Lenovo ThinkSystem RAID 530 Series Internal RAID Adapters
Product Guide

The ThinkSystem RAID 530 family are entry-level 12 Gb SAS/SATA internal RAID adapters that offer a cost-effective RAID solution for small to medium business customers. These cacheless adapters support RAID levels 0/1/10/5/50, and include an extensive list of RAS and management features.

The family is comprised of three adapters:

- The ThinkSystem RAID 530-4i supports up to four internal SAS and SATA drives
- The ThinkSystem RAID 530-8i supports up to eight internal SAS and SATA drives
- The ThinkSystem RAID 530-16i supports up to 16 internal SAS and SATA drives

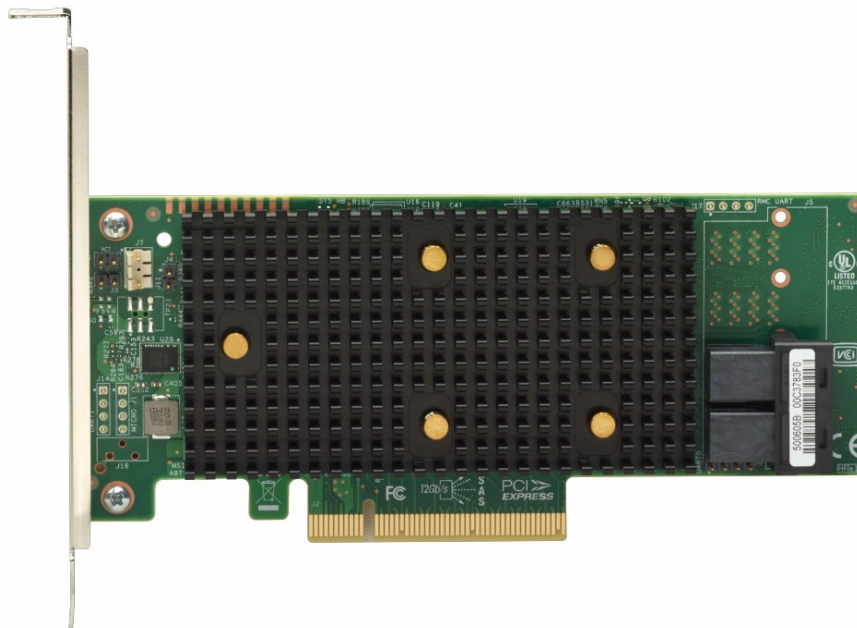The ThinkSystem RAID 530-8i is shown in the following figure.

Figure 1. ThinkSystem RAID 530-8i PCIe 12Gb Adapter

Did you know?

Along with an extensive list of enterprise RAID capabilities, the RAID 530 Series adapters offer advanced drive diagnostic technologies. In the event of a physical drive failure, the drive is placed in a shielded state and the controller starts drive diagnostics to determine if the drive is indeed failed or can be restored. This saves time, money and server downtime associated with transient drive failures and unnecessary drive replacement.

Part number information

The following table provides the ordering part numbers for the adapters.

Table 1. Part numbers and feature codes

Part number	Feature code	Description
4Y37A09727	B6CE	ThinkSystem RAID 530-16i PCIe 12Gb Adapter
7Y37A01082	AUNG	ThinkSystem RAID 530-8i PCIe 12Gb Adapter
7M27A03918	AUYR	ThinkSystem RAID 530-4i 2 Drive Adapter Kit for SN550
7M17A03932	AVEC	ThinkSystem RAID 530-4i 4 Drive Adapter Kit for SN850
4C57A16216	AUYK	ThinkSystem SD530 HW RAID Kit (530-8i for SD530)
4Y37A16225	B5MP	ThinkSystem SR670 RAID 530-8i PCIe Adapter

