Fortissimo Foundation:

All NVMe Flash Array

and

NVMe Flash Hybrid Array

The future in storage technology is now

E.Billi
A3CUBE Inc
Product Presentation

The future in storage technology is now

A3CUBE Fortissimo Foundation, computing/storage converged solution and data engine, provides a very fast and scalable platform for storing and retrieving data items with 100s of gigabytes/s of throughput and Mega IOPS.

Fortissimo Foundation is designed to take advantage of new hardware trends, specially the emergence of CPUs with many cores; GPUs and other co-processors; and new non-volatile storage technologies, like NVMe and SSDs.

Fortissimo Foundation targets also real Rime Analytics, IoT (Internet of things), Multimedia, Virtualization, High Performance Data analysis, Analysis of Large Sets of Sequences (e.g. DNA) to find alignment and correlations.

For more details visit: www.a3cube-inc.com

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Fortissimo Foundation is the first available in the market all NVMe and Hybrid NVMe system

a) All NVMe SSD Flash [model DP1F available now]

b) Hybrid NVMe Flash [model DP1H available now]

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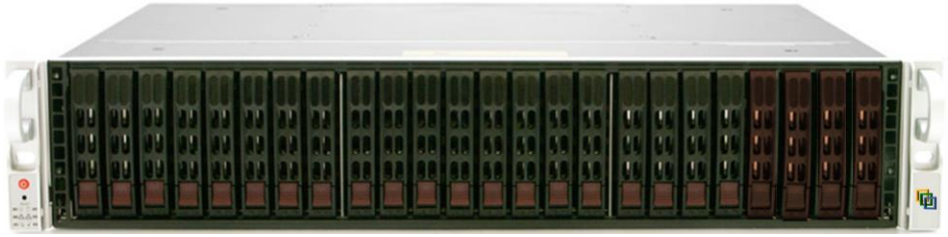
FORTISSIMO DP1 FLASH Only BOX



BOX Configuration	Device Description	Minimum Quantity	Notes
Compute	Intel E5-2670 v3	2	
NVMe (Super A3C Direct Cache engine)	400 GB NVME	1	Up to 4 devices (Up 8 TB)
Ultra Flash Only Array	**Sata SSDs**	**8 TB**	**Up to 20 TB**
DRAM	128 GB DIMMs DDR4	128 GB	Configurable up to 1.5 TB
Fabric	RONNIEE 2S NIC	1	
LAN	10 Gigabit Ethernet	2	Up to 4 10 GBE ports
IB	FDR		Optional (RDMA fully supported)
Warranty		3-year	Hardware Swap

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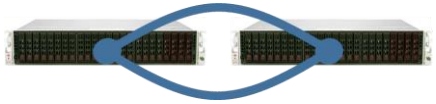
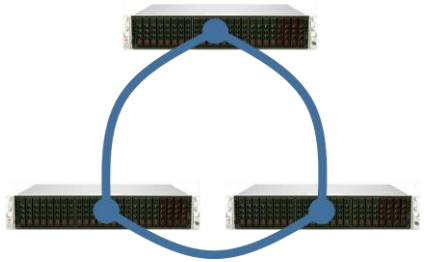
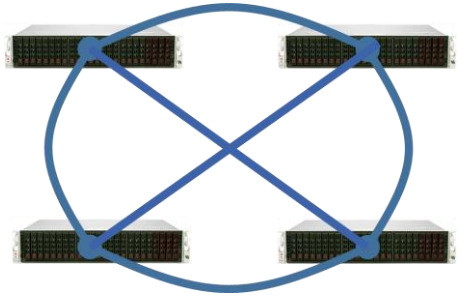
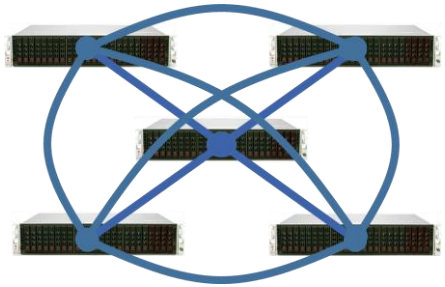
Fortissimo DP1F series scale-in configurations

	Fortissimo model DP1F 2 Nodes	Fortissimo model DP1F 3 Nodes	Fortissimo model DP1F 4 Nodes	Fortissimo model DP1F 5 Nodes
				
	Powered by A3CUBE's Pervasive sub microsecond Direct Internode I/O access			
CPU	4 Intel E5-2670 v3	6 Intel E5-2670 v3	8 Intel E5-2670 v3	10 Intel E5-2670 v3
NVMe	800 GB	1.2 TB	1.6 TB	2 TB
SSD	16 TB	24 TBT	32 TB	40 TB
Memory	256 GB DDR4	384 GB DDR4	512 GB DDR4	640 GB

