

Datasheet

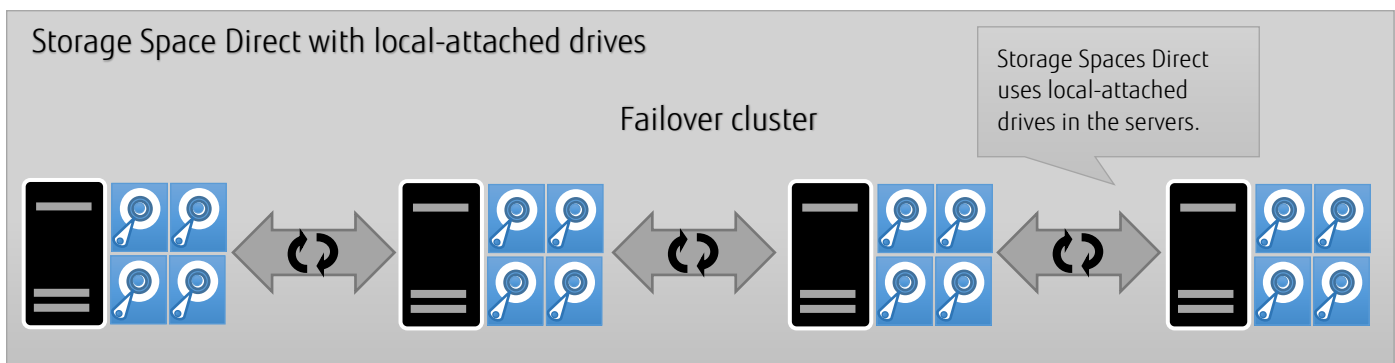
Windows Server 2016

Addendum for Storage Spaces Direct

This data sheet supplements the [Windows Server 2016 Datasheet](#) with specific support information for use of Storage Space Direct.

Overview - Storage Spaces Direct

"Storage Spaces Direct" is a feature in Windows Server 2016 Datacenter that allows creating a failover cluster by just using the local-attached drives (NVMe SSD, SSD SAS, SSD SATA, and HDD SATA) of standard x86-servers. That means no external storage systems (storage arrays, SAN switches) are required anymore.



For more information, please see the following [overview of Storage Space Direct](#).

Support Information

The supported server models for use with "Storage Spaces Direct" are FUJITSU Server PRIMERGY RX2530 M2, RX2540 M2, RX2530 M4 and RX2540 M4. Please note that "Storage Spaces Direct" is only available for Hyper-V workloads or SQL Server workloads.

All LAN controllers supported in Windows Server 2016 are usable for "Storage Spaces Direct". However, SDDC-AQ certified LAN controllers with more than 10 Gbit/s line speed are highly recommended.

Online firmware update is not supported.

It is mandatory to configure a SAS controller for "Storage Spaces Direct" implementations. The SAS controllers currently available are:

- S26361-F3842-E2 PSAS CP400i
- S26361-F3842-L502 PSAS CP400i FH/LP

Please apply the latest PSAS CP400i firmware available for download at: <http://support.ts.fujitsu.com/IndexDownload.asp>

FUJITSU Server PRIMERGY RX2530 M2 and RX2540 M2

Standard configuration rules have to be applied. In addition, a "Storage Space Direct" implementation requires a minimum of 9 disk slots, either already available in the base unit or configured by using a disk expansion option.

For details, please see the following system configurators.

RX2530 M2: <https://sp.ts.fujitsu.com/dmsp/Publications/public/cnfgRX2530M2.pdf>

RX2540 M2: <https://sp.ts.fujitsu.com/dmsp/Publications/public/cnfgRX2540M2.pdf>

The following base units or disk expansion options are available for "Storage Spaces Direct".