The following figure shows the ThinkSystem RAID 530-16i PCIe 12Gb Adapter.
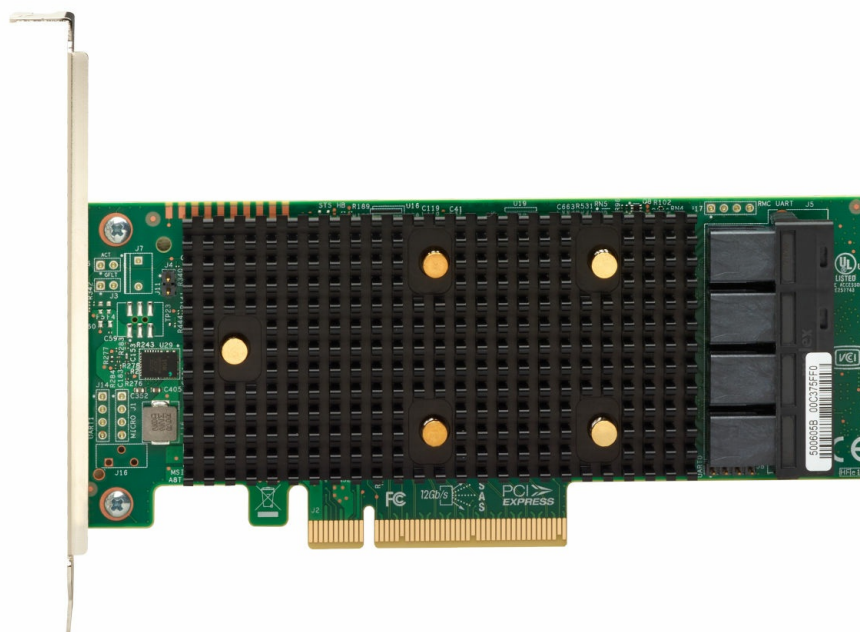

Figure 2. ThinkSystem RAID 530-16i PCIe 12Gb Adapter

Technical specifications

The ThinkSystem RAID 530 Series internal RAID adapters have the following specifications:

- PCIe 3.0 x8 host interface
- 12 Gbps SAS/SATA RAID controllers, based on the Broadcom MegaRAID 9440 adapter family
- Cacheless (not upgradeable)
- Connectivity for up to 4 or 8 or 16 internal SAS or SATA drives, depending on the adapter selected
- Support for intermixing SAS and SATA HDDs and SSDs. Mixing SAS and SATA drives in the same array is not supported. Mixing of HDDs and SSDs in the same array is not supported.
- Support for intermixing of 12 Gbps and 6 Gbps drives.
- Support for RAID 0, 1, 10, 5, and 50 standard, with these exceptions:

- The RAID 530-16i adapter only supports RAID 0, 1 and 10
  - The RAID 530-4i supports only RAID 0, 1 in the SN550 and RAID 0, 1, 10, 5 in the SN850 because those blade servers only support two and four drives respectively
- Support for JBOD (non-RAID) drive state
- Support for up to 64 virtual disks, up to 128 arrays, up to 16 virtual disks per array
- Support for logical drive sizes greater than 2 TB.
- Fixed 64 KB stripe size
- Supports 512e, 512n and 4K sector formatted drives
- Supports TRIM/UNMAP commands for SAS and SATA SSDs
- Compliant with Disk Data Format (DDF) configuration on disk (CoD).
- S.M.A.R.T. support.
- Configuration through
  - XClarity Provisioning Manager UEFI interface
  - XClarity Controller web interface
  - XClarity Administrator Configuration Patterns
  - StorCLI command-line interface
  - LSI Storage Authority (LSA) GUI interface
  - UEFI Human Interface Infrastructure (HII)

Note: CacheCade is not supported by these adapters

The following table compares the specifications of the RAID 530 internal adapters.

