

# IntelliFlash

## PRODUCT SPECIFICATIONS



IntelliFlash

## ▶ INTELLIFLASH N-SERIES - NVMe™ STORAGE SYSTEMS

MODELS	N6100	N6200
<b>STORAGE CAPACITY</b>		
NVMe FLASH CAPACITY (TB) †	46 to 184	46 to 368
NVMe EFFECTIVE CAPACITY (TB) ‡	Up to 920	Up to 1840
<b>STORAGE CONTROLLERS</b>	<b>DUAL CONTROLLER (ACTIVE/ACTIVE), FULLY REDUNDANT ARCHITECTURE</b>	
ETHERNET DATA I/O PORTS	Up to 8x 40/100GbE, or 8x 10/25GbE	
FIBRE CHANNEL DATA I/O PORTS	Up to 8x 16 Gbps Fibre Channel	
NETWORK ADMIN PORTS	4x 10GbE, 2x 1GbE (IPMI)	
<b>PHYSICAL SPECIFICATONS</b>		
CONTROLLER FORM FACTOR	2RU with 24 NVMe SSD slots	
PHYSICAL DIMENSIONS (HxWxD)	3.4" x 17.6" x 33.5" (87.6mm x 446.4 mm x 850mm)	
WEIGHT (ESTIMATED)	80lbs (36.20kg) (chassis only) 91lbs (41.18kg) (fully populated with 24x SSDs)	
TYPICAL POWER USAGE (WATT)	800W (2730BTU/hr)	900W (3070BTU/hr)
ENVIRONMENTAL SPECIFICATIONS	Operating temperature: 10°C to 35°C (50°F ~ 95°F) Non-operating temperature: -40°C to 70°C (-40°F to 158°F) Operating relative humidity: 8% to 90% (non-condensing) Non-operating relative humidity: 5% to 95% (non-condensing)	
<b>SOFTWARE SERVICES</b>		
BLOCK AND FILE PROTOCOLS	SAN Protocols (iSCSI, Fibre Channel), NAS Protocols (NFS, SMB) Operating relative humidity: 20% to 90% (non-condensing)	
CAPABILITIES	<b>IntelliFlash Operating Environment:</b> Real-time deduplication and compression, snapshots and clones, space efficient thin provisioning, synchronous replication, full featured file services, S3 Cloud Connector, Live Dataset Migration, data-at-rest and data-in-flight encryption	
MANAGEMENT	<b>IntelliFlash web UI, configuration wizard, Analytics for IntelliFlash, VMware plug-in for vCenter and support for vCenter Linked Mode, RBAC, SRA and VAAI NAS; Microsoft SCVMM/SMI-S, IP-KVM, SNMP, PowerShell Toolkit</b>	
HARDWARE AVAILABILITY	Redundant storage controllers, fans, power supplies, and network ports; removable NVMe SSDs, SAS expansion	
<b>WARRANTY</b>		
BASIC	24x7 support via email and phone, next business day hardware replacement for defective parts, and software updates for the first 90 days	
OPTIONAL	Standard and Premier Service <a href="http://tintri.com/company/support/intelliflash-support">tintri.com/company/support/intelliflash-support</a> <a href="http://ddn.com/support/support-plans">ddn.com/support/support-plans</a>	

† Values indicated are RAW capacity. One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drives, the operating system and other factors

‡ Effective capacity includes the benefit of data reduction with inline deduplication and compression. Data Reduction is calculated based on a 5:1 efficiency ratio. This efficiency ratio can vary based on workload type. Where a range is present, the values are Min - Max.

