

ALL FLASH (H-SERIES)			
H610S-4	H610S-2	H610S-1	
PER NODE SPECIFICATIONS			
Effective Capacity¹ Base-10 Base-2	791TB 727TB	391TB 361TB	20TB 18TB
Performance 4K IO Size 80% Reads	100,000 IOPS	100,000 IOPS	100,000 IOPS
Storage Network Protocols	iSCSI	iSCSI	iSCSI
Volumes Maximum Quantity	700 Volumes	700 Volumes	700 Volumes
Volume Maximum Size	8TB	8TB	8TB
iSCSI Sessions Maximum Quantity	1000 Sessions	1000 Sessions	1000 Sessions
Cluster Nodes Maximum	100 Nodes	100 Nodes	100 Nodes
SSD Quantity	12x 3.84TB encrypted Non-encrypted	12x 1.92TB encrypted Non-encrypted	12x 960GB encrypted Non-encrypted
Rack Units	1 RU	1 RU	1 RU
Weight English Metric	40.12lb 18.2kg	40.12lb 18.2kg	40.12lb 18.2kg
Processor	2x 64-bit 28 total cores	2x 64-bit 28 total cores	2x 64-bit 28 total cores
Memory	704GB DDR4-2400 ECC	384GB DDR4-2400 ECC	256GB DDR4-2400 ECC
NVRAM	32GB	32GB	32GB
Network Onboard Ports	2x 25GbE SFP28	2x 25GbE SFP28	2x 25GbE SFP28
Management Onboard Ports	2x 1GbE RJ45	2x 1GbE RJ45	2x 1GbE RJ45
OOB Management Onboard Ports	1x 1GbE RJ45	1x 1GbE RJ45	1x 1GbE RJ45
Minimum OS Version	Element 10.4	Element 10.4	Element 10.4

CONVERGED SYSTEMS (NETAPP HCI)			
H700E	H500E	H300E	H410C
PER COMPUTE NODE SPECIFICATIONS			
Rack Units	1 RU, half-width	1 RU, half-width	1 RU, half-width
Processor	2x Intel E5-2695v4 21 GHz, 36 total cores	2x Intel E5-2650v4 2.2 GHz, 24 total cores	2x Intel E5-2620v4 2.1 GHz, 16 total cores
Memory	768GB DDR4-2400 ECC	512GB DDR4-2400 ECC	384GB DDR4-2400 ECC
Network Onboard Ports	4x 10/25GbE SFP28 2x 1GbE RJ45	4x 10/25GbE SFP28 2x 1GbE RJ45	4x 10/25GbE SFP28 2x 1GbE RJ45
PER STORAGE NODE SPECIFICATIONS			
Rack Units	1 RU, half-width	1 RU, half-width	1 RU, half-width
SSD Quantity	6x 1.92TB	6x 960GB encrypted Non-encrypted	6x 480GB
Effective Capacity¹ Base-10 Base-2	44TB 40TB	22TB 20TB	11TB 10TB
Performance 4K IO Size 80% Reads	100,000 IOPS	50,000 IOPS	50,000 IOPS
Network Onboard Ports	2x 10/25GbE SFP28 2x 1GbE RJ45	2x 10/25GbE SFP28 2x 1GbE RJ45	2x 10/25GbE SFP28 2x 1GbE RJ45
NETAPP HCI CHASSIS			
CHASSIS SPECIFICATIONS			
Rack Units	2 RU	Minimum configuration: 2x chassis with 2x compute and 4x storage nodes (4 RU total)	
Max Nodes Per Chassis	4 Nodes	Mix and match four HCI compute and storage nodes per chassis	
Loaded Weight English Metric	54.5lb 24.7kg	Total weight will vary based on node configuration	