Table 2. Specifications

Feature	SD530 adapter	RAID 530-4i	RAID 530-8i	RAID 530-16i
Part number	Feature AUYK	7M27A03918 7M17A03932	7Y37A01082* 4Y37A16225*	4Y37A09727
Form factor	Custom	Custom	PCIe low profile	PCIe low profile
Controller chip	LSI SAS3408	LSI SAS3404	LSI SAS3408	LSI SAS3416
Host interface	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8	PCIe 3.0 x8
Port interface	12 Gb SAS	12 Gb SAS	12 Gb SAS	12 Gb SAS
Number of ports	6	2 or 4†	8	16
Port connectors	2x SlimSAS x4	1x Mini-SAS HD x4 (SFF-8643)	2x Mini-SAS HD x4 (SFF-8643)	4x Mini-SAS HD x4 (SFF-8643)
Drive interface	SAS, SATA	SAS, SATA	SAS, SATA	SAS, SATA
Drive type	HDD, SSD	HDD, SED, SSD	HDD, SED, SSD	HDD, SED, SSD
Hot-swap drives	Yes	Yes	Yes	Yes
Max devices	6	2 or 4†	8	16
RAID levels	0, 1, 10, 5, 50	0, 1, 10, 5†	0, 1, 10, 5, 50	0, 1, 10
JBOD mode	Yes	Yes	Yes	Yes
Cache	None	None	None	None
CacheVault cache protection	No	No	No	No
Performance Accelerator (FastPath)	No	Yes	Yes	Yes
SED support (SafeStore)	Yes	Yes	Yes	Yes

† The 530-4i adapter for use in the SN550 blade server only supports RAID 0 and RAID 1 because the server has only two drives. The 530-4i adpater for use in the SN850 blade server only supports RAID 0, 1, 5 and 10 because the server has only four drives.
* The only technical difference between 7Y37A01082 and 4Y37A16225 is the included cables.

The following figure shows the ThinkSystem SD530 HW RAID adapter.

Figure 3. ThinkSystem SD530 HW RAID adapter

Features

The ThinkSystem RAID 530 adapters have the following standard features:

- MegaRAID FastPath SSD performance acceleration

  MegaRAID FastPath software provides high-performance I/O acceleration for SSD-based virtual drives by using a low latency I/O path to increase the maximum I/O per second (IOPS) capability of the controller. This feature boosts the performance of applications with a highly random data storage access pattern, such as transactional databases.

- Auto-resume on array rebuild or array reconstruction after the loss of system power

  Auto-resume uses non-volatile RAM (NVRAM) to save the rebuild progress during a host reboot or power failure to automatically resume from the last checkpoint. Auto-resume ensures that data integrity is maintained throughout the process. The card supports a number of features that can be implemented without rebooting the server. Applications, such as email and web server, benefit from avoiding downtime during the transition.

- Online Capacity Expansion

  Online Capacity Expansion (OCE) allows the capacity of a virtual disk to be expanded by adding new physical disks or making use of unused space on existing disks, without requiring a reboot.

- Online RAID Level Migration

  Online RAID Level Migration (RLM), which is also known as logical drive migration, can migrate a virtual disk from any RAID level to any other RAID level without requiring a reboot. System availability and application functionality remain unaffected.

- Fast initialization for quick array setup

  Fast initialization quickly writes zeros to the first and last sectors of the virtual drive. This feature allows you to immediately start writing data to the virtual drive while the initialization is running in the background.

- Consistency check for background data integrity

  Consistency check verifies that all stripes in a virtual disk with a redundant RAID level are consistent. The consistency check mirrors data when an inconsistent stripe is detected for RAID 1 and re-creates the parity from the peer disks for RAID 5 or RAID 6. Consistency checks can be scheduled to take place periodically.

- Extensive online configuration options and advanced monitoring and event notification

  Management tools provide convenience for the configuration of logical volumes and alerting when errors have occurred or are about to occur.