Base unit	
S26361-K1565-V501	PY RX2530 M2 10x 2,5'
S26361-K1566-V424	PY RX2540 M2 24x 2,5'
S26361-K1566-V112	PY RX2540 M2 12x 3,5'

Disk expansion option	
S26361-F2495-E450	Config 5: 16x 2.5" HDD
S26361-F2495-L442	Upgr. kit for V401 from 8 to 24x2.5" HDD

Supported HDD/SSDs

HDD SAS (2.5-inch)	SDDC AQ Premium-certified*
S26361-F5543-E190	HD SAS 12G 900GB 10K 512e HOT PL 2.5' EP
S26361-F5543-E112	HD SAS 12G 1.2TB 10K 512e HOT PL 2.5' EP
S26361-F5543-E118	HD SAS 12G 1.8TB 10K 512e HOT PL 2.5' EP
S26361-F5531-E560	HD SAS 12G 600GB 15K HOT PL 2.5' EP
S26361-F5573-E100	HD SAS 12G 1TB 7.2K 512e HOT PL 2.5' BC
S26361-F5573-E200	HD SAS 12G 2TB 7.2K 512e HOT PL 2.5' BC
S26361-F5600-E100	HD SAS 12G 1TB 7.2K 512n HOT PL 2.5' BC
S26361-F5600-E200	HD SAS 12G 2TB 7.2K 512n HOT PL 2.5' BC
S26361-F5550-E190	HD SAS 12G 900G 10K 512n HOT PL 2.5' EP
S26361-F5550-E112	HD SAS 12G 1.2TB 10K 512n HOT PL 2.5' EP
S26361-F5531-E530	HD SAS 12G 300GB 15K HOT PL 2.5' EP
S26361-F5531-E545	HD SAS 12G 450GB 15K HOT PL 2.5' EP

HDD SATA (2.5-inch)	SDDC AQ Premium-certified*
S26361-F3907-E100	HD SATA 6G 1TB 7.2K 512e HOT PL 2.5' BC ✓
S26361-F3907-E200	HD SATA 6G 2TB 7.2K 512e HOT PL 2.5' BC ✓
S26361-F3816-E100	HD SATA 6G 1TB 7.2K HOT PL 2.5' BC
S26361-F3956-E200	HD SATA 6G 2TB 7.2K 512n HOT PL 2.5' BC ✓

HDD SAS (3.5-inch)	SDDC AQ Premium-certified*
S26361-F5571-E200	HD SAS 12G 2TB 7.2K 512e HOT PL 3.5' BC
S26361-F5571-E400	HD SAS 12G 4TB 7.2K 512e HOT PL 3.5' BC
S26361-F5571-E600	HD SAS 12G 6TB 7.2K 512e HOT PL 3.5' BC
S26361-F5571-E800	HD SAS 12G 8TB 7.2K 512e HOT PL 3.5' BC ✓
S26361-F5571-E100	HD SAS 12G 10TB 7.2K 512e HOT PL 3.5' BC ✓
S26361-F5532-E530	HD SAS 12G 300GB 15K HOT PL 3.5' EP
S26361-F5532-E545	HD SAS 12G 450GB 15K HOT PL 3.5' EP
S26361-F5532-E560	HD SAS 12G 600GB 15K HOT PL 3.5' EP
S26361-F5568-E112	HD SAS 12G 1.2TB 10K 512n HOT PL 3.5' EP
S26361-F5569-E118	HD SAS 12G 1.8TB 10K 512e HOT PL 3.5' EP

HDD SATA (3.5-inch)		SDDC AQ Premium-certified*
S26361-F3950-E100	HD SATA 6G 1TB 7.2K HOT PL 3.5' BC	
S26361-F3904-E600	HD SATA 6G 6TB 7.2K 512e HOT PL 3.5' BC	
S26361-F3904-E800	HD SATA 6G 8TB 7.2K 512e HOT PL 3.5' BC	✓
S26361-F3904-E100	HD SATA 6G 10TB 7.2K 512e HOT PL 3.5' BC	✓

SSD (for cache and data storage) SAS (2.5-inch)		SDDC AQ Premium-certified*
S26361-F5608-E400	SSD SAS 12G 400GB Write-Int. 2.5' H-P EP	
S26361-F5608-E800	SSD SAS 12G 800GB Write-Int. 2.5' H-P EP	
S26361-F5608-E160	SSD SAS 12G 1.6TB Write-Int. 2.5' H-P EP	
S26361-F5614-E480	SSD SAS 12G 480GB Mixed-Use 2.5' H-P EP	
S26361-F5614-E960	SSD SAS 12G 960GB Mixed-Use 2.5' H-P EP	
S26361-F5614-E192	SSD SAS 12G 1.92TB Mixed-Use 2.5' H-P EP	
S26361-F5614-E384	SSD SAS 12G 3.84TB Mixed-Use 2.5' H-P EP	