ALL FLASH (AFF A-SERIES)					
AFF A800	AFF A700s	AFF A700	AFF A300	AFF A220	
PER HA PAIR SPECIFICATIONS (ACTIVE-ACTIVE DUAL CONTROLLER)					
Raw Capacity Maximum Base-10 Base-2	6.6PB 5.8PB	6.6PB 5.8PB	14.6PB 13.0PB	11.7PB 10.4PB	4.0PB 3.6PB
Effective Capacity² Base-10 Base-2	26.4PB 23.4PB	26.4PB 23.4PB	58.6PB 52.0PB	46.9PB 41.6PB	16.6PB 14.3PB
Storage Network Protocols	NVMe/FC, FC, iSCSI, NFS, pNFS, SMB	NVMe/FC, FC, iSCSI, NFS, pNFS, SMB	NVMe/FC, FC, iSCSI, NFS, pNFS, SMB	NVMe/FC, FC, iSCSI, NFS, pNFS, SMB	NVMe/FC, FC, iSCSI, NFS, pNFS, SMB
Data Aggregate Maximum Size	800TB	800TB	800TB	800TB	800TB
Flexible Volume Maximum Capacity	100TB	100TB	100TB	100TB	100TB
FabricPool Maximum Capacity	16.4PiB	16.4PiB	16.4PiB	16.4PiB	16.4PiB
FabricPool Capacity Tiers	Amazon Web Services S3 Microsoft Azure Blob IBM Cloud Object Storage NetApp StorageGRID	Amazon Web Services S3 Microsoft Azure Blob IBM Cloud Object Storage NetApp StorageGRID	Amazon Web Services S3 Microsoft Azure Blob IBM Cloud Object Storage NetApp StorageGRID	Amazon Web Services S3 Microsoft Azure Blob IBM Cloud Object Storage NetApp StorageGRID	Amazon Web Services S3 Microsoft Azure Blob IBM Cloud Object Storage NetApp StorageGRID
Cluster Nodes Maximum NAS SAN	24 12 Nodes	24 12 Nodes	24 12 Nodes	24 12 Nodes	24 12 Nodes
Drive Quantity Maximum	240 SSD 48 nt NVMe + 192 external	216 SSD 42 internal + 192 external	480 SSD external	384 SSD external	144 SSD 144 SSD 24 internal + 120 external
Rack Units	4 RU	4 RU	10 RU 5 RU + 2 RU shelf	5 RU 3 RU + 2 RU shelf	2 RU
Weight English Metric	140.4lb 63.7kg	114.9lb 52.1kg	214.5lb 97.3kg	76.0lb 34.5kg	51.8lb 23.5kg
Processor	4x 64-bit 96 total cores	4x 64-bit 72 total cores	4x 64-bit 72 total cores	2x 64-bit 32 total cores	2x 64-bit 24 total cores
Memory	1280GB	1024GB	1024GB	256GB	64GB
I/O Expansion Available Slots	8x Slots PCIe Gen3	8x Slots PCIe Gen3	20x Slots IO Modules	4x Slots PCIe Gen3	-
Ethernet Maximum Ports	20x 100/40GbE 16x 25GbE 32x 10GbE	16x 40GbE 16x 10GbE	32x 40GbE 64x 10GbE	8x 40GbE 24x 10GbE	12x 10GbE
Fibre Channel Maximum Ports	32x 32Gb FC 32x 16Gb FC	8x 32Gb FC 16x 16Gb FC	64x 32Gb FC 64x 16Gb FC	8x 32Gb FC 24x 16Gb FC	8x 16Gb FC
SAS Maximum Ports	32x 12Gb SAS	16x 12Gb SAS	64x 12Gb SAS	24x 12Gb SAS	4x 12Gb SAS
Minimum OS Version	ONTAP 9.4	ONTAP 9.1	ONTAP 9.1	ONTAP 9.1	ONTAP 9.4

