



A

**FINATEC**

**Referência:** SELEÇÃO PÚBLICA Nº 092/2024

Prezado Cliente,

Em atenção a sua consulta, que agradecemos, temos a satisfação de oferecer os materiais abaixo relacionados, e colocamo-nos à inteira disposição para quaisquer esclarecimentos que se façam necessários.

Qtde	Descrição Item	unit. desconto	total desconto
------	----------------	----------------	----------------



		<p>PowerEdge R6615 Server BCC</p> <p>2.5" Chassis with up to 8 NVMe HWRAID Drives, Smart Flow, Front PERC 11</p> <p>PowerEdge R6615 Motherboard V2</p> <p>AMD EPYC 9124 3.0GHz, 16Cores/32Threads, 64M Cache (200W) DDR5-4800</p> <p>4 x 32GB RDIMM DDR5 ECC, 4800MT/s, Dual Rank 16Gb Base x8, BCC</p> <p>Controladora PERC H755N (validar brackets para Smart Flow ou traseiro)</p> <p>Broadcom 5720 Dual Port 1GbE Optional LOM C33, RAID 1 with NVMe and front PERC</p> <p>2 x 1.92TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4 with carrier</p> <p>iDRAC9 Enterprise 16G</p> <p>Placa de rede 57414 Dual Port 10/25GbE SFP28, OCP NIC 3.0</p> <p>Painel Frontal com LCD (Bezel)</p> <p>Riser Config 2, 1 x16 LP (Gen4) + 2 x16 LP (Gen5)</p> <p>4 Very High Performance Fan for 1 CPU</p> <p>Bracket for floating load on fPerc</p> <p>Braço para gerenciamento de cabos/rack</p> <p>Trilhos deslizantes para rack</p> <p>BOSS Blank</p> <p>High Performance Heatsink</p> <p>2 x Cabos de força 250V, NBR14136/C13 de 2 metros</p> <p>Fonte de energia Redundante Dual, Hot-plug, (1+1), 800W</p> <p>Trusted Platform Module 2.0 V3</p> <p>Instalação física não inclusa nesta cotação. - Se desejar conte com a expertise Dell para implementação de seu projeto.</p> <p>Explore mais sobre: Serviços de Suporte   Serviços de Implementação   Serviços de Consultoria   ProSupport Enterprise Suite</p> <p>3 anos de Serviço ProSupport: Atendimento telefônico (24hs x 7 dias). Com direito à reposição de peças no local, após diagnóstico remoto (Cobertura total: peças e softwares OEM).</p> <p>Sem sistema operacional – Consulte matriz de homologação de sistemas</p>		
1	1		R\$ 80.900,00	R\$ 80.900,00
2				
3				
4				

**total** **R\$ 80.900,00**



Validade da Proposta, 30 (trinta) dias corridos desta data, para o cenário detalhado nesta Proposta Comercial. Qualquer alteração deve ser alinhada.

Condição de Pagamento, 30 dias

Prazo de Entrega, 30 dias úteis

Garantia, a garantia é conforme política do fabricante e de toda sua rede referenciada.

Empresa Optante pelo Simples Nacional

Valores expressos em Reais

#### Condições comerciais de fornecimento

- \* Todos os impostos inclusos nos valores unitários - para o cenário apresentado, conforme característica do produto, região e condição tributária;
- \* Os preços ofertados não incluem a instalação dos produtos, somente fornecimento;
- \* Valores não são válidos para outras cotações e quantidades fora desta proposta;

Para o caso de valores apresentados em US\$ serão convertidos em reais na data de faturamento pela cotação do dólar do dia anterior. Havendo variação cambial que gere um desequilíbrio financeiro na presente operação de venda, a A&B Tecnologia se reserva o direito de considerar um valor de dólar compatível com o momento do faturamento;

\* Descontos não aplicáveis.

\* Faturamento Direto pelo Distribuidor pode implicar em alteração de preços dependendo da região onde o cliente se encontra ou sua condição de contribuinte ou não de ICMS.

Concordo que uma vez aceito e enviado esse pedido, o mesmo não mais poderá ser cancelado ou devolvido, principalmente se tratando de encomenda, como produtos que não constam em estoque, ou licenciamento de Software que são personalizados.

A&B INFORMAC EIRELI – ME

28.984.388/0001-21 / 07.832.802/001-69

Banco do Brasil, Ag.: 0452-9, CC: 127863-0

quinta-feira, 29 de agosto de 2024

**Marcos Jorge**

**Departamento Comercial**

**aeb@aebtecnologia.com.br; 61.99986-0722**



JR COMERCIO E LICITAÇÕES LTDA  
CNPJ: 47.12.720/0001-09  
IE: 08.295.169/001-36  
ENDEREÇO: SCN QUADRA 04 BLOCO B S/N SALA 702  
ASA NORTE - BRASILIA - DF  
CEP: 70.714-020  
FONE: 61-9.9932-5719  
EMAIL: corporativo@primatechdf.com

CLIENTE: FUNDAÇÃO DE EMPREENDIMENTOS CIENTÍFICOS E TECNOLÓGICOS

NUMERO ORÇAMENTO: **01242908-11**

**DATA: 29 / AGOSTO / 2024**

**CNPJ: 37.116.704/0001-34**

**CONTATO:**

**CAMPUS UNIVERSITÁRIO DARCY RIBEIRO CLEBA A 1 Bairro / Distrito  
ASA NORTE CEP 70910-900**

**VENDEDOR: JOSE RAFAEL**

### PROPOSTA COMERCIAL

Produto	Nº	Pr. Unidade	Pr. Total	Marca
Servidor Rack PowerEdge R6615 SEM SISTEMA OPERACIONAL PROCESSADOR: AMD EPYC 9124 3.0GHz, 16C/32T, 64M Cache (200W) DDR5-4800 MEMÓRIA: 128GB ( 2X 64GB RDIMM, 4800MT/s, Dual Rank 16Gb Base x4, BCC ) RAID: C3, RAID 1 for 2 HDDs or SSDs (Matching Type/Speed/Capacity) Controlador RAID: Front PERC H355 Front Load Armazenamento: SATA SSD 2X 1.92TB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 3.5in HYB CARR, 1 DWPD Ventiladores: 4 Very High Performance Fan for 1 CPU Fonte de alimentação: Dual, Hot-plug, Power Supply Fully Redundant (1+1), 800W, Mixed Mode, NAF mais Cabo de alimentação: 2X Rack C13 to C14, PDU Style, 12 AMP, 13 Feet (4m) Power Cord, North America Gerenciamento de sistemas integrado: iDRAC9, Enterprise 16G REDE: Broadcom 5720 Quad Port 1GbE BASE-T Adapter, OCP NIC 3.0 Placa de rede adicional: 2X Broadcom 57414 Dual Port 10/25GbE SFP28 Adapter, PCIe Low Profile, V2 Trilhos de rack: Trilhos deslizantes ReadyRails com braço para gerenciamento de cabos Serviço iDRAC: iDRAC Service Module (ISM), Pre-Installed in OS GPU/FPGA/PLACA ACELERADORA: NVIDIA Ampere A2, PCIe, 60W, 16GB Passive, Single Wide, Low Profile GPU, V2 Keyboard and Optical Mouse, USB, Black, English 3 anos de serviço ProSupport	1	R\$ 72.824,70	R\$ 72.824,70	DELL
<b>OBSERVAÇÕES</b>		<b>Total</b>	<b>R\$ 72.824,70</b>	

LOCAL DE ENTREGA: Faculdade UnB Gama - FGA, Universidade de Brasília, Área Especial de Indústria Projeção A, Setor Leste, Gama - DF CEP: 72.444-240

### Condições Comerciais

- Faturamento:** Depósito em conta
- Prazo de Entrega:** 45 dias
- Condições de Pagamento:** Depósito 15 DD
- Frete:** CIF
- Validade da Proposta:** 15 dias corridos
- Condições de Faturamento:**  
Equipamentos serão faturados na data do embarque dos mesmos pela Jr Comercio e Licitações LTDA.  
Serviços serão faturados no momento definido e acordado na proposta de venda e confirmação da ordem de compra. O faturamento dos itens desta proposta será efetuado conforme a origem indicada na lista de Materiais e Serviços acima.
- Previsão de entrega:**  
A previsão de entrega informada nesta proposta é uma estimativa baseada em dados históricos, contada a partir da data da emissão da ordem de venda (OV), feita após análise e confirmação de que todos os dados obrigatórios foram informados pela empresa. A geração desta OV, não o pedido de compra do cliente, é o ponto de partida para a contagem dos dias estimados para a entrega do material, que será atualizada após cada movimentação do produto a partir de sua origem;  
Atrasos na fabricação / disponibilização do material pelo fabricante e outros eventos poderão afetar a previsão final de entrega;  
A Jr Comercio e Licitações LTDA não assumirá nenhum tipo de penalidade no caso de impossibilidade do atendimento das previsões de entrega inicialmente contidas nesta proposta; Os itens em estoque não são reservados para esta proposta e estão sujeitos a confirmação de disponibilidade no momento do aceite do seu pedido de compra.
- Garantia:**  
A garantia é de responsabilidade do fabricante. O prazo e processamento de garantia são estipulados pela política definida pelo fabricante para cada um dos seus produtos.
- Preços e Impostos:**  
Os preços são válidos apenas para a compra das quantidades totais descritas nesta proposta; Todos os impostos estão incluídos nos valores apresentados;  
Os preços indicados poderão sofrer alterações, mesmo depois de aceitos pelo cliente, em razão de mudança de alíquotas de impostos sobre eles incidentes, pela criação de novos impostos ou mudança de lista de preços do fabricante, desde que devidamente comprovados;  
A Jr Comercio e Licitações LTDA não se responsabiliza por manter preços iguais em novos produtos que eventualmente substituam produtos descontinuados pelo fabricante, ficando a critério da empresa compradora o pedido de uma nova proposta com os produtos atualizados com seu preço de mercado.
- Termos e Condições gerais de venda:**  
A lista de material apresentada nesta proposta deve ser validada tecnicamente pela empresa compradora, estando o canal Jr Comercio e Licitações LTDA isenta de responsabilidade sobre possíveis erros de
- Aceite da Proposta:**  
A colocação de pedido de compra da Jr Comercio e Licitações LTDA deve ser formalizada via e-mail ( corporativo@primatechdf.com ) com um "de acordo" nesta proposta por pessoa autorizada para tal ato na empresa compradora. O pedido de compra deve conter todas as informações necessárias para faturamento, entrega e cobrança, além da documentação requisitada pelo fabricante para o aceite e processamento da ordem. O processamento da ordem de venda é o sinal de que a ordem de compra recebida pela Jr Comercio e Licitações LTDA está completa e aceita.

Produtos e Soluções em TI



Serra - ES, 30-08-2024

## **FINATEC**

Brasília - DF

A/C DEPARTAMENTO DE LICITAÇÃO

### **REF.: Tomada de Preços nº 092/2024**

*Objeto da licitação: A presente Seleção Pública tem como objeto a contratação de empresa especializada no fornecimento de equipamento de informática (SERVIDOR), conforme as especificações mínimas e quantitativos contidos no Termo de Referência – Anexo I.*



#### **Filial**

##### **E.R. Soluções de Informática Ltda.**

CNPJ: 05.778.325/0005-47

Inscrição Estadual: 083.668.152

Inscrição Municipal: 470.913.1

Telefone: +55 (16) 99644-9918

E-mail: [isg@ersolucoes.com.br](mailto:isg@ersolucoes.com.br)

End: Av. Cem, S/N, Qd 01 - Mod 01, sala 01 - Piso 02

Terminal Intermodal, Serra, ES CEP 29.161-384



Filial - ES: End: Av. Cem, S/N, Quadra 01 - Módulo 01, Sala 01 - Piso 02  
Terminal Intermodal, Serra, ES CEP 29.161-384  
[gov@ersolucoes.com.br](mailto:gov@ersolucoes.com.br)





Prezados,

Vimos por meio desta, apresentar nossa proposta comercial e temos o prazer de encaminhar, para análise e apreciação, uma breve apresentação desta empresa, com o intuito de conhecerem nosso prestígio.

Desde 1997 prestando serviços em Tecnologia da Informação, a ER Soluções esteve sempre presente nos principais acontecimentos da Indústria da Informática no Brasil.

Com larga experiência varejista além da já premiada atuação no setor governamental e agora com uma ativa presença no mercado SMB regional, a E.R. Soluções obteve importantes parcerias permitindo a presença constante nos principais usuários de TI. Adquirimos competências fundamentais envolvendo as principais tecnologias e os melhores fabricantes do mercado, destacando-se Dell, Lenovo, Microsoft e VMware, entre outras parceiras.

É com este know-how que oferecemos produtos e serviços com o que há de mais moderno dentro das melhores práticas em TI, com equipes de profissionais treinados e certificados, elaborando projetos, apresentando soluções, atendendo necessidades, e prevendo demandas para os mais diversos negócios em todo o território nacional.

O documento a seguir apresenta a proposta de equipamentos, softwares e serviços para o referido pregão.

Desde já agradecemos a oportunidade de oferecer os nossos produtos e serviços, e nos colocamos à disposição para os esclarecimentos adicionais que se fizerem necessários.



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## 1. PROPOSTA COMERCIAL

Item	Descrição	Quantidade	Valor Unitário	Valor Total
1	LENOVO THINKSYSTEM SR645	1,00	R\$ 115.678,37	R\$ 115.678,37

**Total Geral da proposta R\$ 115.678,37**

Serra - ES, 30-08-2024

Atenciosamente,

GEORGE  
EDUARDO  
SALIBY:982913358  
34

Assinado de forma digital  
por GEORGE EDUARDO  
SALIBY:98291335834  
Dados: 2024.08.29  
16:46:31 -03'00'

**George Eduardo Saliby**  
Diretor Comercial

ANDRE LUIS  
MACHADO  
PELICIONI:2487  
8554878

Assinado de forma  
digital por ANDRE LUIS  
MACHADO  
PELICIONI:24878554878  
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**André Luís Machado Pelicioni**  
Diretor Administrativo



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## 2. ESPECIFICAÇÕES TÉCNICAS

### ITEM 1 - LENOVO THINKSYSTEM SR645 V3

1	X	ThinkSystem SR645 V3 ( 7D9CCTO1WW )
1	X	ThinkSystem V3 1U 10x2.5" Chassis
1	X	Operating mode selection for: "Maximum Efficiency Mode"
1	X	Data Center Environment 30 Degree Celsius / 86 Degree Fahrenheit
2	X	ThinkSystem AMD EPYC 9124 16C 200W 3.0GHz Processor
2	X	ThinkSystem SR645 V3/SR635 V3 1U High Performance Heatsink
1	X	Platform Secure Boot Enable
4	X	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 9x4 RDIMM-A
1	X	Select Storage devices - configured RAID
1	X	ThinkSystem RAID 940-16i 4GB Flash PCIe Gen4 12Gb Adapter for U.3
1	X	Controller 1 HW RAID Array 1 RAID 1
2	X	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD
1	X	ThinkSystem 1U 10x2.5" AnyBay Backplane
1	X	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter
1	X	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter
1	X	ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC
1	X	ThinkSystem V3 1U x16/x16 BF PCIe Gen4 Riser1
1	X	ThinkSystem V3 1U MS LP+LP BF Riser Cage
1	X	ThinkSystem V3 1U x16 PCIe Gen4 Riser2
1	X	ThinkSystem 1100W 230V/115V Platinum Hot-Swap Gen2 Power Supply v3
1	X	2.8m, 13A/100-250V, C13 to C14 Jumper Cord
8	X	ThinkSystem V3 1U Performance Fan Option Kit v2
1	X	ThinkSystem 1U V3 10x2.5" Media Bay w/ Ext. Diagnostics Port
1	X	ThinkSystem Toolless Slide Rail Kit v2 with 1U CMA
1	X	TPM 2.0
1	X	ThinkSystem RAID 930/940 SuperCap
1	X	XCC Platinum
1	X	ThinkSystem SR645 V3 MB
1	X	MI for PXE with RJ45 Network port
1	X	940 Series Flash Adapter for U.3 Trimode Setting
1	X	RAID Configuration
2	X	Controller 1 HW RAID Array 1 HDDs
1	X	Brazil CPK
1	X	ThinkSystem 1U PLV Top Cover Sponge
1	X	ThinkSystem CFF V4 PSU Dummy
1	X	ThinkSystem V3 1U LP Riser Cage
1	X	ThinkSystem SR645 V3 Absolut-RoW RoT Module
1	X	software1 XClarity Pro, Per Endpoint w/3 Yr SW S&S
1	X	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S



1	X	software2 XClarity Controller Platin-FOD
1	X	Lenovo XClarity XCC2 Platinum Upgrade (FOD)
1	X	software3 Configuration Instruction
1	X	Service CTO SERVER PREMIER FOUNDATION NBD
1	X	ThinkSystem Pref. Pro II USB Keyboard - Brazil/Portuguese
1	X	ThinkSystem Optical Wheel Mouse - USB



### 3. CONDIÇÕES COMERCIAIS

**Validade da Proposta:**

Validade da Proposta: 30 dias  
Conforme definido no edital.