SSD (for cache and data storage) SATA (2.5-inch)		SDDC AQ Premium-certified*
S26361-F5592-E120	SSD SATA 6G 1.2TB Write-Int. 2.5' H-P EP	
S26361-F5592-E200	SSD SATA 6G 200GB Write-Int. 2.5' H-P EP	
S26361-F5592-E400	SSD SATA 6G 400GB Write-Int. 2.5' H-P EP	
S26361-F5592-E800	SSD SATA 6G 800GB Write-Int. 2.5' H-P EP	
S26361-F5588-E120	SSD SATA 6G 120GB Mixed-Use 2.5' H-P EP	
S26361-F5588-E240	SSD SATA 6G 240GB Mixed-Use 2.5' H-P EP	
S26361-F5588-E480	SSD SATA 6G 480GB Mixed-Use 2.5' H-P EP	
S26361-F5588-E960	SSD SATA 6G 960GB Mixed-Use 2.5' H-P EP	
S26361-F5588-E192	SSD SATA 6G 1.92TB Mixed-Use 2.5' H-P EP	

SSD (for cache and data storage) SAS (3.5-inch)		SDDC AQ Premium-certified*
S26361-F5607-E400	SSD SAS 12G 400GB Write-Int. 3.5' H-P EP	
S26361-F5607-E800	SSD SAS 12G 800GB Write-Int. 3.5' H-P EP	
S26361-F5607-E160	SSD SAS 12G 1.6TB Write-Int. 3.5' H-P EP	
S26361-F5612-E480	SSD SAS 12G 480GB Mixed-Use 3.5' H-P EP	
S26361-F5612-E960	SSD SAS 12G 960GB Mixed-Use 3.5' H-P EP	
S26361-F5612-E192	SSD SAS 12G 1.92TB Mixed-Use 3.5' H-P EP	
S26361-F5612-E384	SSD SAS 12G 3.84TB Mixed-Use 3.5' H-P EP	

SSD (for cache and data storage) SATA (3.5-inch)		SDDC AQ Premium-certified*
S26361-F5593-E200	SSD SATA 6G 200GB Write-Int. 3.5' H-P EP	
S26361-F5593-E400	SSD SATA 6G 400GB Write-Int. 3.5' H-P EP	
S26361-F5593-E800	SSD SATA 6G 800GB Write-Int. 3.5' H-P EP	
S26361-F5593-E120	SSD SATA 6G 1.2TB Write-Int. 3.5' H-P EP	
S26361-F5589-E120	SSD SATA 6G 120GB Mixed-Use 3.5' H-P EP	
S26361-F5589-E240	SSD SATA 6G 240GB Mixed-Use 3.5' H-P EP	
S26361-F5589-E480	SSD SATA 6G 480GB Mixed-Use 3.5' H-P EP	
S26361-F5589-E960	SSD SATA 6G 960GB Mixed-Use 3.5' H-P EP	
S26361-F5589-E192	SSD SATA 6G 1.92TB Mixed-Use 3.5' H-P EP	

SSD (for only data storage) SAS (2.5-inch)		SDDC AQ Premium-certified*
S26361-F5617-E480	SSD SAS 12G 480GB Read-Int. 2.5' H-P EP	
S26361-F5617-E960	SSD SAS 12G 960GB Read-Int. 2.5' H-P EP	
S26361-F5617-E192	SSD SAS 12G 1.92TB Read-Int. 2.5' H-P EP	
S26361-F5617-E384	SSD SAS 12G 3.84TB Read-Int. 2.5' H-P EP	