- Patrol read for media scanning and repairing

  Patrol read is a background sentry service that pro-actively discovers and corrects media defects (bad sectors) that arise normally as a disk drive ages. The service issues a series of verify commands, and if a bad block is discovered, the card's firmware uses RAID algorithms to re-create the missing data and remap the sector to a good sector. The task is interruptible based on controller activity and host operations. The firmware also provides an interface where the patrol read task can be initiated, set up for continuous operation, and terminated from a management application. Patrol read can be activated by a manual command or automatically.

- Global and dedicated hot spare with revertible hot spare support

  A hot spare rebuilds data from all virtual disks within the disk group in which it is configured. You can define a physical disk as a hot spare to replace a failed drive. Hot spares can be configured as either global or dedicated. A global hot spare allows any physical drive to be designated as a hot spare. A dedicated hot spare allows the user to assign a hot spare drive to a particular array of the same drive type.

- Drive roaming

  Drive roaming occurs when the physical disks are changed to different ports on the same controller. When the drives are placed on different channels, the controller detects the RAID configuration from the configuration data on the drives.

- MegaRAID SafeStore support for self-encrypting drive (SED) services

  MegaRAID SafeStore encryption services offer instant secure erase and local key management for self-encrypting drives. This technology represents a step forward in securing data on a disk drive from any unauthorized access or modification resulting from theft, loss, or repurposing of drives. Instant secure erase permanently removes data when repurposing or decommissioning SEDs. SafeStore local key management provides the necessary management and protection of SEDs by using a simple pass phrase, security key identifier, and security key file that can be set and applied to all SEDs that are assigned to a RAID adapter. This feature removes the complexity of managing each SED's unique encryption key, and it essentially relieves the administrator of most of the daily tasks of securing data.

- XClarity Provisioning Manager for pre-boot array configuration and management

  Provisioning Manager is the ThinkSystem UEFI-based application that includes a RAID setup wizard to help you configure drive groups and virtual disks before installing or booting the operating system.

- XClarity Controller web interface for remote storage management

  XClarity Controller (XCC) is the systems management processor integrated in all ThinkSystem servers. The XCC web interface allows you to perform storage inventory, create and edit virtual disks, view events, import a new controller configuration, and perform firmware updates on the adapter.

Note: MegaRAID CacheCade and MegaRAID Storage Manager are not supported.

Server support

The following tables list the ThinkSystem servers that are compatible.

Table 3. ThinkSystem server support (Part 1)

		Intel 2S								AMD Rack			
Part number	Description	ST550 (7X09/7X10)	SR530 (7X07/7X08)	SR550 (7X03/7X04)	SR570 (7Y02/7Y03)	SR590 (7X98/7X99)	SR630 (7X01/7X02)	SR650 (7X05/7X06)	SR670 (7Y36/37/38)	SR635 (7Y98/7Y99)	SR655 (7Y00/7Z01)	SR645 (7D2Y/7D2X)	SR665 (7D2W/7D2V)
4Y37A09727	ThinkSystem RAID 530-16i PCIe 12Gb Adapter	N	N	N	Y	Y	Y	Y	N	N	N	Y	Y
7Y37A01082	ThinkSystem RAID 530-8i PCIe 12Gb Adapter	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
7M27A03918	ThinkSystem RAID 530-4i 2 Drive Adapter Kit for SN550	N	N	N	N	N	N	N	N	N	N	N	N
7M17A03932	ThinkSystem RAID 530-4i 4 Drive Adapter Kit for SN850	N	N	N	N	N	N	N	N	N	N	N	N
4C57A16216	ThinkSystem SD530 HW RAID Kit	N	N	N	N	N	N	N	N	N	N	N	N
4Y37A16225	ThinkSystem SR670 RAID 530-8i PCIe Adapter	N	N	N	N	N	N	N	Y	N	N	N	N

Table 4. ThinkSystem server support (Part 2)