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FORTISSIMO DP1 BOX HYBRID

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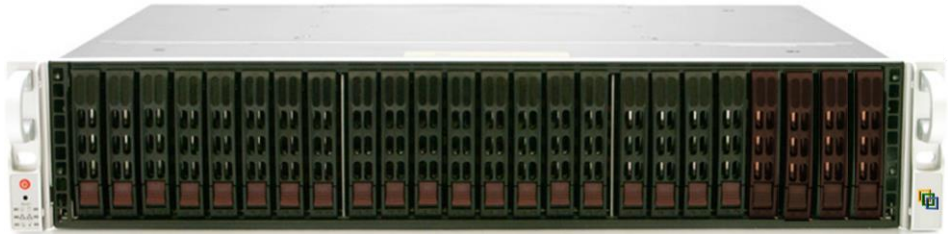

BOX Configuration	Device Description	Minimum Quantity	Notes
Compute	Intel E5-2670 v3	2	
NVMe (Super A3C Direct Cache engine)	400 GB NVME	1	Up to 4 devices (Up to 8TB)
Hybrid Array	**Spinning Drive**	**15 TB**	**Up to 80 TB**
DRAM	128 GB DIMMs DDR4	128 GB	Configurable up to 1.5 TB
Fabric	RONNIEE 2S NIC	1	
LAN	10 Gigabit Ethernet	2	Up to 4 10 GBE ports
IB	FDR		Optional (RDMA fully supported)
Warranty		3-year	Hardware Swap

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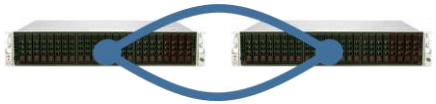
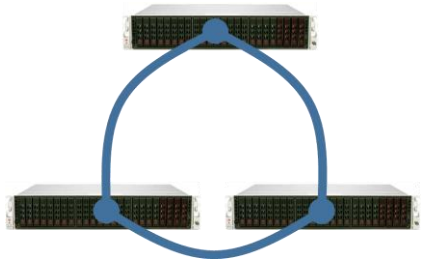
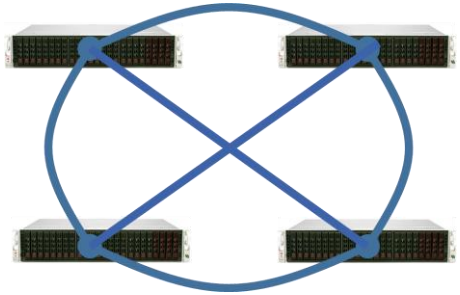
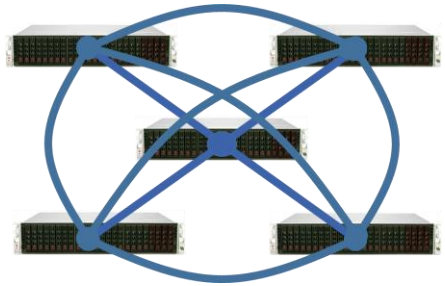
Fortissimo DP1H series scale-in configurations

	 Fortissimo model DP1H 2 Nodes	 Fortissimo model DP1H 3 Nodes	 Fortissimo model DP1H 4 Nodes	 Fortissimo model DP1H 5 Nodes
Powered by A3CUBE's Pervasive sub microsecond Direct Internode I/O access				
CPU	4 Intel E5-2670 v3	6 Intel E5-2670 v3	8 Intel E5-2670 v3	10 Intel E5-2670 v3
NVMe	800 GB	1.2 TB	1.6 TB	2 TB
SATA	30 T	45 T	60 TB	75 TB
Memory	256 GB DDR4	384 GB DDR4	512 GB DDR4	640 GB

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Fortissimo Foundation data protection

Your data will be safe in case of disks error, failures and crashes thanks to our unique multi level of data protection

Node level protection: local data mirror

Storage devices on the nodes can be arranged in JBOD or local data mirror. JBOD allows you to exploit the whole space provided by the slices on the nodes and local data mirror will replicate data between slices transparently

Global level data protection: global mirror

Global mirror is a multi-level Data Replication solution for maximum reliability: a sophisticated circular replication mechanism provides non symmetrical scalable replication of a single brick in aggregate volumes. This mechanism enables you to scale in any number of nodes having at least a copy of the data on a secondary server

Internode Communications Protection (Hardware Fail Over Protection)

Internode communication with hardware Advanced Error Correction and fault back

Fault tolerance to node crashes

The Fortissimo Foundation architecture distributes data across all the nodes. A crash of one node will not effect remaining nodes allowing them to continue to work and provide the data they store in their slices

This setup is particularly useful if you plan to use Fortissimo as a disk layer for object storage systems, such as HDFS, that keep multiple copies of data across the nodes