SSD (for only data storage) SAS (3.5-inch)		SDDC AQ Premium-certified*
S26361-F5615-E480	SSD SAS 12G 480GB Read-Int. 3.5' H-P EP	
S26361-F5615-E960	SSD SAS 12G 960GB Read-Int. 3.5' H-P EP	
S26361-F5615-E192	SSD SAS 12G 1.92TB Read-Int. 3.5' H-P EP	
S26361-F5615-E384	SSD SAS 12G 3.84TB Read-Int. 3.5' H-P EP	

*Disks with a check mark in the "SDDC AQ Premium-certified" column are certified as "Software-Defined Data Center (SDDC) AQ Premium" for Windows Server 2016. See also the [Windows Server Catalog](#). When using "FUJITSU Integrated System PRIMEFLEX for Microsoft Storage Spaces Direct", please use only the "SDDC AQ Premium"-certified disks.

FUJITSU Server PRIMERGY RX2530 M4 and RX2540 M4

Standard configuration rules have to be applied. In addition, a "Storage Space Direct" implementation requires a minimum of 9 disk slots, either already available in the base unit or configured by using a disk expansion option.

For details, please see the following system configurators.

RX2530 M4: <https://sp.ts.fujitsu.com/dmsp/Publications/public/cnfgRX2530M4.pdf>

RX2540 M4: <https://sp.ts.fujitsu.com/dmsp/Publications/public/cnfgRX2540M4.pdf>

The following base units and upgrade kits are available for "Storage Spaces Direct".

Base unit		Remarks
S26361-K1592-V501	PY RX2530 M4 10x 2.5'	
S26361-K1592-V601	PY RX2530 M4 10x 2.5' NVMe	Cannot be used with AIC PCIe-SSD
S26361-K1567-V112	PY RX2540 M4 12x 3.5'	
S26361-K1567-V408, and S26361-F2495-E416	PY RX2540 M4 8x 2.5', and Upgrade kit from 8x to 16x 2.5"	
S26361-K1567-V424	PY RX2540 M4 24x 2.5'	
S26361-K1567-V884	PY RX2540 M4 2.5' Hybrid Flash	"Storage Space Direct" can be configured only with PCIe-SSD. It is impossible to configure "Storage Space Direct" by mixing HDD/SSD or HDD/SSD and PCIe-SSD.

If SFF option can be added to the above base unit, it is also possible to configure "Storage Space Direct" by installing PCIe-SSD in the SFF option.

Supported HDDs/SSDs**2.5-inch Disks**

HDD (for capacity only) (5) ^a		SDDC AQ Premium Certified ^b
S26361-F5573-E100	HD SAS 12G 1TB 7.2K 512e HOT PL 2.5" BC	
S26361-F5573-E200	HD SAS 12G 2TB 7.2K 512e HOT PL 2.5" BC	
S26361-F5600-E100	HD SAS 12G 1TB 7.2K 512n HOT PL 2.5" BC	
S26361-F5600-E200	HD SAS 12G 2TB 7.2K 512n HOT PL 2.5" BC	
S26361-F5543-E190	HD SAS 12G 900GB 10K 512e HOT PL 2.5" EP	
S26361-F5543-E112	HD SAS 12G 1.2TB 10K 512e HOT PL 2.5" EP	
S26361-F5543-E118	HD SAS 12G 1.8TB 10K 512e HOT PL 2.5" EP	
S26361-F5550-E190	HD SAS 12G 900GB 10K 512n HOT PL 2.5" EP	
S26361-F5550-E112	HD SAS 12G 1.2TB 10K 512n HOT PL 2.5" EP	
S26361-F5531-E530	HD SAS 12G 300GB 15K HOT PL 2.5" EP	
S26361-F5531-E545	HD SAS 12G 450GB 15K HOT PL 2.5" EP	
S26361-F5531-E560	HD SAS 12G 600GB 15K HOT PL 2.5" EP	
S26361-F5531-E590	HD SAS 12G 900GB 15K HOT PL 2.5" EP	✓
S26361-F5550-E160	HD SAS 12G 600GB 10K 512n HOT PL 2.5" EP	
S26361-F3907-E100	HD SATA 6G 1TB 7.2K 512e HOT PL 2.5" BC	✓
S26361-F3907-E200	HD SATA 6G 2TB 7.2K 512e HOT PL 2.5" BC	✓
S26361-F3956-E100	HD SATA 6G 1TB 7.2K 512n HOT PL 2.5" BC	✓
S26361-F3956-E200	HD SATA 6G 2TB 7.2K 512n HOT PL 2.5" BC	✓
SSD SAS (for cache and capacity) (3) ^a		SDDC AQ Premium Certified ^b
S26361-F5608-E400	SSD SAS 12G 400GB Write-Int. 2.5" H-P EP	
S26361-F5608-E800	SSD SAS 12G 800GB Write-Int. 2.5" H-P EP	
S26361-F5608-E160	SSD SAS 12G 1.6TB Write-Int. 2.5" H-P EP	
S26361-F5670-E768	SSD SAS 12G 7.68TB Read-Int. 2.5" H-P EP	✓
S26361-F5666-E400	SSD SAS 12G 400GB Mixed-Use 2.5" H-P EP	✓
S26361-F5666-E800	SSD SAS 12G 800GB Mixed-Use 2.5" H-P EP	✓
S26361-F5666-E160	SSD SAS 12G 1.6TB Mixed-Use 2.5" H-P EP	✓