**Entrega**

O prazo de entrega do equipamento é de 30 (trinta) dias úteis após a emissão da Autorização de Fornecimento – AF.

**Local de Entrega**

O equipamento deverá ser entregue em perfeita condição de utilização no endereço abaixo:

Faculdade UnB Gama - FGA, Universidade de Brasília, Área Especial de Indústria Projeção A, Setor Leste, Gama - DF CEP: 72.444-24

Conforme definido no edital

**Condições de Pagamento:**

O pagamento será efetuado somente após a entrega dos equipamentos, mediante depósito bancário, em conta corrente de titularidade da empresa vencedora, no prazo de até 15 (quinze) dias úteis, contados da apresentação da respectiva Nota Fiscal, emitida de acordo com as normas e legislação aplicável, devidamente atestada pelo Coordenador do Projeto.

Conforme definido no edital

**Dados da Conta Bancária**

Banco do Brasil  
Ag. 3235-2  
Conta Corrente: 115.747-7

**DECLARAMOS**, que nos preços contidos na Proposta de Preços, estão incluídos todos os custos diretos e indiretos, sem que caiba, em qualquer caso, direito regressivo sobre a execução de serviços, objeto desta licitação, tais como: impostos, taxas, frete CIF, transportes, inclusive o lucro do fornecedor, materiais, equipamentos, mão-de-obra, encargos sociais, trabalhistas e previdenciários, tributos e contribuições de qualquer natureza ou espécie, não cabendo, portanto, nenhuma reclamação posterior no sentido de alteração de preços.

**DECLARAMOS**, que aceitamos todas as condições estabelecidas no edital e nos anexos do Tomada de Preços 048/2024

**DECLARAMOS**, que a fabricante possui recurso disponibilizado via website do próprio fabricante <https://pcsupport.lenovo.com/br/pt/warrantylookup>, para realizar a validação e verificação da garantia do equipamento através da inserção do número de série do equipamento e também disponibiliza em seu web



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site <http://support.lenovo.com/us/en/lenovodiagnosicsolutions>, software capaz de realizar testes de diagnóstico de hardware.

**DECLARAMOS**, ainda, que a Lenovo dispõe de telefone gratuito 0800-701-4815 (ligações fora da cidade de São Paulo) e 11 3889-8986 (ligações de São Paulo) para abertura de chamados técnicos em Língua Portuguesa e service desk com histórico dos registros, e que os drivers, atualizações e suporte dos produtos Lenovo, estão disponíveis para download no site <http://support.lenovo.com/br/pt>. Os chamados serão abertos através de código de identificação único para cada máquina. Durante o prazo de garantia, será substituída sem ônus a contratante, a parte ou peça defeituosa, salva quando o defeito for provocado por uso inadequado dos equipamentos.

A Lenovo possui um canal específico para auxiliá-lo no descarte desses produtos. Caso você possua um produto Lenovo em situação de descarte, ligue para o nosso SAC ou encaminhe um e-mail para: [reciclar@lenovo.com](mailto:reciclar@lenovo.com), informando o modelo, número de série e cidade, a fim de envio das instruções para o correto descarte do seu produto Lenovo.

**DECLARAMOS**, que todos os equipamentos a serem entregues serão novos, idênticos, com componentes externos e internos de mesmo modelo e marca dos equipamentos ofertados na proposta, salvo se o equipamento não se encontrar mais disponível no mercado no ato do pedido. Em caso de descontinuidade do produto oferecido, ou diante da indisponibilidade devidamente comprovada, este será substituído pelo sucedâneo com as mesmas características ou superiores, ou ainda, por um modelo com características idênticas ou superiores ao ofertado, mediante análise de catálogos, durante todo o período de validade da Ata de Registro de Preços ou do Contrato vigente.

Serra - ES, 30-08-2024

GEORGE  
EDUARDO  
SALIBY:9829133  
5834

Assinado de forma digital por GEORGE EDUARDO SALIBY:98291335834  
Dados: 2024.08.29 16:47:12 -03'00'

**George Eduardo Saliby**  
Diretor Comercial

ANDRE LUIS  
MACHADO  
PELICIONI:2487855  
4878

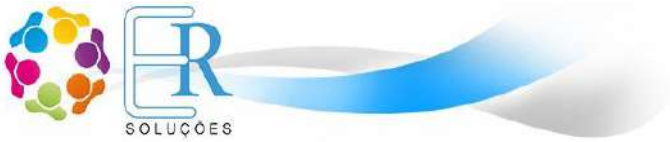
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**André Luís Machado Pelicioni**  
Diretor Administrativo



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**FINATEC**

Brasília - DF

**REF.: Tomada de Preços nº 092/2024**

**DECLARAÇÃO DE DADOS PARA ASSINATURA DA ATA**

A empresa **E.R. SOLUÇÕES INFORMÁTICA LTDA**, apresenta, a seguir, os dados de seus representantes legais para assinatura do eventual Contrato:

**Dados Do Licitante - Filial**

- 1) Razão Social/ Nome Fantasia: E.R. Soluções Informática Ltda.
- 2) CNPJ: 05.778.325/0005-47
- 3) Inscrição Estadual: 83668152
- 4) Inscrição Municipal: 470931
- 5) Endereço: AV Cem, S/N - Quadra 01, Módulo 01, Sala 01 - Piso 02  
CEP: 29.161-384 – Serra - ES
- 6) Telefone: 16 99644-9918 / 16 3234-4433
- 8) E-mail [geovanna@ersolucoes.com.br](mailto:geovanna@ersolucoes.com.br) / [janinne@ersolucoes.com.br](mailto:janinne@ersolucoes.com.br)

**Representante: George Eduardo Saliby**

Cargo: Diretor Comercial  
Endereço Residencial: Rua Severiano Amaro Dos Santos Nº  
700 Apto 93 - Jardim Botânico  
CEP 14021-620 – Ribeirão Preto -SP  
Telefones: 16-3234-4433 / 16 99132-4429  
CPF: 982.913.358-34  
RG.: 7.854.271-6/SSP  
Estado Civil: Divorciado  
Nacionalidade: Brasileiro

**Representante: André Luís Machado Pelicioni**

Cargo: Diretor Administrativo  
Endereço Residencial: - Av. Giuseppe Cilento nº 1811-  
Apto 302 - Jardim Botânico  
CEP. 14.021-650 – Ribeirão Preto / SP  
Tels: Fixo E Celular 16-3234-4433 / 16 99129-7439  
CPF: 248.785.548-78  
RG.: 18.658.107 – SSP/SP  
Estado Civil: Casado  
Nacionalidade: Brasileiro

Serra - ES, 30-08-2024

GEORGE  
EDUARDO  
SALIBY:98291335834  
35834  
**George Eduardo Saliby**  
Diretor Comercial

Assinado de forma digital por GEORGE EDUARDO SALIBY:98291335834  
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ANDRE LUIS  
MACHADO  
PELICIONI:24878554878  
554878  
**André Luís Machado Pelicioni**  
Diretor Administrativo

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# AMD EPYC™ 9124

## GENERAL SPECIFICATIONS

### CONNECTIVITY

### GRAPHICS CAPABILITIES

### PRODUCT IDS

### KEY FEATURES

## General Specifications

<b>Platform:</b>	Server
<b>Product Family:</b>	AMD EPYC™
<b>Product Line:</b>	AMD EPYC™ 9004 Series
<b>AMD PRO Technologies:</b>	No
<b>Regional Availability:</b>	Global, China, NA, EMEA, APJ, LATAM
<b># of CPU Cores:</b>	16
<b># of Threads:</b>	32
<b>Max. Boost Clock ⓘ:</b>	Up to 3.7GHz
<b>All Core Boost Speed ⓘ:</b>	3.6GHz
<b>Base Clock:</b>	3.0GHz
<b>L3 Cache:</b>	64MB

<b>1kU Pricing:</b>	1,083 USD
<b>Default TDP:</b>	200W
<b>AMD Configurable TDP (cTDP):</b>	200-240W
<b>CPU Socket:</b>	SP5
<b>Socket Count:</b>	1P / 2P
<b>Launch Date:</b>	11/10/2022

## Connectivity

<b>PCI Express® Version:</b>	PCIe 5.0 x128
<b>System Memory Type:</b>	DDR5
<b>Memory Channels:</b>	12
<b>System Memory Specification:</b>	Up to 4800MT/s
<b>Per Socket Mem BW:</b>	460.8 GB/s

## Graphics Capabilities

<b>Integrated Graphics:</b>	No
-----------------------------	----

## Product IDs

---

**Product ID Tray:** 100-000000802

---

## Key Features

---

**Supported Technologies:** AMD Infinity Guard  
AMD Infinity Architecture

---

**Workload Affinity:** Media streaming  
Per core CAE/CFD/FEA  
Value

---

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# Lenovo ThinkSystem SR645 V3

## Servidor denso e de elevado desempenho



### Desempenho sem sacrifícios

As infraestruturas e cargas de trabalho de TI estão sempre evoluindo, criando novos tipos de cargas de trabalho. Você precisa de um servidor que possa lidar com as cargas de trabalho de hoje e seja ágil o suficiente para enfrentar os desafios de amanhã. Com maior densidade de núcleo no processador AMD EPYC™ de 4ª geração e velocidade de memória PCIe 5.0, o ThinkSystem SR645 V3 1U tem potência, largura de banda e memória para lidar com virtualização, análise de dados e cargas de trabalho com uso intenso de gráficos.

Com proteção fornecida pela segurança Lenovo ThinkShield e o gerenciamento simplificado do XClarity da Lenovo, o SR645 V3 incorpora a reputação da Lenovo de alta confiabilidade.

### Projetado para flexibilidade

Suas necessidades de dados são exclusivas do seu negócio, e você precisa de uma infraestrutura que tenha flexibilidade para ser personalizada. Com o SR645 V3, você pode escolher as opções de unidade de SAS/SATA, NVMe e EDSFF. Configure suas unidades hoje e com um formato AnyBay™ hot swappable, adicione ou altere rapidamente para gerenciar a carga de trabalho da próxima geração.

Escolha PCIe 4.0 ou 5.0 para atender às metas de velocidade e orçamento da sua infraestrutura e selecione a melhor opção de GPU para suas cargas de trabalho. Seja análise de dados, virtualização ou HPC, o SR645 V3 tem as opções para seus requisitos exclusivos.

### Gerenciamento fácil e seguro

O ThinkSystem SR645 V3 usa o Lenovo XClarity para uma solução de gerenciamento de sistema fácil de usar. O XClarity permite uma visão centralizada e orientada por dados das operações do data center e monitora adições e alterações inesperadas.

Confie no Lenovo ThinkShield para proteger e defender sua infraestrutura de data center contra ataques, com uma abordagem abrangente de segurança de ponta a ponta que começa com o desenvolvimento com a nossa Root of Trust e continua por toda a cadeia de suprimentos e o ciclo de vida completo do servidor.

O portfólio de serviços da Lenovo também oferece suporte ao ciclo de vida completo de seus ativos de TI da Lenovo: desde o planejamento, a implantação e o suporte até a recuperação de ativos.

Lenovo

## Especificações

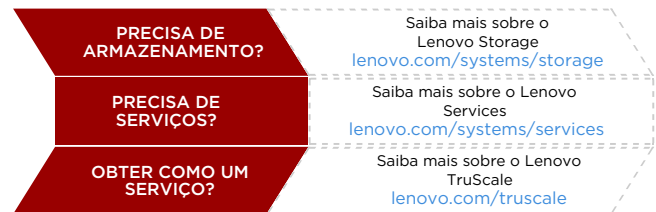
<b>Nome dos produtos</b>	ThinkSystem SR645 V3
<b>Formato</b>	Servidor em rack 1U
<b>Processadores</b>	Até 2 processadores AMD EPYC™ de 4ª geração
<b>Memória</b>	Até 24 slots de memória TruDDR5 Máximo de 6 TB com suporte para 3DS RDIMMs; até 1DPC a 4.800 MHz
<b>Baias de drive</b>	Até 4 unidades de 3,5", 12 unidades de 2,5" ou 16 unidades EDSFF
<b>Slots de expansão</b>	Até 3 slots PCIe 4.0, 2 slots PCIe 5.0 1 slot para adaptador OCP 3.0
<b>GPU</b>	Até 4 GPUs de largura única
<b>Interface de rede</b>	Adaptador mezz OCP 3.0, adaptadores PCIe
<b>Energia</b>	Suprimentos AC e CC redundantes duplos com titânio/platina para conformidade com ErP Lot9
<b>Portas</b>	Frente: 1 USB 3.1 G1, 1 USB 2.0 com conexão XCC para dispositivo móvel, 1 VGA (opcional), porta de diagnóstico externa opcional Traseira: 3 USB 3.1 G1, 1 porta VGA, 1 porta serial (opcional), LED de ID do sistema, LED de erro, botão NMI
<b>Sistema de Gerenciamento</b>	Lenovo XClarity Controller
<b>Sistema Operacional Compatível</b>	Microsoft Windows Server, SUSE Linux Enterprise Server, Red Hat Enterprise Linux, VMware ESXi
<b>Garantia Limitada</b>	1 e 3 anos de serviços no local e para unidades substituíveis pelo cliente, próximo dia útil, 9 horas por dia, 5 dias por semana, upgrades de serviço opcionais

## Sobre a Lenovo

Lenovo (HKSE: 992) (ADR: LNVGY) é uma potência global de tecnologia com receita de US\$ 62 bilhões, classificada em 171º lugar na Fortune Global 500, empregando 77 mil pessoas em todo o mundo e atendendo a milhões de clientes todos os dias em 180 mercados. Focada em uma visão ousada de fornecer tecnologia mais inteligente para todos, a Lenovo está se expandindo para novas áreas de crescimento de infraestrutura, dispositivos móveis, soluções e serviços. Essa transformação está construindo uma sociedade digital mais inclusiva, confiável e sustentável para todos, em todos os lugares.

## Para mais informações

Para saber mais sobre o Lenovo ThinkSystem SR645 V3, entre em contato com seu representante ou parceiro de negócios Lenovo ou acesse [lenovo.com/thinksystem](https://lenovo.com/thinksystem). Para especificações detalhadas, consulte o [guia do produto SR645 V3](#).