## ▶ INTELLIFLASH H-SERIES - HYBRID STORAGE SYSTEMS

MODELS	N6200
<b>STORAGE CAPACITY</b>	
NVME FLASH CAPACITY (TB) †	46 to 184
HDD RAW CAPACITY (TB) ‡	Up to 920
HYBRID EFFECTIVE CAPACITY (TB)	1440 to 20160
<b>STORAGE CONTROLLERS</b>	<b>Dual controller (active/active), fully redundant architecture</b>
ETHERNET DATA I/O PORTS	Up to 8x 40/100GbE, or 8x 10/25GbE
FIBRE CHANNEL DATA I/O PORTS	Up to 8x 16 Gbps Fibre Channel
NETWORK ADMIN PORTS	4x 10GbE, 2x 1GbE (IPMI)
CONTROLLER FORM FACTOR	2RU (24x NVMe SSDs)
CONTROLLER PHYSICAL DIMENSIONS (HxWxD)	3.4" x 17.6" x 33.5" (87.6mm x 446.4 mm x 850mm)
WEIGHT (ESTIMATED)	Controller: 80lbs (36.20kg) (chassis only) and 91lbs (41.18kg) (fully populated with 24x SSDs) 90-bay expansion shelf: 91lbs (41.18kg) (chassis only) and 233 lbs (105.78kg) (fully populated with 90x HDDs)
ENVIRONMENTAL SPECIFICATIONS	Operating temperature: 10°C to 25°C (50°F to 77°F) Non-operating temperature: -40°C to 70°C (-40°F to 158°F) Operating relative humidity: 20% to 90% (non-condensing) Non-operating relative humidity: 5% to 95% (non-condensing)
EXPANSION SHELVES SUPPORTED PER SYSTEM	4
<b>SOFTWARE SERVICES</b>	
BLOCK AND FILE PROTOCOLS	SAN Protocols (iSCSI, Fibre Channel), NAS Protocols (NFS, SMB) Operating relative humidity: 20% to 90% (non-condensing)
CAPABILITIES	<b>IntelliFlash Operating Environment:</b> Real-time deduplication and compression, snapshots and clones, space efficient thin provisioning, synchronous replication, full featured file services, S3 Cloud Connector, Live Dataset Migration, data-at-rest and data-in-flight encryption
MANAGEMENT	IntelliFlash web UI, configuration wizard, Analytics for IntelliFlash, VMware plug-in for vCenter and support for vCenter Linked Mode, RBAC, SRA and VAAI NAS; Microsoft SCVMM/SMI-S, IP-KVM, SNMP, PowerShell Toolkit
HARDWARE AVAILABILITY	Redundant storage controllers, fans, power supplies, and network ports; removable SSDs and HDDs, SAS expansion
<b>WARRANTY</b>	
BASIC	24x7 support via email and phone, next business day hardware replacement for defective parts, and software updates for the first 90 days
OPTIONAL	Standard and Premier Service <a href="https://tintri.com/company/support/intelliflash-support">tintri.com/company/support/intelliflash-support</a> <a href="https://ddn.com/support/support-plans">ddn.com/support/support-plans</a>

† Values indicated are RAW capacity. One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drives, the operating system and other factors

‡ Effective capacity assumes capacity after dual-parity, data protection, and metadata overhead, and includes the benefit of data reduction with inline deduplication and compression. Data Reduction is calculated based on 4:1 ratio. This efficiency can differ based on workload and or expansion shelf configuration. Where a range is present, the values are Min - Max.

## ► INTELLIFLASH H-SERIES EXPANSION SHELVES

MODELS	H6200	
	HE-720	HE-1260
SHELF TYPE	90-Bay SAS HDD Expansion	
STORAGE CAPACITY		
EXPANSION SHELVES SUPPORTED PER SYSTEM	4	
SUPPORTED HDD MEDIA SIZE (TB)	8	14
RAW CAPACITY (TB)†	360 to 720	630 to 1260
EFFECTIVE CAPACITY (TB)‡	2880	5040
PHYSICAL SPECIFICATIONS		
EXPANSION SHELF FORM FACTOR (EIA RACK UNITS)	4RU	
PHYSICAL DIMENSIONS (HxWxD)	6.9" x 17.56" x 44.52" (175.3mm x 446mm x 1080mm)	
WEIGHT (ESTIMATED)	90-bay expansion shelf: 91lbs (41.18kg) (chassis only) and 233 lbs (105.78kg) (fully populated with 90x HDDs)	
ENVIRONMENTAL SPECIFICATIONS	Operating temperature: 10°C to 35°C (50°F ~ 95°F) Non-operating temperature: -40°C to 70°C (-40°F to 158°F) Operating relative humidity: 8% to 90% (non-condensing) Non-operating relative humidity: 5% to 95% (non-condensing)	

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‡ Effective capacity assumes capacity after dual-parity, data protection, and metadata overhead, and includes the benefit of data reduction with inline deduplication and compression. Data Reduction is calculated based on 4:1 ratio. This efficiency can differ based on workload and or expansion shelf configuration. Where a range is present, the values are Min - Max.

