Data Sheet

AmpliStor Software Defined Storage system

Amplidata's **AmpliStor Software Defined Storage** system provides a complete data storage solution for Exabyte-scale, Big Data. The system is built on a scalable architecture that can grow performance and capacity dynamically, while providing the highest-levels of data durability, with the best storage efficiency, high-performance and the lowest Total Cost of Ownership. The system employs patented BitSpread(r) and BitDynamics(r) software to enable the following key values:

Massive Scale for BIG Unstructured DATA

- Scalable to Exabytes of data & Billions of objects
- Throughput scales with amount of resources

Ten 9's Storage Durability and Beyond

- Tunable N-level fault tolerance via policies
- Eliminates the lengthy rebuilds of RAID on high-density disk drives
- Eliminates data corruption or loss due to bit errors

Super-Efficient

- 70% reduction in storage footprint compared to"Three copies in the cloud"
- 50% reduction in storage versus mirrored RAID
- 50-70& lower loor space & power consumption

Automated Management

- Self-healing design manages data integrity assurance and auto-repairs data

50-70% reductions in TCO

- Reduced storage footprint (Capex)
- Reduced operation expenses in power, data center space & management costs

AMPLISTOR SCALE-OUT ARCHITECTURE

AmpliStor is built on a scale-out two-tier architecture. The storage pool is comprised of high-density, low-power AmpliStor Storage Nodes, and the front-end scales-out from a minimum of 3 high-performance AmpliStor Controller Nodes. The system integrates a fully redundant 10 Gb and 1 Gb Ethernet fabric to connect the AmpliStor Controllers and Storage Nodes together as a single pool. Capacity can be increased dynamically through additional storage nodes, and IO throughput can be scaled with additional Controller Nodes. Customer network access to the system is over 10 Gb Ethernet ports to each Controller serving http/REST, which hosts the patent-pending BitSpread distributed encoder. Storage Nodes embed BitDynamics maintenance agents for data integrity veriication, management, monitoring & self-healing.

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AmpliStor AS30 & AS36 Storage Node

Storage Interfaces	AmpliStor http/REST object storage API
	Python Command Line Interface (CLI)
	.Net SDK and C language API
	WebDAV 1
	NFS/CIFS via partner Gateways
Management	BitSpread object encoder with dynamic policy-based storage durability and N-level fault tolerance
	BitDynamics hardware monitoring & self-healing with parallel rebuilds
	Active data integrity veri cation & assurance via granular CRC checksums
	Web Management Console (GUI)
	SNMP Alerts, Traps, MIB
	Integrated and automated capacity management
	Out-of-band health monitoring & self-healing after component failures
	Plug-and-play auto-discovery and con guration of new nodes
	Fast & automated installation & boot
Rack Speci cations	44U
	2 x 48 port Ethernet Switches
	2-10 10 Gb Ethernet cards (optional)
	3 Controllers & 39 Storage Nodes with 2.1 GB/sec aggregate throughput
	Up to 390 disk drives per rack & 1170TB maximum raw storage capacity
	4.2 KW (nominal) / 6.6 KW (peak)
	2 x 30A / 240VAC PDU power supplies
AS30 / AS36 Storage Node Speci cations	1 EIAU High – 19" IEC rack-compliant server
	Low-power Intel® E3™ Processor (E3-1220LV2 - 17 Watts)
	10 x 3TB (AS30 – 30TB) Intellipower™ SATA disk drives or 12 x 3TB (AS36 – 36TB) WD "Green" drives
	4GB Memory (AS30) - 8GB (AS36)
	2 x 1GbE network interfaces
	32.5" depth x 1.75" height x 19" width (AS30) - 33.5" x 1.75" x 19" (AS36)
	35 lbs. (fully populated chassis) AS30 - 57 lbs. AS36
	100 to 240 VAC, 50 - 60Hz, 2.0A – 1.A (AS30) - 100 to 240 VAC, 50 - 60Hz, 3.0A – 1.5A (AS36)
	10° C to 35° C (50° F to 95° F) < 2100m (<7000') elevation, 20% to 80% relative humidity, non-condensing
	FCC, CE & UL® Certi ed (AS30) - CE & UL® Listed, RoHS (AS36)
AC8 Controller Node Speci cations	1 EIAU High – 19" IEC rack-compliant server
	Dual Intel® quad-core Xeon® processors
	48GB ECC Memory
	High-performance 4 x 10GbE network interfaces
	1 x 1GbE network interfaces (management)
	Con gurable 2 x 100GB SSD, optional 4 x extra SSD for object cache
	2 x 300GB SATA disk drives
	FCC, CE & UL® Listed

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