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# SPEC CPU®2017 Integer Rate Result

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## Lenovo Global Technology

ThinkSystem SR645 V3  
(3.00 GHz,AMD EPYC 9124)

SPECrate®2017\_int\_base = 354

SPECrate®2017\_int\_peak = 364

CPU2017 License: 9017

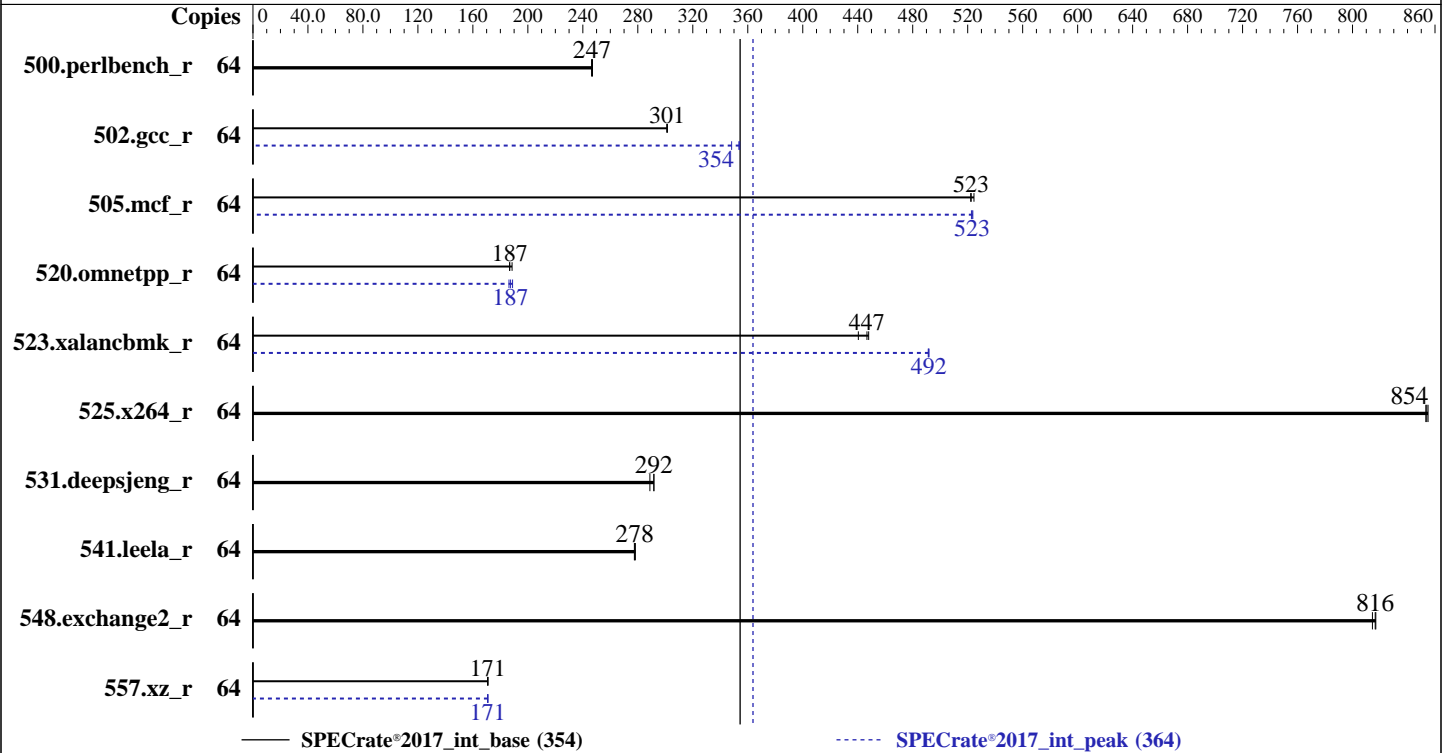
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Nov-2022

Hardware Availability: Feb-2023

Software Availability: Nov-2022



### Hardware

CPU Name: AMD EPYC 9124  
 Max MHz: 3700  
 Nominal: 3000  
 Enabled: 32 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 64 MB I+D on chip per chip,  
 16 MB shared / 4 cores  
 Other: None  
 Memory: 768 GB (24 x 32 GB 2Rx8 PC5-4800B-R)  
 Storage: 1 x 960 GB SATA SSD  
 Other: None

### Software

OS: Ubuntu 22.04.1 LTS  
 Kernel 5.15.0-43-generic  
 Compiler: C/C++/Fortran: Version 4.0.0 of AOCC  
 Parallel: No  
 Firmware: Lenovo BIOS Version KAE105C 1.20 released Nov-2022  
 File System: ext4  
 System State: Run level 5 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other: None  
 Power Management: BIOS and OS set to prefer performance at the cost of additional power usage



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	64	414	246	412	247	<b>413</b>	<b>247</b>	64	414	246	412	247	<b>413</b>	<b>247</b>
502.gcc_r	64	301	301	<b>301</b>	<b>301</b>	301	301	64	<b>256</b>	<b>354</b>	260	348	256	354
505.mcf_r	64	197	525	<b>198</b>	<b>523</b>	198	522	64	<b>198</b>	<b>523</b>	197	524	198	523
520.omnetpp_r	64	445	189	<b>450</b>	<b>187</b>	450	187	64	451	186	445	189	<b>448</b>	<b>187</b>
523.xalancbmk_r	64	<b>151</b>	<b>447</b>	151	448	153	440	64	137	492	<b>137</b>	<b>492</b>	138	491
525.x264_r	64	<b>131</b>	<b>854</b>	131	855	131	853	64	<b>131</b>	<b>854</b>	131	855	131	853
531.deepsjeng_r	64	254	289	<b>251</b>	<b>292</b>	251	292	64	254	289	<b>251</b>	<b>292</b>	251	292
541.leela_r	64	<b>382</b>	<b>278</b>	382	277	381	278	64	<b>382</b>	<b>278</b>	382	277	381	278
548.exchange2_r	64	206	814	<b>205</b>	<b>816</b>	205	817	64	206	814	<b>205</b>	<b>816</b>	205	817
557.xz_r	64	404	171	405	171	<b>405</b>	<b>171</b>	64	405	171	404	171	<b>404</b>	<b>171</b>

SPECrate®2017\_int\_base = **354**

SPECrate®2017\_int\_peak = **364**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Compiler Notes

The AMD64 AOCC Compiler Suite is available at  
<http://developer.amd.com/amd-aocc/>

## Submit Notes

The config file option 'submit' was used.  
'numactl' was used to bind copies to the cores.  
See the configuration file for details.

## Operating System Notes

'ulimit -s unlimited' was used to set environment stack size limit  
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:  
numactl --interleave=all runcpu <etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty\_ratio=8' run as root.  
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.  
To free node-local memory and avoid remote memory usage,  
'sysctl -w vm.zone\_reclaim\_mode=1' run as root.  
To clear filesystem caches, 'sync; sysctl -w vm.drop\_caches=3' run as root.  
To disable address space layout randomization (ASLR) to reduce run-to-run  
variability, 'sysctl -w kernel.randomize\_va\_space=0' run as root.

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## Operating System Notes (Continued)

```
echo 0 > /proc/sys/kernel/numa_balancing
To enable Transparent Hugepages (THP) only on request for base runs,
'echo madvise > /sys/kernel/mm/transparent_hugepage/enabled' run as root.
To enable THP for all allocations for peak runs,
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.
```

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

```
LD_LIBRARY_PATH =
"/home/cpu2017-1.1.8-amd-aocc400-genoa-B1b/amd_rate_aocc400_genoa_B_lib/
lib:/home/cpu2017-1.1.8-amd-aocc400-genoa-B1b/amd_rate_aocc400_genoa_B_l
ib/lib32:"
MALLOC_CONF = "retain:true"
```

Environment variables set by runcpu during the 523.xalancbmk\_r peak run:

```
MALLOC_CONF = "thp:never"
```

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

## Platform Notes

BIOS configuration:  
Operating Mode set to Maximum Performance and then set it to Custom Mode  
NUMA Nodes per Socket set to NPS4

```
Sysinfo program /home/cpu2017-1.1.8-amd-aocc400-genoa-B1b/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on perf Tue Nov 15 21:07:29 2022
```

SUT (System Under Test) info as seen by some common utilities.

(Continued on next page)



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### Platform Notes (Continued)

For more information on this section, see  
<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : AMD EPYC 9124 16-Core Processor

2 "physical id"s (chips)

64 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 16

siblings : 32

physical 0: cores 0 1 2 3 10 11 16 17 18 19 24 25 26 27

physical 1: cores 0 1 2 3 10 11 16 17 18 19 24 25 26 27

From lscpu from util-linux 2.37.2:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:         52 bits physical, 57 bits virtual
Byte Order:            Little Endian
CPU(s):                64
On-line CPU(s) list:   0-63
Vendor ID:             AuthenticAMD
Model name:            AMD EPYC 9124 16-Core Processor
CPU family:            25
Model:                 17
Thread(s) per core:    2
Core(s) per socket:    16
Socket(s):             2
Stepping:              1
Frequency boost:       enabled
CPU max MHz:           3713.0000
CPU min MHz:           400.0000
BogoMIPS:              5990.69
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr
pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt
pdpe1gb rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid
aperfmpperf rapl pni pclmulqdq monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe
popcnt aes xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a
misalignsse 3dnowprefetch osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb
bpxext perfctr_llc mwaitx cpb cat_l3 cdp_l3 invpcid_single hw_pstate ssbd mba ibrs
ibpb stibp vmcall fsgsbase bmi1 avx2 smep bmi2 erms invpcid cqm rdt_a avx512f
avx512dq rdseed adx smap avx512ifma clflushopt clwb avx512cd sha_ni avx512bw
avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
cqm_mbm_local avx512_bf16 clzero irperf xsaveerptr rdpru wbnoinvd amd_ppin cppc arat
npt lbrv svm_lock nrip_save tsc_scale vmcb_clean flushbyasid decodeassists
pausefilter pfthreshold avic v_vmsave_vmload vgif v_spec_ctrl avx512vbmi umip pku
ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq

```

(Continued on next page)



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Hardware Availability: Feb-2023

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### Platform Notes (Continued)

```

la57 rdpid overflow_recov succor smca fsm flush_llid
Virtualization: AMD-V
L1d cache: 1 MiB (32 instances)
L1i cache: 1 MiB (32 instances)
L2 cache: 32 MiB (32 instances)
L3 cache: 128 MiB (8 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-3,32-35
NUMA node1 CPU(s): 4-7,36-39
NUMA node2 CPU(s): 8-11,40-43
NUMA node3 CPU(s): 12-15,44-47
NUMA node4 CPU(s): 16-19,48-51
NUMA node5 CPU(s): 20-23,52-55
NUMA node6 CPU(s): 24-27,56-59
NUMA node7 CPU(s): 28-31,60-63
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Retpolines, IBPB conditional, IBRS_FW, STIBP always-on, RSB filling
Vulnerability Srbds: Not affected
Vulnerability Tsx async abort: Not affected

```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	32K	1M	8	Data	1	64	1	64
L1i	32K	1M	8	Instruction	1	64	1	64
L2	1M	32M	8	Unified	2	2048	1	64
L3	16M	128M	16	Unified	3	16384	1	64

/proc/cpuinfo cache data  
cache size : 1024 KB

From numactl --hardware

WARNING: a numactl 'node' might or might not correspond to a physical chip.

```

available: 8 nodes (0-7)
node 0 cpus: 0 1 2 3 32 33 34 35
node 0 size: 96380 MB
node 0 free: 95781 MB
node 1 cpus: 4 5 6 7 36 37 38 39
node 1 size: 96752 MB

```

(Continued on next page)





# SPEC CPU®2017 Integer Rate Result

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## Lenovo Global Technology

ThinkSystem SR645 V3  
(3.00 GHz,AMD EPYC 9124)

SPECrate®2017\_int\_base = 354

SPECrate®2017\_int\_peak = 364

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Nov-2022

Hardware Availability: Feb-2023

Software Availability: Nov-2022

### Platform Notes (Continued)

```

node 1 free: 96168 MB
node 2 cpus: 8 9 10 11 40 41 42 43
node 2 size: 96752 MB
node 2 free: 96190 MB
node 3 cpus: 12 13 14 15 44 45 46 47
node 3 size: 96752 MB
node 3 free: 96093 MB
node 4 cpus: 16 17 18 19 48 49 50 51
node 4 size: 96719 MB
node 4 free: 96231 MB
node 5 cpus: 20 21 22 23 52 53 54 55
node 5 size: 96752 MB
node 5 free: 96255 MB
node 6 cpus: 24 25 26 27 56 57 58 59
node 6 size: 96752 MB
node 6 free: 96235 MB
node 7 cpus: 28 29 30 31 60 61 62 63
node 7 size: 96693 MB
node 7 free: 96209 MB
node distances:
node  0  1  2  3  4  5  6  7
 0:  10 12 12 12 32 32 32 32
 1:  12 10 12 12 32 32 32 32
 2:  12 12 10 12 32 32 32 32
 3:  12 12 12 10 32 32 32 32
 4:  32 32 32 32 10 12 12 12
 5:  32 32 32 32 12 10 12 12
 6:  32 32 32 32 12 12 10 12
 7:  32 32 32 32 12 12 12 10

```

From /proc/meminfo

MemTotal: 792122388 kB

HugePages\_Total: 0

Hugepagesize: 2048 kB

/sys/devices/system/cpu/cpu\*/cpufreq/scaling\_governor has performance

/usr/bin/lsb\_release -d

Ubuntu 22.04.1 LTS

From /etc/\*release\* /etc/\*version\*

debian\_version: bookworm/sid

os-release:

PRETTY\_NAME="Ubuntu 22.04.1 LTS"

NAME="Ubuntu"

VERSION\_ID="22.04"

(Continued on next page)



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### Platform Notes (Continued)

```
VERSION="22.04.1 LTS (Jammy Jellyfish)"
VERSION_CODENAME=jammy
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
```

uname -a:

```
Linux perf 5.15.0-43-generic #46-Ubuntu SMP Tue Jul 12 10:30:17 UTC 2022 x86_64 x86_64
x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):	Not affected
CVE-2018-3620 (L1 Terminal Fault):	Not affected
Microarchitectural Data Sampling:	Not affected
CVE-2017-5754 (Meltdown):	Not affected
mmio_stale_data:	Not affected
CVE-2018-3639 (Speculative Store Bypass):	Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1):	Mitigation: usercopy/swaps barriers and __user pointer sanitization
CVE-2017-5715 (Spectre variant 2):	Mitigation: Retpolines, IBPB: conditional, IBRS_FW, STIBP: always-on, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling):	Not affected
CVE-2019-11135 (TSX Asynchronous Abort):	Not affected

run-level 5 Nov 15 20:45

SPEC is set to: /home/cpu2017-1.1.8-amd-aocc400-genoa-B1b

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	878G	19G	814G	3%	/

From /sys/devices/virtual/dmi/id

```
Vendor:      Lenovo
Product:    ThinkSystem SR645 V3 MB,Genoa,DDR5,Oahu,1U
Product Family: ThinkSystem
Serial:     1234567890
```

Additional information from dmidecode 3.3 follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

Memory:

24x SK Hynix HMC88AEBRA168N 32 GB 2 rank 4800

(Continued on next page)



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**Software Availability:** Nov-2022

### Platform Notes (Continued)

BIOS:

BIOS Vendor: Lenovo  
BIOS Version: KAE105C-1.20  
BIOS Date: 11/04/2022  
BIOS Revision: 1.20  
Firmware Revision: 1.20

(End of data from sysinfo program)

### Compiler Version Notes

=====  
C | 502.gcc\_r(peak)  
-----

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: i386-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C | 500.perlbench\_r(base, peak) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
525.x264\_r(base, peak) 557.xz\_r(base, peak)

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C | 502.gcc\_r(peak)  
-----

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: i386-unknown-linux-gnu  
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InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C | 500.perlbench\_r(base, peak) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
525.x264\_r(base, peak) 557.xz\_r(base, peak)

(Continued on next page)



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### Compiler Version Notes (Continued)

-----  
AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C++ | 523.xalancbmk\_r(peak)  
-----

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: i386-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C++ | 520.omnetpp\_r(base, peak) 523.xalancbmk\_r(base)  
531.deepsjeng\_r(base, peak) 541.leela\_r(base, peak)

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C++ | 523.xalancbmk\_r(peak)  
-----

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: i386-unknown-linux-gnu  
Thread model: posix  
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

=====  
C++ | 520.omnetpp\_r(base, peak) 523.xalancbmk\_r(base)  
531.deepsjeng\_r(base, peak) 541.leela\_r(base, peak)

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)  
Target: x86\_64-unknown-linux-gnu  
Thread model: posix

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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**Lenovo Global Technology**