S26361-F5666-E320	SSD SAS 12G 3.2TB Mixed-Use 2.5" H-P EP	✓
SSD SATA (for cache and capacity) (3)^a		SDDC AQ Premium Certified^b
S26361-F5588-E240	SSD SATA 6G 240GB Mixed-Use 2.5" H-P EP	
S26361-F5588-E480	SSD SATA 6G 480GB Mixed-Use 2.5" H-P EP	
S26361-F5588-E960	SSD SATA 6G 960GB Mixed-Use 2.5" H-P EP	
S26361-F5588-E192	SSD SATA 6G 1.92TB Mixed-Use 2.5" H-P EP	
S26361-F5675-E240	SSD SATA 6G 240GB Mixed-Use 2.5" H-P EP	✓
S26361-F5675-E480	SSD SATA 6G 480GB Mixed-Use 2.5" H-P EP	✓
S26361-F5694-E240	SSD SATA6G 240GB Mixed-Use 2.5" HP S4600	✓
S26361-F5694-E480	SSD SATA6G 480GB Mixed-Use 2.5" HP S4600	✓
S26361-F5694-E960	SSD SATA6G 960GB Mixed-Use 2.5" HP S4600	✓
S26361-F5694-E192	SSD SATA6G 1.92TB Mix-Use 2.5" HP S4600	✓
SSD SAS (for capacity only) (4)^a		SDDC AQ Premium Certified^b
S26361-F5670-E480	SSD SAS 12G 480GB Read-Int. 2.5" H-P EP	✓
S26361-F5670-E960	SSD SAS 12G 960GB Read-Int. 2.5" H-P EP	✓
S26361-F5670-E192	SSD SAS 12G 1.92TB Read-Int. 2.5" H-P EP	✓
S26361-F5670-E384	SSD SAS 12G 3.84TB Read-Int. 2.5" H-P EP	✓
SSD SATA (for capacity only) (4)^a		SDDC AQ Premium Certified^b
S26361-F5632-E240	SSD SATA 6G 240GB Read-Int. 2.5" H-P EP	✓
S26361-F5632-E480	SSD SATA 6G 480GB Read-Int. 2.5" H-P EP	✓
S26361-F5632-E800	SSD SATA 6G 800GB Read-Int. 2.5" H-P EP	✓
S26361-F5632-E960	SSD SATA 6G 960GB Read-Int. 2.5" H-P EP	✓
S26361-F5632-E120	SSD SATA 6G 1.2TB Read-Int. 2.5" H-P EP	✓
S26361-F5632-E160	SSD SATA 6G 1.6TB Read-Int. 2.5" H-P EP	✓
S26361-F5701-E240	SSD SATA 6G 240GB Read-Int. 2.5" H-P EP	✓
S26361-F5701-E480	SSD SATA 6G 480GB Read-Int. 2.5" H-P EP	✓
S26361-F5701-E960	SSD SATA 6G 960GB Read-Int. 2.5" H-P EP	✓
S26361-F5701-E192	SSD SATA 6G 1.92TB Read-Int. 2.5" H-P EP	✓
S26361-F5701-E384	SSD SATA 6G 3.84TB Read-Int. 2.5" H-P EP	✓
S26361-F5701-E768	SSD SATA 6G 7.68TB Read-Int. 2.5" H-P EP	✓
SFF PCIe-SSD (for cache and capacity) (1)^a		SDDC AQ Premium Certified^b
S26361-F5648-E160	SSD PCIe3 1.6TB Mixed-Use 2.5" H-P EP	✓
S26361-F5648-E320	SSD PCIe3 3.2TB Mixed-Use 2.5" H-P EP	✓
S26361-F5648-E640	SSD PCIe3 6.4TB Mixed-Use 2.5" H-P EP	✓
SFF PCIe-SSD (for capacity only) (2)^a		SDDC AQ Premium Certified^b
S26361-F5649-E50	SSD PCIe3 500GB Read-Int. 2.5" H-P LP	✓
S26361-F5649-E100	SSD PCIe3 1TB Read-Int. 2.5" H-P LP	✓
S26361-F5649-E200	SSD PCIe3 2TB Read-Int. 2.5" H-P LP	✓
S26361-F5649-E400	SSD PCIe3 4TB Read-Int. 2.5" H-P LP	✓