HYBRID FLASH (FAS)				
FAS9000	FAS8200	FAS2750	FAS2720	
PER HA PAIR SPECIFICATIONS (ACTIVE-ACTIVE DUAL CONTROLLER)				
Raw Capacity Maximum Base-10 Base-2	11.5PB 10.2PB	4.8PB 4.26PB	1.2PB 1.1PB	1.44PB 1.3PB
Storage Network Supported Protocols	FC, FCoE, iSCSI, NFS, pNFS, SMB	FC, FCoE, iSCSI, NFS, pNFS, SMB	FC, FCoE, iSCSI, NFS, pNFS, SMB	FC, FCoE, iSCSI, NFS, pNFS, SMB
NVMe Flash Cache Maximum Onboard	16TB	4TB	2TB	2TB
Flash Pool Maximum Capacity	144TB	72TB	24TB	24TB
Data Aggregate Maximum Size	400TB	400TB	400TB	400TB
Flexible Volume Maximum Size	100TB	100TB	100TB	100TB
Cluster Nodes Maximum NAS SAN	24 12 Nodes	24 12 Nodes	24 12 Nodes	24 12 Nodes
Drive Quantity Maximum	1440 HDD 480 SSD external	480 HDD 480 SSD external	144 HDD 144 SSD 24 internal + 120 external	144 HDD 144 SSD 12 internal + 132 external
Rack Units	8 RU	3 RU	2 RU	2 RU
Weight English Metric	214.5lb 97.3kg	76.0lb 34.5kg	58.64lb 26.6kg	61.95lb 28.1kg
Processor	4x 64-bit 72 total cores	2x 64-bit 32 total cores	2x 64-bit 24 total cores	2x 64-bit 24 total cores
Memory	1024GB	256GB	64GB	64GB
NVRAM	64GB	16GB	8GB	8GB
I/O Expansion Available Slots	20x Slots IO Modules	4x Slots PCIe Gen3	-	-
Ethernet Maximum Ports	32x 40GbE 64x 10GbE	8x 40GbE 24x 10GbE	12x 10GbE	12x 10GbE
Fibre Channel Maximum Ports	64x 32Gb FC 64x 16Gb FC	8x 32Gb FC 24x 16Gb FC	8x 16Gb FC	8x 16Gb FC
SAS Maximum Ports	64x 12Gb SAS	24x 12Gb SAS	4x 12Gb SAS	4x 12Gb SAS
Minimum OS Version	ONTAP 9.1	ONTAP 9.1	ONTAP 9.4	ONTAP 9.4

HYBRID FLASH (E-SERIES)					
E5760	E5724	E2860	E2824	E2812	
DUPLIX SPECIFICATIONS (ACTIVE-ACTIVE DUAL CONTROLLER)					
Raw Capacity Maximum Base-10 Base-2	5.8PB 5.15PB	5.4PB 4.8PB	2.2PB 1.95PB	1.5PB 1.33PB	1.2PB 1.07PB
Storage Network Supported Protocols	FC, iSCSI, InfiniBand (SRP, ISER), NVMe/IB, NVMe/RoCE, SAS	FC, iSCSI, InfiniBand (SRP, ISER), NVMe/IB, NVMe/RoCE, SAS	FC, iSCSI, SAS	FC, iSCSI, SAS	FC, iSCSI, SAS
Dynamic Disk Pools Maximum Quantity	20 Pools	20 Pools	20 Pools	20 Pools	20 Pools
DDP Volumes Maximum Size	2048 Volumes	2048 Volumes	512 Volumes	512 Volumes	512 Volumes
DDP Volume Maximum Size	2 PiB	2 PiB	2 PiB	2 PiB	2 PiB
Drive Quantity Maximum	480	444	180	96	84
Rack Units	4 RU	2 RU	4 RU	2 RU	2 RU
Weight English Metric	239.2lb 108.5kg	50.6lb 22.9kg	238.3lb 108.1kg	50.6lb 22.9kg	60.2lb 27.3kg
Processor	2x 64-bit 16 total cores	2x 64-bit 8 total cores	2x 64-bit 4 total cores	2x 64-bit 4 total cores	2x 64-bit 4 total cores
Memory	128GB 32GB	128GB 32GB	64GB 16GB	64GB 16GB	64GB 16GB
I/O Expansion Available Slots	2	2	2	2	2
FC/iSCSI Network Onboard Ports	4x 10GbE 16Gb FC SFP+	4x 10GbE 16Gb FC SFP+	4x 10GbE 16Gb FC SFP+ or 4x 10GbE RJ45	4x 10GbE 16Gb FC SFP+ or 4x 10GbE RJ45	4x 10GbE 16Gb FC SFP+ or 4x 10GbE RJ45
SAS Expansion Onboard Ports	4x 12Gb SAS miniSAS HD	4x 12Gb SAS miniSAS HD	4x 12Gb SAS miniSAS HD	4x 12Gb SAS miniSAS HD	4x 12Gb SAS miniSAS HD
Minimum OS Version	SANtricity 11.40	SANtricity 11.40	SANtricity 11.30.1	SANtricity 11.30	SANtricity 11.30