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**Software Availability:** Nov-2022

## Compiler Version Notes (Continued)

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin

-----  
Fortran | 548.exchange2\_r(base, peak)  
-----

AMD clang version 14.0.6 (CLANG: AOCC\_4.0.0-Build#389 2022\_10\_07) (based on LLVM Mirror.Version.14.0.6)

Target: x86\_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin  
-----

## Base Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

## Base Portability Flags

500.perlbench\_r: -DSPEC\_LINUX\_X64 -DSPEC\_LP64

502.gcc\_r: -DSPEC\_LP64

505.mcf\_r: -DSPEC\_LP64

520.omnetpp\_r: -DSPEC\_LP64

523.xalancbmk\_r: -DSPEC\_LINUX -DSPEC\_LP64

525.x264\_r: -DSPEC\_LP64

531.deepsjeng\_r: -DSPEC\_LP64

541.leela\_r: -DSPEC\_LP64

548.exchange2\_r: -DSPEC\_LP64

557.xz\_r: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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**Software Availability:** Nov-2022

## Base Optimization Flags (Continued)

C benchmarks (continued):

```
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-z muldefs -O3 -march=znver4 -fveclib=AMDLIBM -ffast-math
-fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lflang
-lamdalloc
```

C++ benchmarks:

```
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -z muldefs -O3
-march=znver4 -fveclib=AMDLIBM -ffast-math
-mllvm -unroll-threshold=100 -finline-aggressive
-mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt
-fvirtual-function-elimination -fvisibility=hidden -lamdlibm -lflang
-lamdalloc-ext
```

Fortran benchmarks:

```
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-inline-recursion=4 -Wl,-mllvm -Wl,-lsr-in-nested-loop
-Wl,-mllvm -Wl,-enable-iv-split -z muldefs -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -fepilog-vectorization-of-inductions
-mllvm -optimize-strided-mem-cost -floop-transform
-mllvm -unroll-aggressive -mllvm -unroll-threshold=500 -lamdlibm
-lflang -lamdalloc
```

## Base Other Flags

C benchmarks:

```
-Wno-unused-command-line-argument
```

C++ benchmarks:

```
-Wno-unused-command-line-argument
```

Fortran benchmarks:

```
-Wno-unused-command-line-argument
```



# SPEC CPU®2017 Integer Rate Result

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SPECrate®2017\_int\_peak = 364

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Nov-2022

Hardware Availability: Feb-2023

Software Availability: Nov-2022

## Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

flang

## Peak Portability Flags

```
500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LINUX -DSPEC_LP64
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
```

## Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: basepeak = yes
```

```
502.gcc_r: -m32 -flto -z muldefs -Ofast -march=znver4
-fveclib=AMDLIBM -ffast-math -fstruct-layout=7
-mllvm -unroll-threshold=50 -fremap-arrays -fstrip-mining
-mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -zopt -fgnu89-inline
-lamdalloc
```