		E	1S Intel				4S Intel				Dense/ Blade			
Part number	Description	SE350 (7Z46/7D1X)	ST50 (7Y48/7Y50)	ST250 (7Y45/7Y46)	SR150 (7Y54)	SR250 (7Y51/7Y52)	SR850 (7X18/7X19)	SR850P (7D2F/2D2G)	SR860 (7X69/7X70)	SR950 (7X11/12/13)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
4Y37A09727	ThinkSystem RAID 530-16i PCIe 12Gb Adapter	N	N	N	N	N	N	N	N	N	N	N	N	N
7Y37A01082	ThinkSystem RAID 530-8i PCIe 12Gb Adapter	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
7M27A03918	ThinkSystem RAID 530-4i 2 Drive Adapter Kit for SN550	N	N	N	N	N	N	N	N	N	N	N	Y	N
7M17A03932	ThinkSystem RAID 530-4i 4 Drive Adapter Kit for SN850	N	N	N	N	N	N	N	N	N	N	N	N	Y
4C57A16216	ThinkSystem SD530 HW RAID Kit	N	N	N	N	N	N	N	N	N	Y	N	N	N
4Y37A16225	ThinkSystem SR670 RAID 530-8i PCIe Adapter	N	N	N	N	N	N	N	N	N	N	N	N	N

The following figure shows the ThinkSystem RAID 530-4i adapter for both the SN550 and the SN850 blade servers. Note that the plastic frame in the lower right of the adapter is part of the mechanism that attaches the adapter to the server; the adapter does not support a supercapacitor.
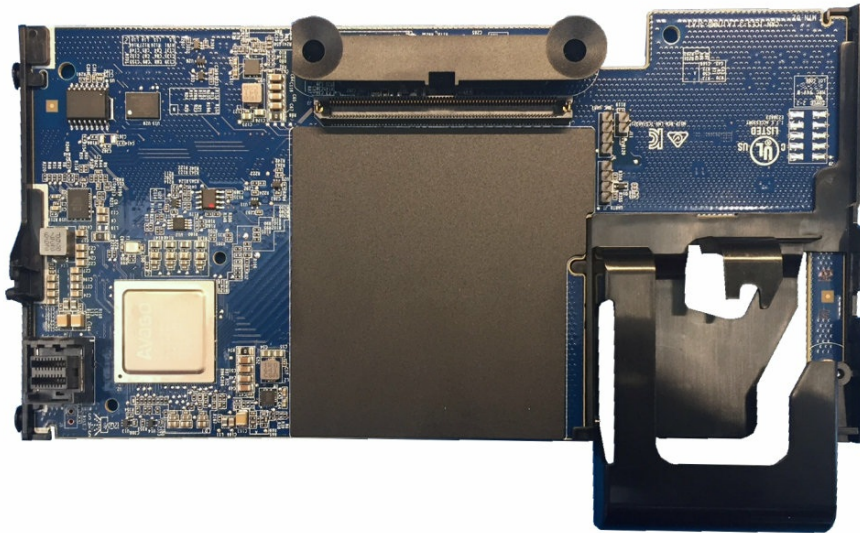

Figure 4. ThinkSystem RAID 530-4i adapter for Flex (included heatsink not shown)

Operating system support

Table 5. Operating system support for ThinkSystem RAID 530-8i PCIe 12Gb Adapter, 7Y37A01082 (Part 1 of 2)

Operating systems	SR250	ST250	ST50	SR635	SR655	SR530 (Gen 2)	SR550 (Gen 2)	SR570 (Gen 2)	SR590 (Gen 2)	SR630 (Gen 2)	SR650 (Gen 2)	SR670 (Gen 2)	SR850 (Gen 2)	SR850P	SR860 (Gen 2)	SR950 (Gen 2)	ST550 (Gen 2)
Microsoft Windows Server 2012 R2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Microsoft Windows Server version 1709	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server version 1803	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6.10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.5	Y	Y	Y	N	N	N	N	N	N	N	N	Y	N	N	N	N	N
Red Hat Enterprise Linux 7.6	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Red Hat Enterprise Linux 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 11 SP4 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP2 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP3	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N
SUSE Linux Enterprise Server 12 SP3 with Xen	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N
SUSE Linux Enterprise Server 12 SP4	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
SUSE Linux Enterprise Server 15	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.0 U3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y