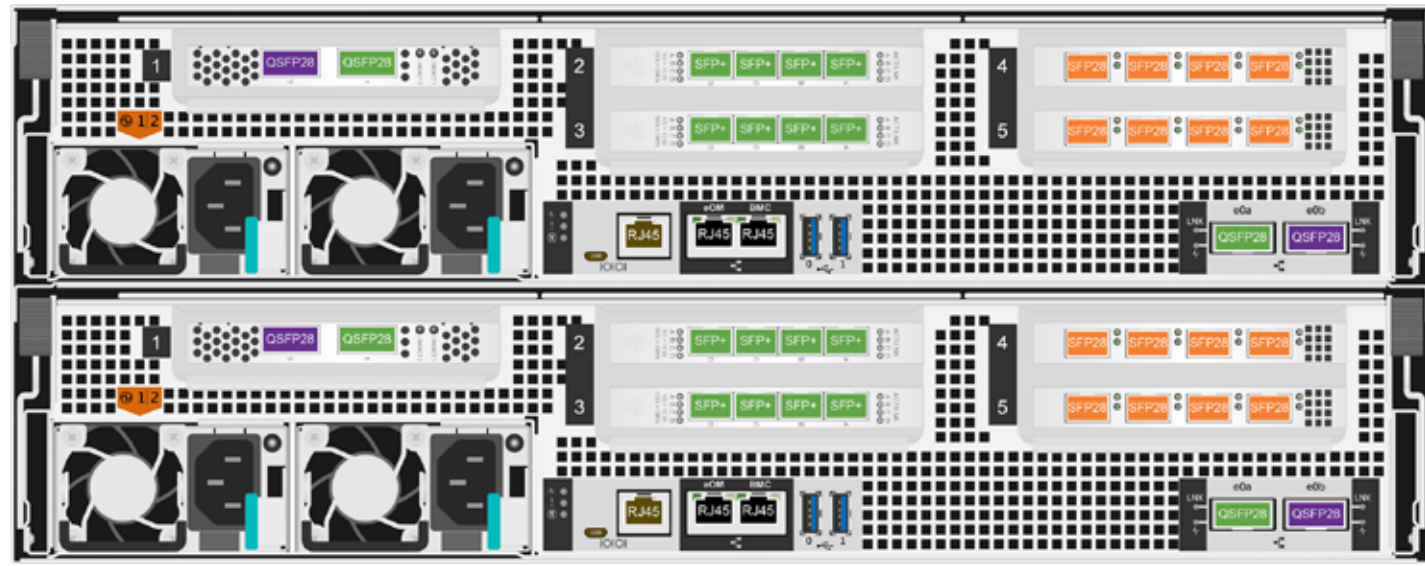
ALL FLASH (EF-SERIES)		
EF570	EF280	
DUPLIX SPECIFICATIONS		
Raw Capacity Maximum Base-10 Base-2	1.8PB 1.6PB	1.5PB 1.33PB
Storage Network Supported Protocols	FC, iSCSI, InfiniBand (SRP, ISER), NVMe/IB, NVMe/RoCE, SAS	FC, iSCSI, SAS
Dynamic Disk Pools Maximum Quantity	20 Pools	20 Pools
DDP Volumes Maximum Size	2048 Volumes	512 Volumes
DDP Volume Maximum Size	2 PiB	2 PiB
Drive Quantity Maximum	120	96
Rack Units	2 RU	2 RU
Weight English Metric	50.6 lb 22.9 kg	50.6 lb 22.9 kg
Processor	2x 64-bit 16 total cores	2x 64-bit 4 total cores
Memory	128GB 32GB	64GB 16GB
I/O Expansion Available Slots	2	2
FC/iSCSI Network Onboard Ports	4x 10GbE 16Gb FC SFP+	4x 10GbE 16Gb FC SFP+ or 4x 10GbE RJ45
SAS Expansion Onboard Ports	4x 12Gb SAS miniSAS HD	4x 12Gb SAS miniSAS HD
Minimum OS Version	SANtricity 11.40	SANtricity 11.40.2