```
505.mcf_r: -m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast
-march=znver4 -fveclib=AMDLIBM -ffast-math
-fstruct-layout=7 -mllvm -unroll-threshold=50
-fremap-arrays -fstrip-mining
-mllvm -inline-threshold=1000
-mllvm -reduce-array-computations=3 -zopt -lamdlibm
```

(Continued on next page)



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**Software Availability:** Nov-2022

## Peak Optimization Flags (Continued)

505.mcf\_r (continued):

-lflang -lamdalloc

525.x264\_r: basepeak = yes

557.xz\_r: Same as 505.mcf\_r

C++ benchmarks:

520.omnetpp\_r: -m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Ofast  
-march=znver4 -fveclib=AMDLIBM -ffast-math  
-finline-aggressive -mllvm -unroll-threshold=100  
-mllvm -reduce-array-computations=3 -zopt  
-fvirtual-function-elimination -fvisibility=hidden  
-lamdlibm -lamdalloc-ext

523.xalancbmk\_r: -m32 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6  
-Wl,-mllvm -Wl,-reduce-array-computations=3  
-Wl,-mllvm -Wl,-do-block-reorder=aggressive  
-fno-loop-reroll -Ofast -march=znver4 -fveclib=AMDLIBM  
-ffast-math -finline-aggressive  
-mllvm -unroll-threshold=100  
-mllvm -reduce-array-computations=3 -zopt  
-mllvm -do-block-reorder=aggressive  
-fvirtual-function-elimination -fvisibility=hidden  
-lamdalloc-ext

531.deepsjeng\_r: basepeak = yes

541.leela\_r: basepeak = yes

Fortran benchmarks:

548.exchange2\_r: basepeak = yes

## Peak Other Flags

C benchmarks (except as noted below):

-Wno-unused-command-line-argument

502.gcc\_r: -L/usr/lib32 -Wno-unused-command-line-argument  
-L/home/work/cpu2017/v118/aocc4/b1/rate/amd\_rate\_aocc400\_genoa\_B\_lib/lib32

(Continued on next page)





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**Software Availability:** Nov-2022

## Peak Other Flags (Continued)

C++ benchmarks (except as noted below):

-Wno-unused-command-line-argument

523.xalancbmk\_r: -L/usr/lib32 -Wno-unused-command-line-argument

-L/home/work/cpu2017/v118/aocc4/b1/rate/amd\_rate\_aocc400\_genoa\_B\_lib/lib32

Fortran benchmarks:

-Wno-unused-command-line-argument

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/aocc400-flags.html>

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Genoa-O.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/aocc400-flags.xml>

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Genoa-O.xml>

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.8 on 2022-11-15 16:07:29-0500.

Report generated on 2022-12-07 10:44:14 by CPU2017 PDF formatter v6442.

Originally published on 2022-12-06.

# ThinkSystem 7500 PRO Read Intensive NVMe PCIe 4.0 x4 SSDs

## Product Guide

The ThinkSystem 7500 PRO Read Intensive NVMe SSDs are general-purpose yet high-performance family of NVMe solid-state drives. They are engineered for greater performance and endurance in a cost-effective design, and to support a broader set of workloads. Now with SED encryption as standard, these drives help ensure data security, even when the drive is removed from the server.

**SED support:** All drives listed in this product guide include SED drive encryption. Our naming convention for new drives doesn't include SED in the name.



Figure 1. ThinkSystem 7500 PRO Read Intensive NVMe SSDs

### Did you know?

Lenovo Read Intensive (Entry) SSDs are suitable for read-intensive and general-purpose data center workloads, however their NVMe PCIe interface means the drives also offer high performance. Overall, these SSDs provide outstanding IOPS/watt and cost/IOPS for enterprise solutions.

Self-encrypting drives (SEDs) provide benefits by encrypting data on-the-fly at the drive level with no performance impact, by providing instant secure erasure thereby making the data no longer readable, and by enabling auto-locking to secure active data if a drive is misplaced or stolen from a system while in use. These features are essential for many businesses, especially those storing customer data.

## Part number information

The following table lists the part numbers and feature codes for the 7500 PRO SSDs.

Table 1. Part number information

Part number	Feature	Description	Supplier model
4XB7A95049	C2BY	ThinkSystem 2.5" U.3 7500 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	MTFDKCC960TGP-1BK1DABYY
4XB7A95050	C2BR	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	MTFDKCC1T9TGP-1BK1DABYY
4XB7A95051	C2BS	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	MTFDKCC3T8TGP-1BK1DABYY
4XB7A95052	C2BT	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	MTFDKCC7T6TGP-1BK1DABYY
4XB7A95053	C2BU	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	MTFDKCC15T3TGP-1BK1DABYY

The part numbers include the following items:

- One solid-state drive
- Hot swap drives include a hot-swap tray
- Documentation flyer

## Features

Non-Volatile Memory Express (NVMe) is PCIe high performance SSD technology that provides high I/O throughput and low latency. NVMe interfaces remove SAS/SATA bottlenecks and unleash all of the capabilities of contemporary NAND flash memory. Each NVMe PCI SSD has direct PCIe x4 connection, which provides at least 2x more bandwidth and 2x less latency than SATA/SAS-based SSD solutions. NVMe drives are also optimized for heavy multi-threaded workloads by using internal parallelism and many other improvements, such as enlarged I/O queues.

The ThinkSystem 7500 PRO Read Intensive NVMe SSDs have the following features:

- NVMe SSD with PCIe 4.0 performance and a U.3 interface
- Based on the Micron 7500 PRO family of SSDs
- Compliant with Trusted Computing Group Opal 2.01 Security Subsystem Class cryptographic standard (TCG Opal 2.01 SSC)
- Micron 232-layer 3D TLC NAND
- Direct PCIe 4.0 x4 connection for each NVMe drive, resulting in up to 8 GBps overall throughput.
- Advanced ECC Engine and End-to-End Data Protection
- Protect data integrity from unexpected power loss with advanced power-loss protection architecture
- Adaptive Thermal Monitoring to monitor the internal temperature of the drive with power adjustment to ensure operation within thermal limits
- Supports Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T).
- Enterprise-level security features:
  - Secure Execution Environment - dedicated security processing hardware with physical isolation
  - Asymmetric Roots of Trust - Enables authenticated revocation of root keys
  - Strong Asymmetric Key Support - Uses standard, NIST-approved algorithms with 208-bit/3072-bit RSA keys
  - RSA Delegation Key Support - Enables customers to maintain ownership of RSA keys
  - Secure Boot - Helps ensure firmware integrity on running platform
  - Key-Based Firmware Update - Validates firmware using public key-based authentication prior to firmware update
  - Key-Based Privileged Access - Protects against unauthorized privileged SSD function execution with public key-based authorization
- Supports the following specifications:
  - PCI Express Base Specification Rev. 4.0
  - NVM Express 2.0b
  - NVM Express Management Interface 1.2b

Read Intensive SSDs and Write Intensive SSDs have similar read IOPS performance, but the key difference between them is their endurance -- how long they can reliably perform write operations. Read Intensive SSDs have a better cost/IOPS ratio but lower endurance compared to Write Intensive SSDs. SSD write endurance is typically measured by the number of program/erase (P/E) write cycles that the drive incurs over its lifetime, listed as the total bytes of written data (TBW) in the device specification.

The TBW value assigned to a solid-state device is the total bytes of written data (based on the number of P/E cycles) that a drive can be guaranteed to complete (% of remaining P/E cycles = % of remaining TBW). Reaching this limit does not cause the drive to immediately fail. It simply denotes the maximum number of writes that can be guaranteed. A solid-state device will not fail upon reaching the specified TBW. At some point based on manufacturing variance margin, after surpassing the TBW value, the drive will reach the end-of-life point, at which the drive will go into a read-only mode.

Because of such behavior by Read Intensive solid-state drives, careful planning must be done to use them only in read-intensive or mixed use (70% read/30% write) environments to ensure that the TBW of the drive will not be exceeded before the required life expectancy.

For example, the 7500 PRO 1.92TB drive has an endurance of 3,504 TB of total bytes written (TBW). This means that for full operation over five years, write workload must be limited to no more than 1,920 GB of writes per day, which is equivalent to 1.00 full drive writes per day (DWPD). For the device to last three years, the drive write workload must be limited to no more than 3,200 GB of writes per day, which is equivalent to 1.7 full drive writes per day.

## **The benefits of drive encryption**

All ThinkSystem 7500 PRO Read Intensive NVMe SSDs support drive encryption.

Self-encrypting drives (SEDs) provide benefits in three main ways:

- By encrypting data on-the-fly at the drive level with no performance impact
- By providing instant secure erasure (cryptographic erasure, thereby making the data no longer readable)
- By enabling auto-locking to secure active data if a drive is misplaced or stolen from a system while in use

The following sections describe the benefits in more details.

### **Automatic encryption**

It is vital that a company keep its data secure. With the threat of data loss due to physical theft or improper inventory practices, it is important that the data be encrypted. However, challenges with performance, scalability, and complexity have led IT departments to push back against security policies that require the use of encryption. In addition, encryption has been viewed as risky by those unfamiliar with key management, a process for ensuring a company can always decrypt its own data. Self-encrypting drives comprehensively resolve these issues, making encryption both easy and affordable.

When the self-encrypting drive is in normal use, its owner need not maintain authentication keys (otherwise known as credentials or passwords) in order to access the data on the drive. The self-encrypting drive will encrypt data being written to the drive and decrypt data being read from it, all without requiring an authentication key from the owner.

### **Drive retirement and disposal**

When hard drives are retired and moved outside the physically protected data center into the hands of others, the data on those drives is put at significant risk. IT departments retire drives for a variety of reasons, including:

- Returning drives for warranty, repair, or expired lease agreements
- Removal and disposal of drives
- Repurposing drives for other storage duties

Nearly all drives eventually leave the data center and their owner's control. Corporate data resides on such drives, and when most leave the data center, the data they contain is still readable. Even data that has been striped across many drives in a RAID array is vulnerable to data theft because just a typical single stripe in today's high-capacity arrays is large enough to expose for example, hundreds of names and bank account numbers.

In an effort to avoid data breaches and the ensuing customer notifications required by data privacy laws, companies use different methods to erase the data on retired drives before they leave the premises and potentially fall into the wrong hands. Current retirement practices that are designed to make data unreadable rely on significant human involvement in the process, and are thus subject to both technical and human failure.

The drawbacks of today's drive retirement practices include the following:

- Overwriting drive data is expensive, tying up valuable system resources for days. No notification of completion is generated by the drive, and overwriting won't cover reallocated sectors, leaving that data exposed.
- Methods that include degaussing or physically shredding a drive are expensive. It is difficult to ensure the degauss strength is optimized for the drive type, potentially leaving readable data on the drive. Physically shredding the drive is environmentally hazardous, and neither practice allows the drive to be returned for warranty or expired lease.
- Some companies have concluded the only way to securely retire drives is to keep them in their control, storing them indefinitely in warehouses. But this is not truly secure because a large volume of drives coupled with human involvement inevitably leads to some drives being lost or stolen.
- Professional disposal services is an expensive option and includes the cost of reconciling the services as well as internal reports and auditing. Transporting of the drives also has the potential of putting the data at risk.

Self-encrypting drives eliminate the need to overwrite, destroy, or store retired drives. When the drive is to be retired, it can be cryptographically erased, a process that is nearly instantaneous regardless of the capacity of the drive.

### **Instant secure erase**

The self-encrypting drive provides instant data encryption key destruction via cryptographic erasure. When it is time to retire or repurpose the drive, the owner sends a command to the drive to perform a cryptographic erasure. Cryptographic erasure simply replaces the encryption key inside the encrypted drive, making it impossible to ever decrypt the data encrypted with the deleted key.

Self-encrypting drives reduce IT operating expenses by reducing asset control challenges and disposal costs. Data security with self-encrypting drives helps ensure compliance with privacy regulations without hindering IT efficiency. So called "Safe Harbor" clauses in government regulations allow companies to not have to notify customers of occurrences of data theft if that data was encrypted and therefore unreadable.

Furthermore, self-encrypting drives simplify decommissioning and preserve hardware value for returns and repurposing by:

- Eliminating the need to overwrite or destroy the drive
- Securing warranty returns and expired lease returns
- Enabling drives to be repurposed securely

### **Auto-locking**

Insider theft or misplacement is a growing concern for businesses of all sizes; in addition, managers of branch offices and small businesses without strong physical security face greater vulnerability to external theft. Self-encrypting drives include a feature called auto-lock mode to help secure active data against theft.

Using a self-encrypting drive when auto-lock mode is enabled simply requires securing the drive with an authentication key. When secured in this manner, the drive's data encryption key is locked whenever the drive is powered down. In other words, the moment the self-encrypting drive is switched off or unplugged, it automatically locks down the drive's data.

When the self-encrypting drive is then powered back on, it requires authentication before being able to unlock its encryption key and read any data on the drive, thus protecting against misplacement and theft.

While using self-encrypting drives just for the instant secure erase is an extremely efficient and effective means to help securely retire a drive, using self-encrypting drives in auto-lock mode provides even more advantages. From the moment the drive or system is removed from the data center (with or without authorization), the drive is locked. No advance thought or action is required from the data center administrator to protect the data. This helps prevent a breach should the drive be mishandled and helps secure the data against the threat of insider or outside theft.

## Technical specifications

Table 2. Technical specifications

Feature	960 GB drive	1.92 TB drive	3.84 TB drive	7.68 TB drive	15.36 TB drive
Interface	PCIe 4.0 x4	PCIe 4.0 x4	PCIe 4.0 x4	PCIe 4.0 x4	PCIe 4.0 x4
Capacity	960 GB	1.92 TB	3.84 TB	7.68 TB	15.36 TB
SED encryption	TCG Opal	TCG Opal	TCG Opal	TCG Opal	TCG Opal
Endurance (drive writes per day for 5 years)	1.0 DWPD	1.0 DWPD	1.0 DWPD	1.0 DWPD	1.0 DWPD
Endurance (total bytes written)	1752 TB	3504 TB	7008 TB	14,016 TB	28,032 TB
Data reliability (UBER)	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read	< 1 in 10 <sup>17</sup> bits read
MTBF	2,000,000 hours	2,000,000 hours	2,000,000 hours	2,000,000 hours	2,000,000 hours
IOPS reads (4 KB blocks)	800,000	1,000,000	1,100,000	1,100,000	1,100,000
IOPS writes (4 KB blocks)	85,000	145,000	180,000	215,000	250,000
Sequential read rate (128 KB blocks)	6800 MBps	6800 MBps	6800 MBps	7000 MBps	7000 MBps
Sequential write rate (128 KB blocks)	1400 MBps	2700 MBps	5300 MBps	5900 MBps	5900 MBps
Latency (random R/W)	70 µs / 15 µs	70 µs / 15 µs	70 µs / 15 µs	70 µs / 15 µs	70 µs / 15 µs
Typical power (R/W)	12.3 / 7.3 W	12.6 / 10.1 W	12.8 / 15.5 W	13.5 / 17.5 W	15.5 / 18.3 W

## Server support

The following tables list the ThinkSystem servers that are compatible.

Table 3. Server support (Part 1 of 4)

Part Number	Description	AMD V3				2S Intel V3	4S 8S Intel V3			Multi Node			GPU Rich					
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)
4XB7A95049	ThinkSystem 2.5" U.3 7500 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N
4XB7A95050	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N
4XB7A95051	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N
4XB7A95052	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N
4XB7A95053	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N



Table 4. Server support (Part 2 of 4)

Part Number	Description	1S V3			Edge				Super Computing				1S Intel V2			2S Intel V2			
		ST50 V3 (7DF4 / 7DF3)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)	SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)
4XB7A95049	ThinkSystem 2.5" U.3 7500 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y	Y
4XB7A95050	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y	Y
4XB7A95051	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y	Y
4XB7A95052	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y	Y
4XB7A95053	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y	Y

Table 5. Server support (Part 3 of 4)

Part Number	Description	AMD V1				Dense V2				4S V2		8S	4S V1		1S Intel V1					
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)
4XB7A95049	ThinkSystem 2.5" U.3 7500 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N
4XB7A95050	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N
4XB7A95051	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N
4XB7A95052	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N
4XB7A95053	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N

Table 6. Server support (Part 4 of 4)

Part Number	Description	2S Intel V1							Dense V1				
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
4XB7A95049	ThinkSystem 2.5" U.3 7500 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A95050	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A95051	ThinkSystem 2.5" U.3 7500 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A95052	ThinkSystem 2.5" U.3 7500 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	N	N	N	N	N	N
4XB7A95053	ThinkSystem 2.5" U.3 7500 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	N	N	N	N	N	N	N	N	N	N	N	N

## Storage controller support

NVMe PCIe SSDs require a NVMe drive backplane and some form of PCIe connection to processors. PCIe connections can take the form of either an adapter (PCIe Interposer or PCIe extender) or simply a cable that connects to an onboard NVMe connector.

Consult the relevant server product guide for details about required components for NVMe drive support.

## Operating system support

The following tables list the supported operating systems:

**Tip:** These tables are automatically generated based on data from [Lenovo ServerProven](#).

**VMware vSAN certification:** The drives listed in this product guide are VMware vSAN certified, however in the [VMware Compatibility Guide](#) (VCG), they are listed under the drive vendor company name instead of Lenovo. To check a drive for vSAN certification, search the VCG using the Supplier part number as listed in Table 1 in the [Part number information](#) section.

Table 7. Operating system support for ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD, 4XB7A95050

Operating systems	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR675 V3	ST650 V3 (4th Gen Xeon)	SR630 V2	SR650 V2
Microsoft Windows 10	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
Microsoft Windows 11	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.9	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.10	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.3	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.4	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.5	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.6	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR675 V3	ST650 V3 (4th Gen Xeon)	SR630 V2	SR650 V2
<b>Operating systems</b>												
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2	N	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 15 SP3	N	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	Y	Y
Ubuntu 20.04.5 LTS	N	N	Y	Y	N	N	Y	Y	Y	N	N	N
Ubuntu 22.04 LTS	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Ubuntu 22.04.3 LTS	N	Y	N	N	N	Y	N	N	N	N	N	N