^a Numbers in parentheses denote Disk Categories. Please refer to Table 2 in the "Technical Notes on Storage Spaces Direct (S2D)" section below.

^b Items with a ✓ mark are certified as "Software-Defined Data Center (SDDC) AQ Premium" for Windows Server 2016. Please see the [Windows Server Catalog](#) and the [Windows Server Software-Defined Datacenter \(WSSD\)](#) certification program. Please use "SDDC AQ Premium" certified disks only for Fujitsu PRIMEFLEX Integrated Systems for Microsoft Storage Spaces Direct.

3.5-inch Disks

HDD SAS (for capacity only) (5)^a		SDDC AQ Premium Certified^b
S26361-F5635-E200	HD SAS 12G 2TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F5635-E400	HD SAS 12G 4TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F5635-E600	HD SAS 12G 6TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F5571-E800	HD SAS 12G 8TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F5571-E100	HD SAS 12G 10TB 7.2K 512e HOT PL 3.5" BC	✓

S26361-F5571-E120	HD SAS 12G 12TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F5626-E100	HD SAS 12G 1TB 7.2K HOT PL 3.5" BC	✓
S26361-F5626-E200	HD SAS 12G 2TB 7.2K HOT PL 3.5" BC	✓
S26361-F5626-E400	HD SAS 12G 4TB 7.2K HOT PL 3.5" BC	✓
S26361-F5569-E118	HD SAS 12G 1.8TB 10K 512e HOT PL 3.5" EP	
S26361-F5532-E530	HD SAS 12G 300GB 15K HOT PL 3.5" EP	
S26361-F5532-E545	HD SAS 12G 450GB 15K HOT PL 3.5" EP	
S26361-F5532-E560	HD SAS 12G 600GB 15K HOT PL 3.5" EP	
S26361-F5532-E590	HD SAS 12G 900GB 15K HOT PL 3.5" EP	✓
S26361-F5568-E160	HD SAS 12G 600GB 10K 512n HOT PL 3.5" EP	
S26361-F5568-E112	HD SAS 12G 1.2TB 10K 512n HOT PL 3.5" EP	
HDD SATA (for capacity only) (5)^a		SDDC AQ Premium Certified^b
S26361-F5636-E100	HD SATA 6G 1TB 7.2K HOT PL 3.5" BC	✓
S26361-F5636-E200	HD SATA 6G 2TB 7.2K HOT PL 3.5" BC	✓
S26361-F5636-E400	HD SATA 6G 4TB 7.2K HOT PL 3.5" BC	✓
S26361-F5638-E600	HD SATA 6G 6TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F3904-E800	HD SATA 6G 8TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F3904-E100	HD SATA 6G 10TB 7.2K 512e HOT PL 3.5" BC	✓
S26361-F3904-E120	HD SATA 6G 12TB 7.2K 512e HOT PL 3.5" BC	✓
SSD SAS (for cache and capacity) (3)^a		SDDC AQ Premium Certified^b
S26361-F5607-E400	SSD SAS 12G 400GB Write-Int. 3.5" H-P EP	
S26361-F5607-E800	SSD SAS 12G 800GB Write-Int. 3.5" H-P EP	
