional)	64GB per Node (Standard) / Up to 2TB per Node (Optional)
<b>SSD for OS</b>	240GB SSD for OS in Each Node (Standard) / Up to 3.8TB SSD for OS in Each Node (Optional)	256GB NVMe SSD for OS in Each Node / Up to 3.8TB NVMe SSD for OS in Each Node (Optional)
<b>Fast Storage</b>	N/A	256GB up to 3.8TB PCI-E Based NVMe SSD for Fast Data Storage per Node (Optional)
<b>Network Ports</b>	Six Bonded 10Gb RJ-45 (Backwards Compatible with 1Gb) or Four Bonded 10Gb SFP+ Ethernet Connections per Cluster	Four Bonded 10Gb RJ-45 Ethernet Connections per Cluster (Backwards Compatible with 1Gb)
<b>Available Slots</b>	Up to 2 PCI-E Slots per Node Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage	Up to 6 PCI-E Slots per Node Can Be Used For Optional Network Card, FC SAN Target or SAS/FC Storage Expansion Kits to Easily Convert Your Existing Storage Appliances into Advanced iSCSI Storage
<b>Interface Options</b>	Optional Support for 1Gb RJ-45, 10Gb RJ-45, SFP+, CX4, SR Optical, LR Optical, 40Gb QSFP+, 12Gb SAS, 16Gb FC	
<b>Management</b>	Gigabit Management Port and Intelligent Platform Management Interface (IPMI) with KVM-Over-LAN per Node	
<b>Power Supplies</b>	Redundant 80-PLUS Platinum Hot-Swappable PS per Node	Redundant 80-PLUS Titanium Hot-Swappable PS per Node
<b>Power Output/Input</b>	750W (100-240Vac) per Node	800W (100-127Vac) / 1000W (200-240Vac) per Node
<b>Form Factor</b>	Two 1U Rackmounts	Two 2U Rackmounts
<b>Dimensions (H x W x D)</b>	1.7" x 17.2" x 29.7" per Node (3.5" Total Rack Height for Two-Node Cluster)	3.5" x 17.2" x 25.5" per Node (7" Total Rack Height for Two-Node Cluster)

Please refer to Chapter 1 for more information about available network port upgrades ([1.3](#)), supported processor ([1.3.1](#)), system memory ([1.3.2](#)), and SSD for OS ([1.3.3](#)), and other upgrades.

## Chapter 4:

# Contacting StoneFly

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We'd love to hear from you about your projects and your data storage needs. You can contact us via email, call us, or schedule a demo directly on the StoneFly website.

### **Corporate Office - USA**

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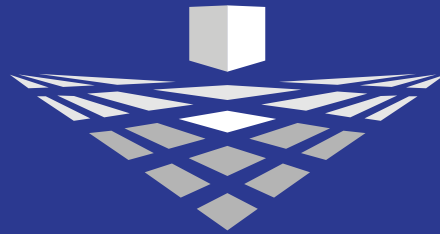
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# STONEFLY

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