Ubuntu 24.04 LTS	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	N	N	N	N	N	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	N	Y	Y	Y	N	Y	Y	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	Y	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y

## IBM SKLM Key Management support

To effectively manage a large deployment of SEDs in Lenovo servers, IBM Security Key Lifecycle Manager (SKLM) offers a centralized key management solution. Certain Lenovo servers support Features on Demand (FoD) license upgrades that enable SKLM support.

The following table lists the part numbers and feature codes to enable SKLM support in the management processor of the server.

Table 8. FoD upgrades for SKLM support

Part number	Feature code	Description
Security Key Lifecycle Manager - FoD (United States, Canada, Asia Pacific, and Japan)		
00D9998	A5U1	SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/1Yr S&S
00D9999	AS6C	SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/3Yr S&S
Security Key Lifecycle Manager - FoD (Latin America, Europe, Middle East, and Africa)		
00FP648	A5U1	SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/1Yr S&S
00FP649	AS6C	SKLM for System x/ThinkSystem w/SEDs - FoD per Install w/3Yr S&S

The IBM Security Key Lifecycle Manager software is available from Lenovo using the ordering information listed in the following table.

Table 9. IBM Security Key Lifecycle Manager licenses

Part number	Description
7S0A007FWW	IBM Security Key Lifecycle Manager Basic Edition Install License + SW Subscription & Support 12 Months
7S0A007HWW	IBM Security Key Lifecycle Manager For Raw Decimal Terabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months
7S0A007KWW	IBM Security Key Lifecycle Manager For Raw Decimal Petabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months
7S0A007MWW	IBM Security Key Lifecycle Manager For Usable Decimal Terabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months
7S0A007PWW	IBM Security Key Lifecycle Manager For Usable Decimal Petabyte Storage Resource Value Unit License + SW Subscription & Support 12 Months

The following tables list the ThinkSystem servers that support the SKLM FoD license upgrades.

Table 10. IBM SKLM Key Management license upgrades (Part 1 of 4)

Part Number	Description	AMD V3				2S Intel V3	4S 8S Intel V3			Multi Node	GPU Rich								
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)	SR780a V3 (7DJ5)
A5U1	SKLM for System x w/SEDs - FoD per Install w/1Yr S&S	N	N	Y	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N
AS6C	SKLM for System x w/SEDs - FoD per Install w/3Yr S&S	N	N	Y	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N

Table 11. IBM SKLM Key Management license upgrades (Part 2 of 4)

Part Number	Description	1S V3		Edge				Super Computing				1S Intel V2		2S Intel V2					
		ST50 V3 (7DF4 / 7DF3)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)	SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)
A5U1	SKLM for System x w/SEDs - FoD per Install w/1Yr S&S	N	Y	Y	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y	Y
AS6C	SKLM for System x w/SEDs - FoD per Install w/3Yr S&S	N	Y	Y	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y	Y

Table 12. IBM SKLM Key Management license upgrades (Part 3 of 4)

Part Number	Description	AMD V1				Dense V2				4S V2	8S	4S V1	1S Intel V1						
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)
A5U1	SKLM for System x w/SEDs - FoD per Install w/1Yr S&S	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	N	N	N	N	N
AS6C	SKLM for System x w/SEDs - FoD per Install w/3Yr S&S	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	N	N	N	N	N

Table 13. IBM SKLM Key Management license upgrades (Part 4 of 4)

Part Number	Description	2S Intel V1							Dense V1			
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)
A5U1	SKLM for System x w/SEDs - FoD per Install w/1Yr S&S	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
AS6C	SKLM for System x w/SEDs - FoD per Install w/3Yr S&S	Y	Y	Y	Y	Y	Y	Y	N	N	N	N

## Warranty

The 7500 PRO SSDs carry a one-year, customer-replaceable unit (CRU) limited warranty. When the SSDs are installed in a supported server, these drives assume the system's base warranty and any warranty upgrades.

Solid State Memory cells have an intrinsic, finite number of program/erase cycles that each cell can incur. As a result, each solid state device has a maximum amount of program/erase cycles to which it can be subjected. The warranty for Lenovo solid state drives (SSDs) is limited to drives that have not reached the maximum guaranteed number of program/erase cycles, as documented in the Official Published Specifications for the SSD product. A drive that reaches this limit may fail to operate according to its Specifications.

## Physical specifications

The 7500 PRO SSDs have the following physical specifications:

U.3 drives

- Height: 15mm (0.6 in.)
- Width: 70 mm (2.8 in.)
- Depth: 100 mm (4.0 in.)
- Weight: 200 g (2.5 oz)

## Operating environment

The 7500 PRO SSDs are supported in the following environment:

- Temperature:
  - Operating: 0 to 70 °C (32 to 158 °F)
  - Non-operating: -40 to 85 °C (-40 to 185 °F)
- Relative humidity, Non-operating: 5 to 90% (noncondensing)
- Maximum altitude: 3,050 m (10,000 ft)
- Shock, non-operating: 1,500 G (Max) at 0.5 ms
- Vibration, non-operating: 9.1 G<sub>RMS</sub> (5-800 Hz)

## Agency approvals

The 7500 PRO SSDs conform to the following regulations:

- CE (Europe): EN55032, EN55024 Class B, RoHS
- FCC: CFR Title 47, Part 15, Class B
- UL/cUL: approval to UL-60950-1, 2nd Edition, IEC 60950-1:2005 (2nd Edition); EN 60950-1 (2006) + A11:2009+ A1:2010 + A12:2011 + A2:2013
- BSMI (Taiwan): approval to CNS 13438, Class B, CNS 15663
- RCM (Australia, New Zealand): AS/NZS CISPR32 Class B
- KC RRL (Korea): approval to KN32 Class B, KN 35 Class B
- W.E.E.E.: Compliance with EU WEEE directive 2012/19/EC.
- TUV (Germany): approval to IEC60950/EN60950
- VCCI (Japan): 2015-04 Class B
- IC (Canada): ICES-003 Class B
- Morocco: EN55032, EN55024 Class B
- UkrSEPRO (Ukraine): EN55032 Class B, IEC60950/EN60950, RoHS (Resolution 2017 No. 139)
- UKCA (UK): SI 2016/1091 Class B and SI 2012/3032 RoHS

## Related publications and links

For more information, see the following documents:

- Lenovo ThinkSystem storage options product web page  
<https://lenovopress.com/lp0761-storage-options-for-thinksystem-servers>
- Micron 7500 product page  
<https://www.micron.com/products/ssd/product-lines/7500>

## Related product families

Product families related to this document are the following:

- [Drives](#)



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## Broadcom 5719 and 5720 Gigabit Ethernet Adapters Product Guide

The Broadcom NetXtreme Gigabit Ethernet Adapters are a family of high performance PCIe and OCP adapters. The adapters are available with either two ports or four ports and are supported on ThinkSystem and System x servers.

Figure 1 shows the Broadcom NetXtreme I Quad Port GbE Adapter.



Figure 1. Broadcom NetXtreme I Quad Port GbE Adapter

### Did you know?

The NetXtreme Quad Port Ethernet Adapter is an ideal way to implement a virtualization solution using your existing Gigabit Ethernet network. With four copper-based Gigabit ports on a single PCI Express 2.0 x4 interface, the adapter provides the density and capacity you need to support large numbers of virtualized systems on one server.

## Part number information

The following table lists the ordering information for the adapters.

Table 1. Ordering information

Part number	Feature code	Description
ThinkSystem adapters with PCIe interface		
7ZT7A00482	AUZX	ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter
7ZT7A00484	AUZV	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter
ThinkSystem adapters with OCP interface		
4XC7A08235	B5T1	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter

The part numbers for the PCIe adapters include the following items:

- One Ethernet adapter with full-height (4.75-inch) bracket
- Low profile (3.13-inch) bracket
- Documentation flyer

The following figure shows the Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter.



Figure 2. ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter

## Features and specifications

The adapters have the following features:

- One, two, or four 10/100/1000 copper ports with RJ45 for Cat 5e/6 cabling
- Full line-rate performance across all ports
- Standard form factor adapters, either PCIe low profile or OCP 3.0 SFF
- PCI Express 2.0 host interface
- Jumbo Frames support (9600 bytes frames)
- Wake-on-LAN (WoL) support
- IEEE 802.1q VLAN support - provides enhanced network management and efficiency
- I/O virtualization (IOV) support for VMWare NetQueue and Microsoft VMQ - improves network performance in virtualized environments
- IEEE 802.3x flow control support
- IEEE 802.3ad link aggregation support
- IEEE 802.3 auto-negotiation support
- Automatic MDI crossover
- Receive and transmit side scaling
- TCP, IP, and UDP checksum offload
- Message Signaled Interrupts (MSI) and MSI-X support - Maximizes server processing performance by reducing CPU overhead and lowering interrupt latency
- On-chip temperature monitor (NetXtreme I only)
- IEEE 802.3az Energy Efficient Ethernet (EEE) compliant - Reduces adapter power consumption by up to 42% through intelligent adaptive power management, adjusting power based on data traffic load. (NetXtreme I only)
- IEEE 802.3z (Clause 30) - Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (NetXtreme I only)
- IEEE 1588 Precision Time Control and 802.1AS time synchronization support - Provides greater accuracy of data packet delivery within the network (NetXtreme I only)
- Management using Broadcom Advanced Control Suite (BACS), Windows Management Instrumentation (WMI), and Broadcom Management API (BMAPI)

The following table compares the features of the cards.

Table 2. Features

	ThinkSystem 2-port	ThinkSystem 4-port	OCP 4-port
Part number	7ZT7A00482	7ZT7A00484	4XC7A08235
Chipset	BCM5720	BCM5719	BCM5719
RJ45 connectors	2	4	4
Host interface	PCIe 2.0	PCIe 2.0	PCIe 2.0
PCIe Lanes	x1	x4	x4
TOE support	No	No	No
iSCSI offload	No (SW Initiator)	No (SW Initiator)	No (SW Initiator)
Stateless offloads	Yes	Yes	Yes
Jumbo Frames	Yes	Yes	Yes
IEEE 802.1Q VLAN support	Yes	Yes	Yes
PXE Boot	Yes	Yes	Yes
iSCSI Boot	Yes	Yes	Yes
NIC Teaming	Yes	Yes	Yes
On-chip temperature monitor	Yes	Yes	Yes
IEEE 802.3az (Energy Efficient Ethernet, EEE)	Yes	Yes	Yes
IEEE 1588/802.1AS (Precision Time Protocol, PTP)	Yes	Yes	Yes
VMware NetQueue & Microsoft VMQ	Yes	Yes	Yes
Statistics for SNMP MIB II	Yes	Yes	Yes
Form Factor	Low profile	Low profile	OCP 3.0 SFF

## Physical specifications

The adapters have the following physical specifications:

- OCP adapters:
  - Width: 76 mm (3 in.)
  - Depth: 115 mm (4.5 in.)
- 5720 2-Port adapters:
  - Length: 109 mm (4.3")
  - Height: 69 mm (2.7")
  - Depth: 19 mm (0.74 in)
- 5719 4-Port adapters:
  - Length: 132 mm (5.2")
  - Height: 69 mm (2.7")
  - Depth: 19 mm (0.74 in)

## Operating environment

The adapters are supported in the following environment:

- Temperature:
  - Operating at 0 to 914 m (0 to 3,000 ft): 10° to 35°C (50° to 95°F)
  - Operating at 914 m to 2133m (3,000 to 7,000 ft): 10° to 32°C (50° to 90°F)
- Relative humidity: 20% to 80% (non-condensing)

## Warranty

One-year limited warranty. When installed in a Lenovo server, these cards assume the server's base warranty and any warranty upgrade.

## Server support - ThinkSystem

The following tables list the ThinkSystem servers that are compatible.

Table 3. Server support - ThinkSystem (Part 1 of 4)

Part Number	Description	AMD V3				2S Intel V3		4S 8S Intel V3		Multi Node		GPU Rich							
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)	SR780a V3 (7DJ5)
7ZT7A00482	ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
7ZT7A00484	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	N	N	N	N	N
4XC7A08235	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	N	N	N	N	N

Table 4. Server support - ThinkSystem (Part 2 of 4)

Part Number	Description	1S V3				Edge				Super Computing				1S Intel V2		2S Intel V2			
		ST50 V3 (7DF4 / 7DF3)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)	SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)
7ZT7A00482	ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y
7ZT7A00484	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	Y	Y	Y	Y	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y
4XC7A08235	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	Y

Table 5. Server support - ThinkSystem (Part 3 of 4)

Part Number	Description	AMD V1				Dense V2				4S V2	8S	4S V1		1S Intel V1						
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)
7ZT7A00482	ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7ZT7A00484	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4XC7A08235	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N

Table 6. Server support - ThinkSystem (Part 4 of 4)

Part Number	Description	2S Intel V1							Dense V1				
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
7ZT7A00482	ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter	Y	Y	Y	Y	N	Y	Y	N	N	N	N	N
7ZT7A00484	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N
4XC7A08235	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	N	N	N	N	N	N	N	N	N	N	N	N



## Connectors and LEDs

Figure 4 shows the LEDs on the PCIe adapters (2-port shown).

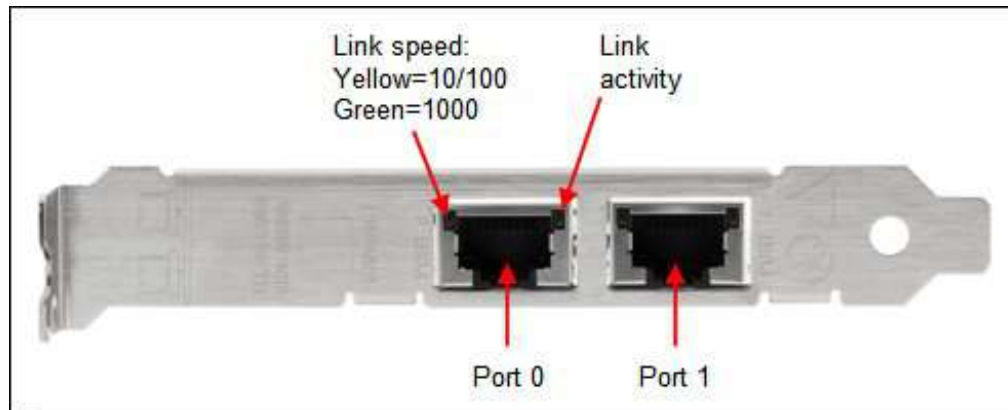


Figure 4. PCIe adapter connectors and LEDs

## Regulatory compliance

The adapters conform to the following international standards:

- EN55022
- EN55024
- EN60950 / CE
- EN 61000-3-2
- EN 61000-3-3
- ICES-003, Issue-004
- IEC 950 CB Scheme
- FCC 47 CFR Part 15 Class A
- UL 1950
- CSA C22.2 950-95
- VCCI
- AS/NZSCISPR 22 / C-tick
- RRL for KC
- BSMI
- UL 94-IV
- RoHS

## Operating system support - ThinkSystem

The following table indicates which operating systems can be preloaded in the Lenovo factory for CTO server orders where this adapter is included in the server configuration.

Table 7. OS preload support

Operating system	Preload support
Windows Server 2016	No support as a preload
Windows Server 2019	Supported as a preload for factory orders
Windows Server 2022	Supported as a preload for factory orders
VMware ESXi 6.5 U3	No support as a preload
VMware ESXi 6.7 U3	No support as a preload
VMware ESXi 7.0	No support as a preload
VMware ESXi 7.0 U1	No support as a preload
VMware ESXi 7.0 U2	No support as a preload
VMware ESXi 7.0 U3	No support as a preload
VMware ESXi 8.0	No support as a preload
VMware ESXi 8.0 U1	No support as a preload
VMware ESXi 8.0 U2	No support as a preload
VMware ESXi 8.0 U3	No support as a preload

**Tip:** If an OS is listed as "No support" above, but it is listed in one of the support tables below, that means the OS is supported by the adapter, just not available to be preloaded in the Lenovo factory in CTO orders.

The following tables list the supported operating systems for each ThinkSystem part number.

- [ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter, 7ZT7A00482](#)
- [ThinkSystem Broadcom NetXtreme PCIe 1Gb 4-Port RJ45 Ethernet Adapter, 7ZT7A00484](#)
- [ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter, 4XC7A08235](#)

**Tip:** These tables are automatically generated based on data from [Lenovo ServerProven](#).

Table 8. Operating system support for ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter, 7ZT7A00482 (Part 1 of 3)

Operating systems	SR250 V2	ST250 V2	ST50 V2	SR150	SR250	ST250	ST50	SR630 V2	SR650 V2	SR850 V2	SR860 V2	ST650 V2	SR635	SR645	SR655	SR665
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>2</sup>	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>2</sup>	N
Microsoft Windows Server 2012 R2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2016	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server version 1709	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
Red Hat Enterprise Linux 6 Server x64 Edition	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

Operating systems	SR250 V2	ST250 V2	ST50 V2	SR150	SR250	ST250	ST50	SR630 V2	SR650 V2	SR850 V2	SR860 V2	ST650 V2	SR635	SR645	SR655	SR665
Red Hat Enterprise Linux 6.9	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
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.5	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.6	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.7	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.8	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.9	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.0	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
Red Hat Enterprise Linux 8.1	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.10	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.3	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	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
SUSE Linux Enterprise Server 12 SP2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP3	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP4 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP5	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP2	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Operating systems	SR250 V2	ST250 V2	ST50 V2	SR150	SR250	ST250	ST50	SR630 V2	SR650 V2	SR850 V2	SR860 V2	ST650 V2	SR635	SR645	SR655	SR665
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	Y	Y	N	N	Y	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	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
VMware vSphere Hypervisor (ESXi) 6.5	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
VMware vSphere Hypervisor (ESXi) 6.5 U2	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U3	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U2	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	N	N	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	N	N	N	Y	Y	Y	Y	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	N	Y	Y	Y	Y	N	N	Y	Y	N	Y <sup>1</sup>	Y	Y <sup>1</sup>	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

Table 9. Operating system support for ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter, 7ZT7A00482 (Part 2 of 3)

Operating systems	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2012 R2	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
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server version 1709	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
Red Hat Enterprise Linux 6 Server x64 Edition	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
Red Hat Enterprise Linux 6.9	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
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	N	N	N	N
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 7.9	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 8.10	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
Red Hat Enterprise Linux 9.4	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 11 SP4	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
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	Y	N	N	N
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
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	Y	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 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.0 U3	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
VMware vSphere Hypervisor (ESXi) 6.5 U1	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	N	N	N	N	N	N	N	N	N	N	Y

Table 10. Operating system support for ThinkSystem Broadcom 5720 1GbE RJ45 2-Port PCIe Ethernet Adapter, 7ZT7A00482 (Part 3 of 3)

	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2012 R2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server version 1709	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Microsoft Windows Server version 1803	N	N	N	N	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 6 Server x64 Edition	N	Y	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6.10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 6.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.3	Y	Y	N	N	Y	Y	Y	N	Y	Y
Red Hat Enterprise Linux 7.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.5	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
Red Hat Enterprise Linux 7.7	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
Red Hat Enterprise Linux 7.9	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
Red Hat Enterprise Linux 8.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										

Red Hat Enterprise Linux 8.10	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 9.4	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 11 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP2	Y	Y	N	N	Y	Y	Y	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	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
SUSE Linux Enterprise Server 15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	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
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N



<b>Operating systems</b>	<b>SR530 (Xeon Gen 1)</b>	<b>SR550 (Xeon Gen 1)</b>	<b>SR570 (Xeon Gen 1)</b>	<b>SR590 (Xeon Gen 1)</b>	<b>SR630 (Xeon Gen 1)</b>	<b>SR650 (Xeon Gen 1)</b>	<b>SR850 (Xeon Gen 1)</b>	<b>SR860 (Xeon Gen 1)</b>	<b>SR950 (Xeon Gen 1)</b>	<b>ST550 (Xeon Gen 1)</b>