S26361-F5607-E160	SSD SAS 12G 1.6TB Write-Int. 3.5" H-P EP	
S26361-F5668-E768	SSD SAS 12G 7.68TB Read-Int. 3.5" H-P EP	✓
S26361-F5662-E400	SSD SAS 12G 400GB Mixed-Use 3.5" H-P EP	✓
S26361-F5662-E800	SSD SAS 12G 800GB Mixed-Use 3.5" H-P EP	✓
S26361-F5662-E160	SSD SAS 12G 1.6TB Mixed-Use 3.5" H-P EP	✓
S26361-F5662-E320	SSD SAS 12G 3.2TB Mixed-Use 3.5" H-P EP	✓
SSD SATA (for cache and capacity) (3)^a		SDDC AQ Premium Certified^b
S26361-F5589-E240	SSD SATA 6G 240GB Mixed-Use 3.5" H-P EP	
S26361-F5589-E480	SSD SATA 6G 480GB Mixed-Use 3.5" H-P EP	
S26361-F5589-E960	SSD SATA 6G 960GB Mixed-Use 3.5" H-P EP	
S26361-F5589-E192	SSD SATA 6G 1.92TB Mixed-Use 3.5" H-P EP	
S26361-F5673-E240	SSD SATA 6G 240GB Mixed-Use 3.5" H-P EP	✓
S26361-F5673-E480	SSD SATA 6G 480GB Mixed-Use 3.5" H-P EP	✓
S26361-F5692-E240	SSD SATA6G 240GB Mixed-Use 3.5" HP S4600	✓
S26361-F5692-E480	SSD SATA6G 480GB Mixed-Use 3.5" HP S4600	✓
S26361-F5692-E960	SSD SATA6G 960GB Mixed-Use 3.5" HP S4600	✓
S26361-F5692-E192	SSD SATA6G 1.92TB Mix-Use 3.5" HP S4600	✓
SSD SAS (for capacity only) (4)^a		SDDC AQ Premium Certified^b
S26361-F5668-E480	SSD SAS 12G 480GB Read-Int. 3.5" H-P EP	✓
S26361-F5668-E960	SSD SAS 12G 960GB Read-Int. 3.5" H-P EP	✓
S26361-F5668-E192	SSD SAS 12G 1.92TB Read-Int. 3.5" H-P EP	✓
S26361-F5668-E384	SSD SAS 12G 3.84TB Read-Int. 3.5" H-P EP	✓
SSD SATA (for capacity only) (4)^a		SDDC AQ Premium Certified^b
S26361-F5630-E240	SSD SATA 6G 240GB Read-Int. 3.5" H-P EP	✓
S26361-F5630-E480	SSD SATA 6G 480GB Read-Int. 3.5" H-P EP	✓
S26361-F5630-E800	SSD SATA 6G 800GB Read-Int. 3.5" H-P EP	✓
S26361-F5630-E960	SSD SATA 6G 960GB Read-Int. 3.5" H-P EP	✓
S26361-F5630-E120	SSD SATA 6G 1.2TB Read-Int. 3.5" H-P EP	✓
S26361-F5630-E160	SSD SATA 6G 1.6TB Read-Int. 3.5" H-P EP	✓

S26361-F5700-E240	SSD SATA 6G 240GB Read-Int. 3.5" H-P EP	✓
S26361-F5700-E480	SSD SATA 6G 480GB Read-Int. 3.5" H-P EP	✓
S26361-F5700-E960	SSD SATA 6G 960GB Read-Int. 3.5" H-P EP	✓
S26361-F5700-E192	SSD SATA 6G 1.92TB Read-Int. 3.5" H-P EP	✓
S26361-F5700-E384	SSD SATA 6G 3.84TB Read-Int. 3.5" H-P EP	✓
S26361-F5700-E768	SSD SATA 6G 7.68TB Read-Int. 3.5" H-P EP	✓

^a Numbers in parentheses denote Disk Categories. Please refer to Table 2 in the "Technical Notes on Storage Spaces Direct (S2D)" section below.