NetApp HCI (2x chassis configuration with 4x storage nodes and 4x compute nodes shown)



Height 3.46" (8.8cm) / Width 17.6" (44.7cm) / Depth 28.34" (72cm)

AFF A800 (configuration shown with optional 4x quad-port 10GbE and 4x quad-port 32Gb FC adapters)



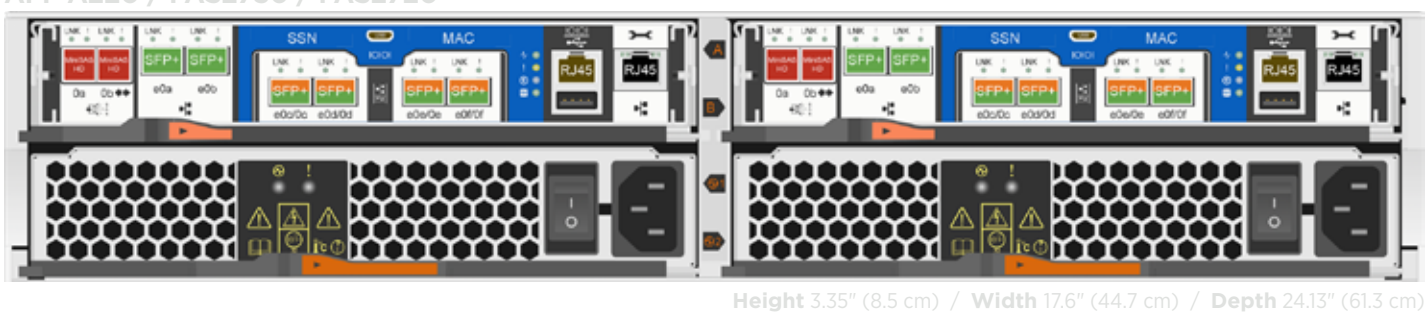
Height 6.89" (175 cm) / Width 17.6" (44.7 cm) / Depth 36.57" (92.9 cm)

EF280 / E2824



Height 3.35" (8.5 cm) / Width 17.6" (44.7 cm) / Depth 24.15" (61.3 cm)

AFF A220 / FAS2750 / FAS2720



Height 5.15" (8.5 cm) / Width 17.6" (44.7 cm) / Depth 24.15" (61.3 cm)