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5	Y	Y	N	N	Y	Y	Y	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	N	N	N	N	N	N	N	N	N	Y

Table 11. Operating system support for ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter, 7ZT7A00484 (Part 1 of 4)

<b>Operating systems</b>	<b>SE450</b>	<b>SE455 V3</b>	<b>SE350</b>	<b>SR250 V3</b>	<b>ST250 V3</b>	<b>ST50 V3</b>	<b>SR630 V3 (4th Gen Xeon)</b>	<b>SR630 V3 (5th Gen Xeon)</b>	<b>SR635 V3</b>	<b>SR645 V3</b>	<b>SR650 V3 (4th Gen Xeon)</b>	<b>SR650 V3 (5th Gen Xeon)</b>	<b>SR655 V3</b>	<b>SR665 V3</b>	<b>SR850 V3</b>	<b>SR860 V3</b>	<b>ST650 V3 (4th Gen Xeon)</b>	<b>ST650 V3 (5th Gen Xeon)</b>
Microsoft Windows 10	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N
Microsoft Windows Server 2012 R2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2016	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2019	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<b>Operating systems</b>	<b>SE450</b>	<b>SE455 V3</b>	<b>SE350</b>	<b>SR250 V3</b>	<b>ST250 V3</b>	<b>ST50 V3</b>	<b>SR630 V3 (4th Gen Xeon)</b>	<b>SR630 V3 (5th Gen Xeon)</b>	<b>SR635 V3</b>	<b>SR645 V3</b>	<b>SR650 V3 (4th Gen Xeon)</b>	<b>SR650 V3 (5th Gen Xeon)</b>	<b>SR655 V3</b>	<b>SR665 V3</b>	<b>SR850 V3</b>	<b>SR860 V3</b>	<b>ST650 V3 (4th Gen Xeon)</b>	<b>ST650 V3 (5th Gen Xeon)</b>
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	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	N
Microsoft Windows Server version 1803	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6 Server x64 Edition	N	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	N
Red Hat Enterprise Linux 6.9	N	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	N
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.6	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.7	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.8	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.9	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.1	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.10	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.3	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.4	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.5	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.6	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 8.7	Y	N	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 9.0	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 9.1	Y	N	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 9.4	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP2	N	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	N
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

	SE450	SE455 V3	SE350	SR250 V3	ST250 V3	ST50 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	ST650 V3 (4th Gen Xeon)	ST650 V3 (5th Gen Xeon)
<b>Operating systems</b>																		
SUSE Linux Enterprise Server 12 SP4 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP5 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP2	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP2 with Xen	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP3	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP3 with Xen	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
SUSE Linux Enterprise Server 15 with Xen	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.6 LTS	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	Y	Y	Y	N	N	N	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N
Ubuntu 22.04 LTS	Y	N	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Ubuntu 22.04.2 LTS	N	Y	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
Ubuntu 24.04 LTS	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	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	N
VMware vSphere Hypervisor (ESXi) 6.5	N	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	N
VMware vSphere Hypervisor (ESXi) 6.5 U2	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	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	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U2	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Operating systems	SE450	SE455 V3	SE350	SR250 V3	ST250 V3	ST50 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	ST650 V3 (4th Gen Xeon)	ST650 V3 (5th Gen Xeon)
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	N	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	N	N	N	N
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N

Table 12. Operating system support for ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter, 7ZT7A00484 (Part 2 of 4)

Operating systems	SR250 V2	ST250 V2	ST50 V2	SR150	SR250	ST250	ST50	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2	ST650 V2	SR635	SR645	SR655	SR665
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>2</sup>	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>2</sup>	N
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	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	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 Server x64 Edition	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	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.6	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.7	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.8	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.9	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.0	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
Red Hat Enterprise Linux 8.1	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.10	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<b>Operating systems</b>	<b>SR250 V2</b>	<b>ST250 V2</b>	<b>ST50 V2</b>	<b>SR150</b>	<b>SR250</b>	<b>ST250</b>	<b>ST50</b>	<b>SR630 V2</b>	<b>SR650 V2</b>	<b>SR670 V2</b>	<b>SR850 V2</b>	<b>SR860 V2</b>	<b>ST650 V2</b>	<b>SR635</b>	<b>SR645</b>	<b>SR655</b>	<b>SR665</b>
Red Hat Enterprise Linux 8.2	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.3	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
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	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP4 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP5	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP2	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	Y	Y	Y	N	N	Y	N	N	N	N
Ubuntu 18.04.6 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<b>Operating systems</b>	<b>SR250 V2</b>	<b>ST250 V2</b>	<b>ST50 V2</b>	<b>SR150</b>	<b>SR250</b>	<b>ST250</b>	<b>ST50</b>	<b>SR630 V2</b>	<b>SR650 V2</b>	<b>SR670 V2</b>	<b>SR850 V2</b>	<b>SR860 V2</b>	<b>ST650 V2</b>	<b>SR635</b>	<b>SR645</b>	<b>SR655</b>	<b>SR665</b>
Ubuntu 22.04.2 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	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	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U3	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U2	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	N	Y	Y	Y	Y	N	N	N	Y	Y	N	Y <sup>1</sup>	Y	Y <sup>1</sup>	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	Y	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

Table 13. Operating system support for ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter, 7ZT7A00484 (Part 3 of 4)

<b>Operating systems</b>	<b>SR530 (Xeon Gen 2)</b>	<b>SR550 (Xeon Gen 2)</b>	<b>SR570 (Xeon Gen 2)</b>	<b>SR590 (Xeon Gen 2)</b>	<b>SR630 (Xeon Gen 2)</b>	<b>SR650 (Xeon Gen 2)</b>	<b>SR850 (Xeon Gen 2)</b>	<b>SR850P (Xeon Gen 2)</b>	<b>SR860 (Xeon Gen 2)</b>	<b>SR950 (Xeon Gen 2)</b>	<b>ST550 (Xeon Gen 2)</b>
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2012 R2	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
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server version 1709	N	N	N	N	N	N	N	N	N	N	N

	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
Microsoft Windows Server version 1803	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6 Server x64 Edition	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
Red Hat Enterprise Linux 6.9	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
Red Hat Enterprise Linux 7.4	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.5	N	N	N	N	N	N	N	N	N	N	N
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 7.9	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 8.10	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP2	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
SUSE Linux Enterprise Server 12 SP3	N	N	N	N	N	N	N	Y	N	N	N
SUSE Linux Enterprise Server 12 SP3 with Xen	N	N	N	N	N	N	N	Y	N	N	N
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
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

	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
SUSE Linux Enterprise Server 15	Y	Y	Y	Y	Y	Y	Y	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 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.6 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.0 U3	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
VMware vSphere Hypervisor (ESXi) 6.5 U1	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y



	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	N	N	N	N	N	N	N	N	N	N	Y

Table 14. Operating system support for ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter, 7ZT7A00484 (Part 4 of 4)

	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2012 R2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server version 1709	Y	Y	Y	Y	Y	N	N	Y	Y	Y
Microsoft Windows Server version 1803	N	N	N	N	Y	Y	Y	Y	Y	N
Red Hat Enterprise Linux 6 Server x64 Edition	N	Y	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 6.10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 6.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.3	Y	Y	N	N	Y	Y	Y	N	Y	Y
Red Hat Enterprise Linux 7.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.5	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
Red Hat Enterprise Linux 7.7	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
Red Hat Enterprise Linux 7.9	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
Red Hat Enterprise Linux 8.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.10	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										

Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 9.4	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP2	Y	Y	N	N	Y	Y	Y	N	Y	Y
SUSE Linux Enterprise Server 12 SP2 with Xen	Y	Y	N	N	Y	Y	Y	N	Y	Y
SUSE Linux Enterprise Server 12 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	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
SUSE Linux Enterprise Server 15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	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
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.6 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N	N	N	N	N	N	N

	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5	Y	Y	N	N	Y	Y	Y	N	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.5 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	N	N	N	N	N	N	N	N	N	Y

Table 15. Operating system support for ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter, 4XC7A08235 (Part 1 of 2)

	SE455 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	SR950 V3	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2
<b>Operating systems</b>																	
Microsoft Windows 10	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
Microsoft Windows Server 2016	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y

Operating systems	SE455 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	SR950 V3	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2
	Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.9	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.2	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP5	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP2	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Operating systems	Operating systems																	
	SE455 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	SR950 V3	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2	
SUSE Linux Enterprise Server 15 SP6	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N
Ubuntu 20.04.5 LTS	Y	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	N	Y	N	Y	Y	Y	N	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y <sup>1</sup>	N	Y	Y	Y <sup>1</sup>	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> For limitation, please refer [Support Tip 104278](#)

Table 16. Operating system support for ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter, 4XC7A08235 (Part 2 of 2)

Operating systems	Operating systems			
	SR635	SR645	SR655	SR665
Microsoft Windows 10	N	N	Y <sup>2</sup>	N
Microsoft Windows 11	N	N	Y <sup>2</sup>	N
Microsoft Windows Server 2016	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.7	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.8	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.9	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.0	Y <sup>1</sup>	N	Y <sup>1</sup>	N
Red Hat Enterprise Linux 8.1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.10	Y	Y	Y	Y

<b>Operating systems</b>	<b>SR635</b>	<b>SR645</b>	<b>SR655</b>	<b>SR665</b>
Red Hat Enterprise Linux 8.2	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP1 with Xen	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP6	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	N	N	N	N
Ubuntu 24.04 LTS	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y <sup>1</sup>	Y	Y <sup>1</sup>	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y

Operating systems	SR635	SR645	SR655	SR665
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U3	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

## Related publications

For more information, refer to the following resources:

- Lenovo ThinkSystem networking options product web page  
<https://lenovopress.com/lp0765-networking-options-for-thinksystem-servers>
- ServerProven compatibility page for Ethernet adapters:  
<http://www.lenovo.com/us/en/serverproven>

## Related product families

Product families related to this document are the following:

- [1 Gb Ethernet Connectivity](#)
- [Ethernet Adapters](#)

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# ThinkSystem Broadcom 57414 10/25GbE SFP28 Ethernet Adapters

## Product Guide

The ThinkSystem Broadcom 57414 10/25GbE SFP28 Ethernet Adapters are high-performance 25 Gb Ethernet adapters that offers TruFlow intelligent flow processing and support advanced networking technologies including RoCE, SDN, NFV and virtualization.

The following figure shows the 2-port adapter.



Figure 1. ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter

### Did you know?

These adapters support 10 Gb or 25 Gb Ethernet switches, including the ThinkSystem NE2572 RackSwitch 25 Gb Ethernet switch. Alternatively, with suitable breakout cables, you can connect four 25 Gb adapters or ports to a single 100 GbE switch port such as the ThinkSystem NE10032 RackSwitch to maximize the investment of your 100Gb switch.

## Part number information

The ordering information is listed in the following table.

Table 1. Ordering information

Part number	Feature code	Description
PCIe adapters		
4XC7A08238	B5T0 / BK1H	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter
OCP adapters		
4XC7A08237	B5SZ / BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port OCP Ethernet Adapter

The PCIe adapters, when shipped as a stand-alone option part number, include the following items:

- One Broadcom adapter
- An attached full-height (3U) bracket, and a low-profile (2U) bracket that can be substituted if needed
- Documentation flyer

## Supported transceivers and cables

The adapters have one or two empty SFP28 cages for connectivity. The adapters either support a connection to a 10 Gb or 25 Gb switch or can share a connection to a 100 Gb switch using a 4:1 breakout cable.

The following table lists the supported transceivers.

Table 2. Transceivers

Part number	Feature code	Description
1Gb Transceivers		
00FE333	A5DL	SFP 1000Base-T (RJ-45) Transceiver
10Gb Transceivers		
00FE331	B0RJ	10GBASE-LR SFP+ Transceiver
49Y4216	0069	Brocade 10Gb SFP+ SR Optical Transceiver
49Y4218	0064	QLogic 10Gb SFP+ SR Optical Transceiver
46C3447	5053	SFP+ SR Transceiver
4TC7A78615	BNDR	ThinkSystem Accelink 10G SR SFP+ Ethernet transceiver
25Gb Transceivers		
4M27A67041	BFH2	Lenovo 25Gb SR SFP28 Ethernet Transceiver
4TC7A69045	BF10	Lenovo Dual Rate 10G/25G SR SFP28 85C Transceiver
7G17A03537	AV1B	Lenovo Dual Rate 10G/25G SR SFP28 Transceiver
4TC7A88638	BYBJ	ThinkSystem Finisar Dual Rate 10G/25G SR SFP28 Transceiver

Configuration notes:

- It is supported to mix 10Gb and 1Gb transceivers or to mix 25Gb and 1Gb transceivers. It is not supported to mix 10Gb and 25Gb transceivers.
- Transceivers BF10, AV1B, and BYBJ are only supported at 25Gb/s speed on the PCIe adapter (4XC7A08238). The transceivers are supported at both 10Gb/s and 25Gb/s speeds on the OCP adapter (4XC7A08237).

**25Gb transceivers:** When installed in this 25Gb Ethernet adapter, 25Gb transceivers are designed to operate at either 25 Gb/s or 10 Gb/s speeds as listed in the description of the transceiver, however the speed also depends on the negotiation with the connected switch. In most configurations, this negotiation is automatic, however in some configurations you may have to manually set the link speed or FEC mode.

The following figure shows the 2-port OCP adapter.



Figure 2. ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port OCP Ethernet Adapter

The following table lists the supported fiber optic cables and Active Optical Cables.

Table 3. Optical cables

Part number	Feature code	Description
LC-LC OM3 Fiber Optic Cables (these cables require a 10 GbE SFP+ SR or 25 GbE SFP28 SR transceiver)		
00MN499	ASR5	Lenovo 0.5m LC-LC OM3 MMF Cable
00MN502	ASR6	Lenovo 1m LC-LC OM3 MMF Cable
00MN505	ASR7	Lenovo 3m LC-LC OM3 MMF Cable
00MN508	ASR8	Lenovo 5m LC-LC OM3 MMF Cable
00MN511	ASR9	Lenovo 10m LC-LC OM3 MMF Cable
00MN514	ASRA	Lenovo 15m LC-LC OM3 MMF Cable
00MN517	ASRB	Lenovo 25m LC-LC OM3 MMF Cable
00MN520	ASRC	Lenovo 30m LC-LC OM3 MMF Cable
MTP-4xLC OM3 MMF Breakout Cables (these cables require a transceiver)		
00FM412	A5UA	Lenovo 1m MPO-4xLC OM3 MMF Breakout Cable
00FM413	A5UB	Lenovo 3m MPO-4xLC OM3 MMF Breakout Cable
00FM414	A5UC	Lenovo 5m MPO-4xLC OM3 MMF Breakout Cable
SFP+ 10Gb Active Optical Cables		
00YL634	ATYX	Lenovo 1m SFP+ to SFP+ Active Optical Cable
00YL637	ATYY	Lenovo 3m SFP+ to SFP+ Active Optical Cable
00YL640	ATYZ	Lenovo 5m SFP+ to SFP+ Active Optical Cable
00YL643	ATZ0	Lenovo 7m SFP+ to SFP+ Active Optical Cable
00YL646	ATZ1	Lenovo 15m SFP+ to SFP+ Active Optical Cable
00YL649	ATZ2	Lenovo 20m SFP+ to SFP+ Active Optical Cable
SFP28 25Gb Active Optical Cables		
4X97A94008	AV1F	Lenovo 3m 25G SFP28 Active Optical Cable
4X97A94011	AV1G	Lenovo 5m 25G SFP28 Active Optical Cable
4X97A94012	AV1H	Lenovo 10m 25G SFP28 Active Optical Cable
4X97A94013	AV1J	Lenovo 15m 25G SFP28 Active Optical Cable
4X97A94702	AV1K	Lenovo 20m 25G SFP28 Active Optical Cable
QSFP28 100Gb Ethernet Breakout Active Optical Cables		
7Z57A03552	AV1S	Lenovo 5m 100G to 4x25G Breakout Active Optical Cable
7Z57A03554	AV1U	Lenovo 15m 100G to 4x25G Breakout Active Optical Cable
OM4 LC to LC Cables (these cables require a transceiver)		
4Z57A10845	B2P9	Lenovo 0.5m LC-LC OM4 MMF Cable
4Z57A10846	B2PA	Lenovo 1m LC-LC OM4 MMF Cable
4Z57A10847	B2PB	Lenovo 3m LC-LC OM4 MMF Cable
4Z57A10848	B2PC	Lenovo 5m LC-LC OM4 MMF Cable
4Z57A10849	B2PD	Lenovo 10m LC-LC OM4 MMF Cable
4Z57A10850	B2PE	Lenovo 15m LC-LC OM4 MMF Cable
4Z57A10851	B2PF	Lenovo 25m LC-LC OM4 MMF Cable
4Z57A10852	B2PG	Lenovo 30m LC-LC OM4 MMF Cable

The following table lists the supported direct-attach copper (DAC) cables.

Table 4. Copper cables

Part number	Feature code	Description
<b>SFP+ 10Gb Passive DAC Cables</b>		
00D6288	A3RG	0.5m Passive DAC SFP+ Cable
90Y9427	A1PH	1m Passive DAC SFP+ Cable
00AY764	A51N	1.5m Passive DAC SFP+ Cable
00AY765	A51P	2m Passive DAC SFP+ Cable
90Y9430	A1PJ	3m Passive DAC SFP+ Cable
90Y9433	A1PK	5m Passive DAC SFP+ Cable
00D6151	A3RH	7m Passive DAC SFP+ Cable
<b>SFP+ 10Gb Active DAC Cables</b>		
00VX111	AT2R	Lenovo 1m Active DAC SFP+ Cables
00VX114	AT2S	Lenovo 3m Active DAC SFP+ Cables
00VX117	AT2T	Lenovo 5m Active DAC SFP+ Cables
<b>SFP28 25Gb Passive DAC Cables</b>		
7Z57A03557	AV1W	Lenovo 1m Passive 25G SFP28 DAC Cable
7Z57A03558	AV1X	Lenovo 3m Passive 25G SFP28 DAC Cable
7Z57A03559	AV1Y	Lenovo 5m Passive 25G SFP28 DAC Cable
<b>QSFP28 100G-to-4x25G Ethernet Breakout Cables</b>		
7Z57A03564	AV22	Lenovo 1m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable
4Z57A85043	BS32	Lenovo 1.5m 100G to 4x25G Breakout SFP28 Breakout DAC Cable
4Z57A85044	BS33	Lenovo 2m 100G to 4x25G Breakout SFP28 Breakout DAC Cable
7Z57A03565	AV23	Lenovo 3m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable
7Z57A03566	AV24	Lenovo 5m 100G QSFP28 to 4x25G SFP28 Breakout DAC Cable

## Features

The adapters have the following features:

- Broadcom TruFlow technology integrates flow processing to provide hardware assisted processing of traffic flows with data path Acceleration. TruFlow enables efficient network flow processing, increases Virtual Machine density by offloading the server CPU to improve application performance.