^b Items with a ✓ mark are certified as "Software-Defined Data Center (SDDC) AQ Premium" for Windows Server 2016. Please see the [Windows Server Catalog](#) and the [Windows Server Software-Defined Datacenter \(WSSD\)](#) certification program. Please use "SDDC AQ Premium" certified disks only for Fujitsu PRIMEFLEX Integrated Systems for Microsoft Storage Spaces Direct.

AIC PCIe-SSDs

AIC PCIe-SSD (for cache and capacity) (1) ^a		SDDC AQ Premium Certified ^b
S26361-F5650-E200	PACC EP P4600 AIC 2TB Mixed-Use	✓
S26361-F5650-E400	PACC EP P4600 AIC 4TB Mixed-Use	✓

^a Numbers in parentheses denote Disk Categories. Please refer to Table 2 in the "Technical Notes on Storage Spaces Direct (S2D)" section below.

^b Items with a ✓ mark are certified as "Software-Defined Data Center (SDDC) AQ Premium" for Windows Server 2016. Please see the [Windows Server Catalog](#) and the [Windows Server Software-Defined Datacenter \(WSSD\)](#) certification program. Please use "SDDC AQ Premium" certified disks only for Fujitsu PRIMEFLEX Integrated Systems for Microsoft Storage Spaces Direct.

Technical Notes on Storage Spaces Direct (S2D)

Storage Spaces Direct makes it possible to combine multiple physical disks of different kinds into what is called a "storage pool" – a scalable, virtual storage space. S2D automatically detects what kind of disk is available and determines whether a given disk is to be used as a cache or a capacity disk; disks of the highest quality will be used as cache disks, and the remaining disks are to be used as capacity disks. To be included in a storage pool, a server must contain at least 2 cache disks and at least 4 capacity disks.

PCIe SSDs, SSDs, and HDDs can be combined in many different ways to form storage pools. Table 1 shows six such patterns and refers to the storage pools thus formed as Storage Pool A to F.

Table 1 How PCIe SSDs, SSDs, and HDDs Can Be Combined to Form Storage Pools

Storage Pool	PCIe SSD	SSD	HDD
A	--	≥2 cache disks	≥4 capacity disks
B	≥2 cache disks	--	≥4 capacity disks
C	≥2 cache disks	≥4 capacity disks	--
D	≥2 cache disks	≥4 capacity disks (can be combined with HDDs)	≥4 capacity disks (can be combined with SSDs)
E	--	≥4 capacity disks	--
F	≥4 capacity disks	--	--

Some SSDs are meant to be used as cache disks, while other SSDs as capacity disks. HDDs can be used only as capacity disks. The lists of 2.5-inch disks, 3.5-inch disks, and AIC PCIe-SSDs in the previous section classify PCIe SSDs, SSDs, and HDDs according to the purpose for which they are to be used in a storage pool (i.e., whether to be used as cache or capacity disks). Those disks can be grouped into five categories. Table 2 summarizes them and refers to them as Disk Category 1 to 5. The Disk Categories and the numbers in the aforementioned lists of disks are cross-referenced.

Table 2 Disk Category and Purpose

Disk Category	Purpose
1	PCIe SSDs (for cache and capacity)
2	PCIe SSDs (for capacity only)
3	SSDs (for cache and capacity)
4	SSDs (for capacity only)
5	HDDs (for capacity only)

Table 3 shows which Disk Category's disks are to be used for Storage Pool A to F. For example, Storage Pool A can consist of cache disks from Disk Category 3 and capacity disks from Disk Category 5. Please refer to your PRIMERGY server's technical specifications to determine which disks can be used with your system.

Table 3 Storage Pool by Disk Category

Storage Pool	Disk Category	
	For Cache	For Capacity
A	3	5
B	1	5
C	1	3 or 4
D	1	3 and 5, 4 and 5
E	--	3 or 4 (3 and 4 can be combined)
F	--	1 or 2

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