	STANDARD	PREMIUM	EXTREME	EXPLORE	STANDARD	PREMIUM/BYOL ⁵
CLOUD VOLUME SERVICES SPECIFICATIONS Visit cloud.netapp.com for latest information and updates	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Microsoft Azure	Amazon Web Services Microsoft Azure
Cloud Partners Platforms	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Azure NetApp Files Google Cloud Platform	Amazon Web Services Microsoft Azure	Amazon Web Services Microsoft Azure
Storage Network Protocols	NFS, SMB	NFS, SMB	NFS, SMB	NFS, SMB	NFS, SMB, iSCSI	NFS, SMB, iSCSI
Performance IOPS per TB	1000 IOPS 16K IO Size	4000 IOPS 16K IO Size	8000 IOPS 16K IO Size	8000 IOPS 16K IO Size	Up to 10TB	Up to 368TB
Throughput MB/sec per TB	16 MB/second	64 MB/second	128 MB/second	128 MB/second	Up to 2TB	Up to 368TB
Maximum Size Per Cloud Volume	100TB	100TB	100TB	100TB	Up to 10TB	Up to 368TB
Data Management Key Services	Snapshots Clones Replication	Snapshots Clones Replication	Snapshots Clones Replication	Snapshots Clones Replication	Enterprise Workloads SAAS Applications Disaster Recovery Backup and Archive File Services Analytics Dev Ops Database	Enterprise Workloads SAAS Applications Disaster Recovery Backup and Archive File Services Analytics Dev Ops Database
Use Cases	File Services Web Serving File Backup Home Directories	Virtualized Apps Gen Purpose Databases SW Dev Repositories Media Repositories	High Performance Apps Analytics	High Performance Apps Analytics	Enterprise Workloads SAAS Applications Disaster Recovery Backup and Archive File Services Analytics Dev Ops Database	Enterprise Workloads SAAS Applications Disaster Recovery Backup and Archive File Services Analytics Dev Ops Database

AFF A300 / FAS8200 (configuration shown with optional 4x quad-port 16Gb FC adapters)



Height 5.1" (13cm) / Width 17.6" (44.7cm) / Depth 29.9" (76cm)

H-Series H610S Node



Height 1.69" (4.3 cm) / Width 17.32" (44 cm) / Depth 30.7" (78 cm)

SYSTEM CABINET			
SPECIFICATIONS	PART NUMBERS		
Total Rack Space English Metric	42 Rack Units 1 Rack Unit = 17.5"	X870F-QS-C AFF A-Series, FAS	
Height English Metric	79.3" 201.4cm	Empty Cabinet X87000-00 E/EF-Series Domestic	
Width English Metric	24" 60.9cm	X87001-00 E/EF-Series International	
Depth English Metric	50.4" 128cm	X87880A AFF A-Series, FAS	
Empty Weight English Metric	400lb 181kg	Rail Kits ⁴ X-02657-00 FAS2720, DS212C	
Loaded Ship Weight³ English Metric	1800lb 816.5kg	X-02659-00 Super Rail Kit	
Loaded Static Weight⁴ English Metric	2700lb 1224.7kg	Doors X8786A-R6 front X87001A Rear	
Front Service Clearance English Metric	47.2" 120cm	Side Panel X87002A	
Rear Service Clearance English Metric	30" 76.3cm	Blanking Panels X8776B-R6 1 RU X8778B-R6 2 RU	
POWER CONFIGURATIONS			
NEMA 30A Single-Phase	X8712C-R6	NEMA L6-30P 4x input cords	IEC 60320 C13 24x outlets
NEMA 30A 3-Phase Delta	X8719A-R6	NEMA L15-30P 2x input cords	IEC 60320 C13 24x outlets
NEMA 30A 3-Phase Delta	X8720A-R6	NEMA L21-30P 2x input cords	IEC 60320 C13 24x outlets
IEC 32A Single-Phase	X8713C-R6	IEC60309 32A P+N+E 4x input cords	IEC 60320 C13 24x outlets
IEC 32A 3-Phase Wye	X8718A-R6	IEC60309 32A 3P+N+E 2x input cords	IEC 60320 C13 24x outlets
IEC 32A 3			