Operating systems	SR250	ST250	ST50	SR635	SR655	SR530 (Gen 2)	SR550 (Gen 2)	SR570 (Gen 2)	SR590 (Gen 2)	SR630 (Gen 2)	SR650 (Gen 2)	SR670 (Gen 2)	SR850 (Gen 2)	SR850P	SR860 (Gen 2)	SR950 (Gen 2)	ST550 (Gen 2)
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y

Table 6. Operating system support for ThinkSystem RAID 530-8i PCIe 12Gb Adapter, 7Y37A01082 (Part 2 of 2)

Operating systems	SR530 (Gen 1)	SR550 (Gen 1)	SR570 (Gen 1)	SR590 (Gen 1)	SR630 (Gen 1)	SR650 (Gen 1)	SR670 (Gen 1)	SR850 (Gen 1)	SR860 (Gen 1)	SR950 (Gen 1)	ST550 (Gen 1)
Microsoft Windows Server 2012 R2	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Microsoft Windows Server version 1709	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Microsoft Windows Server version 1803	N	N	N	N	Y	Y	N	Y	Y	Y	N
Red Hat Enterprise Linux 6.10	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Red Hat Enterprise Linux 6.9	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Red Hat Enterprise Linux 7.3	Y	Y	N	N	Y	Y	N	Y	N	Y	Y
Red Hat Enterprise Linux 7.4	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Red Hat Enterprise Linux 7.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 11 SP4 with Xen	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP2	Y	Y	N	N	Y	Y	N	Y	N	Y	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	Y	Y	N	N	Y	Y	N	Y	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP3 with Xen	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y

Operating systems	SR530 (Gen 1)	SR550 (Gen 1)	SR570 (Gen 1)	SR590 (Gen 1)	SR630 (Gen 1)	SR650 (Gen 1)	SR670 (Gen 1)	SR850 (Gen 1)	SR860 (Gen 1)	SR950 (Gen 1)	ST550 (Gen 1)
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.0 U3	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5	Y	Y	N	N	Y	Y	N	Y	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U1	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Warranty

The adapters carry a 1-year limited warranty. When installed in a supported ThinkSystem server, the adapter assumes the server's base warranty and any warranty upgrades.

Operating environment

The ThinkSystem RAID 530 Series adapters are supported in the following environment:

- Operating:
    - Temperature: 10°C to 55°C (50°F to 131°F)
    - Relative humidity: 20% to 90% (non-condensing)
- Storage
    - Temperature with package: -40°C to 70°C (-40°F to 158°F)
    - Relative humidity: 5% to 95% (non-condensing)

Agency approvals

The ThinkSystem RAID 530 adapters have the following agency approvals:

- FCC Part 15 Class A
- Australia/New Zealand (AS/NZS CISPR 22)
- Canada (ICES-003 Class B)
- Europe (EN55022/EN55024)
- Japan (VCCI V-3)
- Korea (RRA no 2013-24 & 25)
- RoHS compliant
- EN/IEC/UL 60950
- Taiwan (CNS 13438)
- USA (FCC 47 CFR part 15 Subpart B class B)
- WEEE

Related publications and links

For more information, see the following documents:

- Lenovo ThinkSystem product publications:
  http://thinksystem.lenovofiles.com/help/index.jsp

- ServerProven hardware compatibility:
  http://www.lenovo.com/us/en/serverproven

- Lenovo RAID Management Tools and Resources:
  https://lenovopress.com/lp0579-lenovo-raid-management-tools-and-resources

- Lenovo RAID Introduction
  https://lenovopress.com/lp0578-lenovo-raid-introduction

Related product families

Product families related to this document are the following:

- RAID Adapters

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