## ▶ INTELLIFLASH T-SERIES - HYBRID STORAGE SYSTEMS

MODELS	HYBRID STORAGE SYSTEM
	T4200
STORAGE CAPACITY	
ALL-FLASH RAW CAPACITY (TB)†	N/A
ALL-FLASH EFFECTIVE CAPACITY (TB)‡	N/A
FLASH AS % OF TOTAL USABLE CAPACITY	20%
HYBRID FLASH RAW CAPACITY (TB)†	5.8 to 40.4
HDD RAW CAPACITY (TB)†	52 to 364
HYBRID EFFECTIVE CAPACITY (TB)‡	156 to 1387
STORAGE CONTROLLERS	Dual Controller (active/active), fully redundant architecture
ETHERNET DATA I/O PORTS	12x 8G or 16x 16G FC
FIBRE CHANNEL DATA I/O PORTS	2x 1GbE, 1x 1GbE (IPMI)
PHYSICAL SPECIFICATIONS	
CONTROLLER FORM FACTOR	Typical Power
PHYSICAL DIMENSIONS (HxWxD)	5.25" x 17.2" x 25.25" (134MM x 437MM x 642MM)
WEIGHT	105lbs (47.63kg)
TYPICAL POWER USAGE (WATT)	441W (1505BTU/hr)
ENVIRONMENTAL SPECIFICATIONS	Operating temperature: 10°C to 25°C (50°F to 77°F) Non-operating temperature: -40°C to 70°C (-40°F to 158°F) Operating relative humidity: 20% to 90% (non-condensing) Non-operating relative humidity: 5% to 95% (non-condensing)
SOFTWARE SERVICES	
BLOCK AND FILE PROTOCOLS	SAN Protocols (iSCSI, Fibre Channel), NAS Protocols (NFS, SMB)
CAPABILITIES	<b>IntelliFlash Operating Environment:</b> Real-time deduplication and compression, snapshots and clones, space efficient thin provisioning, synchronous replication, full featured file services, S3 Cloud Connector, Live Dataset Migration, data-at-rest and data-in-flight encryption
MANAGEMENT	<b>IntelliFlash web UI, configuration wizard, Analytics for IntelliFlash, VMware plug-in for vCenter and support for vCenter Linked Mode, RBAC, SRA and VAAI NAS; Microsoft SCVMM/SMI-S, IP-KVM, SNMP, PowerShell Toolkit</b>
HARDWARE AVAILABILITY	Redundant storage controllers, fans, power supplies, and network ports; removable SSDs and HDDs, SAS expansion
WARRANTY	
BASIC	24x7 support via email and phone, next business day hardware replacement for defective parts and software updates for the first 90 days.
OPTIONAL	Standard and Premier Service <a href="https://tintri.com/company/support/intelliflash-support">tintri.com/company/support/intelliflash-support</a> <a href="https://ddn.com/support/support-plans">ddn.com/support/support-plans</a>

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‡ Effective capacity assumes capacity after dual-parity, data protection, and metadata overhead, and includes the benefit of data reduction with inline deduplication and compression. Data Reduction is calculated based on 80% efficiency. This efficiency can differ based on workload and or expansion shelf configuration. Where a range is present, the values are Min - Max.

## ▶ INTELLIFLASH T-SERIES EXPANSION SHELVES

MODEL	HE-50
SHELF TYPE	Hybrid Flash
STORAGE CAPACITY	
ALL-FLASH RAW CAPACITY (TB)†	5.6
HDD RAW CAPACITY (TB)†	52
ALL-FLASH EFFECTIVE CAPACITY (TB)‡	N/A
PHYSICAL SPECIFICATIONS	
EXPANSION SHELF FORM FACTOR (EIA RACK UNITS)	3RU
PHYSICAL DIMENSIONS (HxWxD)	5.25" x 17.2" x 25.25" (134mm x 437mm x 642mm)
TYPICAL POWER USAGE (WATT)	196W (668BTU/hr)
WEIGHT	105lbs (47.6kg)
PHYSICAL DIMENSIONS (HxWxD)	Operating temperature: 10°C to 35°C (50°F to 95°F) Non-operating temperature: -40°C to 70°C (-40°F to 158°F) Operating relative humidity: 20% to 90% (non-condensing) Non-operating relative humidity: 5% to 95% (non-condensing)

† Values indicated are RAW capacity. One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drives, the operating system and other factors

‡ Effective capacity assumes capacity after dual-parity, data protection, and metadata overhead, and includes the benefit of data reduction with inline deduplication and compression. Data Reduction is calculated based on 80% efficiency. This efficiency can differ based on workload and or expansion shelf configuration. Where a range is present, the values are Min - Max. Min All Flash RAW capacity based on half-populated expansion shelf: FE-100, FE-200, FE-400.

For more information on how DDN IntelliFlash systems can turbo-charge your business success with simplified Intelligent Infrastructure, visit [www.ddn.com/intelliflash](http://www.ddn.com/intelliflash)