- Broadcom adapters are the industry's most secure PCIe Ethernet solution, leveraging Broadcom's BroadSAFE® technology to provide unparalleled platform security via Silicon Root of Trust. Broadcom is the first Ethernet Adapter vendor to store authentication key and code in silicon to protect clients from maliciously modified firmware.
- The adapters support RoCEv2. RoCE (RDMA over Converged Ethernet), which allows Remote Direct Memory Access (RDMA) traffic to be communicated over Converged Ethernet using DCB. Broadcom's Smart Congestion Control provides consistent and predictable performance for real world workloads plus scaling for heavily loaded network traffic making it ideal for clients looking for deterministic low latency.
- Support for Data Center Bridging (DCB), including IEEE 802.1Qbb Priority based Flow Control (PFC), 802.1Qaz Enhanced Transmission Selection (ETS), and 802.1Qau Quantized Congestion Notification (QCN) capabilities. DCB technology allows the device to provide lossless data delivery, prioritize low latency traffic, and share bandwidth among data center physical links.

- Support for SR-IOV which bypasses the hypervisor, reducing the latency by removing data copies and context switches between VM address space and hypervisor address space, when transmitting or receiving data over the network. The implementation supports 802.1Qbg Edge Virtual Bridging (EVB)

## Specifications

The adapter has the following technical specifications:

- Based on the Broadcom BCM57414 (2-port) controllers
- PCIe 3.0 x8 host interface
- Supports Message Signal Interrupt (MSI-X)
- Two SFP28 external connectors supporting a transceiver, direct-attach copper (DAC) cable or active optical cable (AOC).
- Support for PXE boot
- Support for Wake-on-LAN (WOL) (OCP adapter only)
- Networking Features
  - Jumbo frames (up to 9600-Byte)
  - 802.3x flow control
  - Link Aggregation (802.3ad)
  - Virtual LANs-802.1q VLAN tagging
  - Configurable Flow Acceleration
  - Advanced Congestion Avoidance
  - IEEE 1588 and Time Sync
  - Forward Error Correction Clause 74, Clause 91 support over 25 Gbps
  - iSCSI boot is only supported via server UEFI; iSCSI boot is not supported by the adapter in legacy mode
- Performance Features
  - Max. 30M Packet Per Second
  - Low latency
  - Bidirectional wire speed throughput
- Stateless Offload Features
  - TCP, UDP, IPv4, IPv6 checksum offload
  - Large Send Offload
  - Receive Segment Coalescing
  - TCP Segmentation offload
  - Large Receive Offload
  - Generic Receive Offload
  - Receive Side Scaling (RSS)
  - Transmit Side Scaling (TSS)
  - Header-Payload Split
  - Accelerated Received Flow Steering (RFS)

- Virtualization
  - vSwitch Acceleration
  - NetQueue, VMQueue, and Multiqueue
  - PCI SIG SR-IOV compliant with support for 128 Virtual Functions
  - Virtual NIC (vNIC) / Network Partitioning (NPAR) with support for up to 16 physical functions
  - VXLAN-aware stateless offloads
  - NVGRE-aware stateless offloads
  - Geneve-aware stateless offloads
  - IP-in-IP-aware stateless offloads
  - GRE-aware (encap/decap) stateless offloads
  - Stateless Transport Tunneling
  - Edge Virtual Bridging (EVB)
  - Per Virtual Function (VF) statistics
  - VF Receive-Side Scaling (RSS)/Transmit-Side Scaling (TSS)
- RDMA over Converged Ethernet (RoCE)
  - RoCEv2
  - Data Center Bridging with RoCE
  - Reliable Connection Queue Pair
  - Unreliable Datagram Queue Pair
  - Raw Ethertype Queue Pair
  - Up to 1 million Queue Pairs
  - Up to 64K Shared Receive Queues
  - Up to 1 million Completion Queues
  - Up to 1 million Memory Regions and Memory Windows
  - Up to 1 million Protection Domains
  - Up to 250 outstanding RDMA Reads or Atomics per Queue Pair
  - Congestion Avoidance (hardware-based flows tracking and rate adjustment)
  - Fast Memory Register
  - Linux OFED 3.5 and later
  - MS-Windows Network Direct Kernel Provider Interface and SMBDirect
  - MS-Windows Network Direct Service Provider Interface
- Integrated Flow Processing
  - 1 million+ Exact Match Flows
  - Exact Match Flow Lookup
  - Wildcard Match Flow Lookup
  - VLAN insertion/deletion
  - NAT/NAPT
  - Tunnel Encapsulation/De-capsulation
  - Flow tracking and aging
  - Mirroring
  - Metering
  - Flow counters/statistics
  - Custom tunnel header support
- Data Center Bridging
  - Priority-based flow control (PFC; IEEE 802.1Qbb)
  - Enhanced transmission selection (ETS; IEEE 802.1Qaz)
  - Quantized Congestion Notification (QCN; IEEE 802.1Qau)
  - Data Center Bridging Capability eXchange (DCBX; IEEE 802.1Qaz)
  - Up to 8 traffic classes per port; fully DCB compliant per 802.1Qbb
- Manageability
  - TruManage Technology based on Distributed Management Task Force (DMTF) standards and protocols, support for SMASH2.0, WS-Man, and IPMI2.0/DCMI1.5
  - Management Component Transport Protocol (MCTP) - MCTP over SMBus and MCTP over PCIe VDM



- Power Saving
  - ACPI compliant power management
  - PCI Express Active State Power Management (ASPM)
  - PCI Express eCLKREQ support
  - PCI Express unused lane powered down
  - Ultra low-power mode
  - Energy Efficient Ethernet (IEEE Std 802.3az-2010)
  - Power Management (PM) Offload

## Server support

The following tables list the ThinkSystem servers that are compatible.

Table 5. Server support (Part 1 of 4)

Part Number	Description	2S AMD V3				2S Intel V3				4S 8S Intel V3				Multi Node				GPU Rich				1S V3	
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)			
4XC7A08238	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	Y		
4XC7A08237	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y	N	N		

Table 6. Server support (Part 2 of 4)

Part Number	Description	Edge				Super Computing				1S Intel V2				2S Intel V2			
		SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)	SR650 V2 (7Z72 / 7Z73)
4XC7A08238	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	Y	
4XC7A08237	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	Y	Y

Table 7. Server support (Part 3 of 4)

Part Number	Description	AMD V1				Dense V2				4S V2	8S	4S V1		1S Intel V1					
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)
4XC7A08238	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	Y	Y	N	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	N	N	N	N
4XC7A08237	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N

Table 8. Server support (Part 4 of 4)

Part Number	Description	2S Intel V1							Dense V1			
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)
4XC7A08238	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
4XC7A08237	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	N	N	N	N	N	N	N	N	N	N	N

## Operating system support

The following tables list the supported operating systems:

- [ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter, 4XC7A08238](#)
- [ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port OCP Ethernet Adapter, 4XC7A08237](#)

**Tip:** These tables are automatically generated based on data from [Lenovo ServerProven](#).

Table 9. Operating system support for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter, 4XC7A08238 (Part 1 of 4)

Operating systems	SE455 V3	SR250 V3	ST250 V3	SD530 V3	SD550 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	ST650 V3	SR250 V2	ST250 V2
Microsoft Windows 10	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N
Microsoft Windows Server 2016	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2019	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
Red Hat Enterprise Linux 8.6	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	N	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	N	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP5 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP2 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Operating systems	SE455 V3	SR250 V3	ST250 V3	SD530 V3	SD550 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	ST650 V3	SR250 V2	ST250 V2
SUSE Linux Enterprise Server 15 SP3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	Y	N	N	N	N	N	N	Y	Y	N	N	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	N	N	N
Ubuntu 22.04 LTS	N	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y	Y	Y
Ubuntu 22.04.2 LTS	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	Y	Y	Y	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	N	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> For limitation, please refer [Support Tip TT1716](#)

Table 10. Operating system support for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter, 4XC7A08238 (Part 2 of 4)

Operating systems	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2	ST650 V2	SR635	SR645	SR655	SR665
Microsoft Windows 10	N	N	N	N	N	N	N	N	Y <sup>2</sup>	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	Y <sup>2</sup>	N
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<b>Operating systems</b>	<b>SR630 V2</b>	<b>SR650 V2</b>	<b>SR670 V2</b>	<b>SR850 V2</b>	<b>SR860 V2</b>	<b>ST650 V2</b>	<b>SR635</b>	<b>SR645</b>	<b>SR655</b>	<b>SR665</b>
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.7	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.8	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.9	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.0	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
Red Hat Enterprise Linux 8.1	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.2	Y	Y	Y	Y	Y	Y	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP5	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
SUSE Linux Enterprise Server 15	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	Y	Y	Y	N	N	Y	N	N	N	N
Ubuntu 20.04 LTS	Y	Y	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<b>Operating systems</b>	<b>SR630 V2</b>	<b>SR650 V2</b>	<b>SR670 V2</b>	<b>SR850 V2</b>	<b>SR860 V2</b>	<b>ST650 V2</b>	<b>SR635</b>	<b>SR645</b>	<b>SR655</b>	<b>SR665</b>
Ubuntu 22.04.2 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	N	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	N	N	N	N	N	N	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	N	Y	Y	N	Y <sup>1</sup>	Y	Y <sup>1</sup>	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

Table 11. Operating system support for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter, 4XC7A08238 (Part 3 of 4)

<b>Operating systems</b>	<b>SR530 (Xeon Gen 2)</b>	<b>SR550 (Xeon Gen 2)</b>	<b>SR570 (Xeon Gen 2)</b>	<b>SR590 (Xeon Gen 2)</b>	<b>SR630 (Xeon Gen 2)</b>	<b>SR650 (Xeon Gen 2)</b>	<b>SR850 (Xeon Gen 2)</b>	<b>SR850P (Xeon Gen 2)</b>	<b>SR860 (Xeon Gen 2)</b>	<b>SR950 (Xeon Gen 2)</b>	<b>ST550 (Xeon Gen 2)</b>
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	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
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	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 7.9	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
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	N	N	N	N	N	N	N	N	N	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
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	N	N	N	N	Y	N	N	N	N	N	N
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 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	Y	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

	SR530 (Xeon Gen 2)	SR550 (Xeon Gen 2)	SR570 (Xeon Gen 2)	SR590 (Xeon Gen 2)	SR630 (Xeon Gen 2)	SR650 (Xeon Gen 2)	SR850 (Xeon Gen 2)	SR850P (Xeon Gen 2)	SR860 (Xeon Gen 2)	SR950 (Xeon Gen 2)	ST550 (Xeon Gen 2)
<b>Operating systems</b>											
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 12. Operating system support for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter, 4XC7A08238 (Part 4 of 4)

	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										
Microsoft Windows 10	N	N	N	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	N	N	N	N	N	N
Microsoft Windows Server 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	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
Red Hat Enterprise Linux 7.7	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
Red Hat Enterprise Linux 7.9	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
Red Hat Enterprise Linux 8.1	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
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y



	SR530 (Xeon Gen 1)	SR550 (Xeon Gen 1)	SR570 (Xeon Gen 1)	SR590 (Xeon Gen 1)	SR630 (Xeon Gen 1)	SR650 (Xeon Gen 1)	SR850 (Xeon Gen 1)	SR860 (Xeon Gen 1)	SR950 (Xeon Gen 1)	ST550 (Xeon Gen 1)
<b>Operating systems</b>										

Red Hat Enterprise Linux 9.3	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 9.4	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5	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
SUSE Linux Enterprise Server 15	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1	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
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 with Xen	N	N	N	N	N	N	N	N	N	N
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table 13. Operating system support for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter, 4XC7A08237 (Part 1 of 2)

Operating systems	SE455 V3	SD530 V3	SD550 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2
Microsoft Windows 10	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N
Microsoft Windows 11	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N
Microsoft Windows Server 2016	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 7.9	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Red Hat Enterprise Linux 8.2	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.3	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 12 SP5	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP1 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SUSE Linux Enterprise Server 15 SP2	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y

Operating systems	SE455 V3	SD530 V3	SD550 V3	SR630 V3 (4th Gen Xeon)	SR630 V3 (5th Gen Xeon)	SR635 V3	SR645 V3	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3	SR850 V3	SR860 V3	SR630 V2	SR650 V2	SR670 V2	SR850 V2	SR860 V2
SUSE Linux Enterprise Server 15 SP3 with Xen	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	N	N	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	N	N
Ubuntu 20.04 LTS	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N
Ubuntu 20.04.5 LTS	Y	N	N	N	N	Y	Y	N	N	Y	Y	Y <sup>2</sup>	Y <sup>2</sup>	N	N	N	N	N
Ubuntu 22.04 LTS	N	N	N	Y	N	Y	Y	Y	N	Y	Y	Y <sup>2</sup>	Y <sup>2</sup>	Y	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 22.04.3 LTS	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N	N	N	Y	Y	Y	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	N	N
VMware vSphere Hypervisor (ESXi) 7.0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VMware vSphere Hypervisor (ESXi) 7.0 U1	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U2	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	N	N	N	Y	N	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	N	N	Y <sup>1</sup>	N	Y	Y	Y <sup>1</sup>	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

<sup>1</sup> For limitation, please refer [Support Tip 104278](#)

<sup>2</sup> For limitation, please refer [Support Tip TT1716](#)

Table 14. Operating system support for ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter, 4XC7A08237 (Part 2 of 2)

Operating systems	SR635	SR645	SR655	SR665
Microsoft Windows 10	N	N	Y <sup>2</sup>	N
Microsoft Windows 11	N	N	Y <sup>2</sup>	N
Microsoft Windows Server 2016	Y	Y	Y	Y
Microsoft Windows Server 2019	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y
Red Hat Enterprise Linux 7.6	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.7	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>

<b>Operating systems</b>	<b>SR635</b>	<b>SR645</b>	<b>SR655</b>	<b>SR665</b>
Red Hat Enterprise Linux 7.8	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 7.9	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.0	Y <sup>1</sup>	N	Y <sup>1</sup>	N
Red Hat Enterprise Linux 8.1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.2	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
Red Hat Enterprise Linux 8.3	Y	Y	Y	Y
Red Hat Enterprise Linux 8.4	Y	Y	Y	Y
Red Hat Enterprise Linux 8.5	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	Y	Y	Y	Y
Red Hat Enterprise Linux 8.7	Y	Y	Y	Y
Red Hat Enterprise Linux 8.8	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	Y	Y	Y	Y
Red Hat Enterprise Linux 9.1	Y	Y	Y	Y
Red Hat Enterprise Linux 9.2	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP4	Y <sup>1</sup>	N	Y <sup>1</sup>	N
SUSE Linux Enterprise Server 12 SP5	Y	Y	Y	Y
SUSE Linux Enterprise Server 12 SP5 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP1	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP1 with Xen	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
SUSE Linux Enterprise Server 15 SP2	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP2 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP3 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	Y	Y	Y	Y
Ubuntu 18.04.5 LTS	N	N	N	N
Ubuntu 20.04 LTS	N	N	N	N
Ubuntu 20.04.5 LTS	N	N	N	N
Ubuntu 22.04 LTS	Y	Y	Y	Y
Ubuntu 22.04.2 LTS	N	N	N	N
Ubuntu 22.04.3 LTS	N	N	N	N
Ubuntu 24.04 LTS	N	N	N	N
VMware vSphere Hypervisor (ESXi) 6.7 U3	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>	Y <sup>1</sup>
VMware vSphere Hypervisor (ESXi) 7.0 U1	Y <sup>1</sup>	Y	Y <sup>1</sup>	Y

	SR635	SR645	SR655	SR665
<b>Operating systems</b>				
VMware vSphere Hypervisor (ESXi) 7.0 U2	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 7.0 U3	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	Y	Y	Y	Y

<sup>1</sup> The OS is not supported with EPYC 7003 processors.

<sup>2</sup> ISG will not sell/preload this OS, but compatibility and cert only.

## Physical specifications

The PCIe adapters have the following dimensions:

- Length: 167 mm (6.6 in.)
- Height: 63 mm (2.5 in)

## Operating environment

The adapters are supported in the following environment:

- Temperature (operating): 0 to 55 °C (32 to 131 °F)
- Temperature (storage): -40 to 65 °C (-40 to 149 °F)
- Humidity: 5 to 95% non-condensing

## Warranty

One-year limited warranty. When installed in a supported server, these adapters assume the server's base warranty and any warranty upgrade.

## Agency approvals

The adapters conform to the following standards:

- EN 55022:2010 + AC:2011 Class B (CE EU)
- EN 55024 Class B (EU)
- CFR47, Part 15 Class B (USA FCC)
- ICES-003 Class B (Canada)
- CNS13438 Class B (BSMI Taiwan)
- RRL KN22 Class B (S. Korea)
- KN24 (ESD) (S. Korea)
- V-3 / 2014 / 04 (VCCI Japan)
- EN 60950-1
- UL 60950-1
- CTUVus UL
- CSA 22.2 No. 950
- CNS14336 Class B
- ICES 003
- UL 1977 (connector safety)
- UL 796 (PCB wiring safety)
- UL 94 (flammability of parts)

## Related publications

For more information, see the following resources:

- Networking Options for ThinkSystem Servers  
<https://lenovopress.com/lp0765-networking-options-for-thinksystem-servers>
- Lenovo ServerProven compatibility information:  
<http://www.lenovo.com/us/en/serverproven/>

## Related product families

Product families related to this document are the following:

- [25 Gb Ethernet Connectivity](#)
- [Ethernet Adapters](#)

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This document, LP0781, was created or updated on October 31, 2023.

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[comments@lenovopress.com](mailto:comments@lenovopress.com)

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## PROPOSTA

SELEÇÃO PÚBLICA Nº 092/2024


À

Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC

Declaramos que foram examinadas minuciosamente as especificações e condições do Edital e de seus anexos, em especial seu Anexo I - Termo de Referência – destinado à contratação de empresa especializada no fornecimento de equipamentos de informática para laboratório (servidor).

Propomos, sob nossa integral responsabilidade, o fornecimento do item descrito no Termo de Referência – Anexo I desta Seleção Pública, pelos valores, descritos na planilha detalhada abaixo:

ITEM	DESCRIÇÃO DETALHADA	FORNEC	MARCA/MODELO	QUANT	VAL UNIT	VAL TOTAL
1	<p>Servidor Rack PowerEdge R6615</p> <p>Base</p> <p>PowerEdge R6615 Server BCC</p> <p>Sistema operacional</p> <p>No Operating System</p> <p>Trusted Platform Module (TPM)</p> <p>Trusted Platform Module 2.0 V3</p> <p>Configuração de Chassi</p> <p>2.5" Chassis with up to 10 SAS4/SATA Drives, Front PERC 11</p> <p>Processor</p> <p>AMD EPYC 9124 3.0GHz, 16C/32T, 64M Cache (200W)</p> <p>DDR5-4800</p> <p>Configuração térmica do processador</p> <p>High Performance Heatsink, V2</p> <p>Memória</p> <p>(2) 64GB RDIMM, 4800MT/s, Dual Rank 16Gb Base x4, BCC RAID</p> <p>C3, RAID 1 for 2 HDDs or SSDs (Matching Type/Speed/Capacity)</p> <p>Controlador RAID</p> <p>PERC H355 with rear load bracket</p> <p>Armazenamento</p> <p>(2) 1.92TB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD</p> <p>Ventiladores</p> <p>4 Very High Performance Fan for 1 CPU</p> <p>Fonte de alimentação</p> <p>Dual, Hot-plug, Power Supply Fully Redundant (1+1), 800W, Mixed Mode, NAF</p> <p>Cabo de alimentação</p> <p>(2) C13 to C14, PDU Style, 12 AMP, 13 Feet (4m) Power Cord, North America</p> <p>Gerenciamento de sistemas integrado</p> <p>iDRAC9, Enterprise 16G</p> <p>Placa de rede adicional</p> <p>LOM Blank; Broadcom 5719 Quad Port 1GbE BASE-T Adapter, PCIe Low Profile, V2, FIRMWARE RESTRICTIONS APPLY;</p> <p>Broadcom 57414 Dual Port 10/25GbE SFP28 Adapter, PCIe Low Profile, V2</p> <p>Tampa frontal</p> <p>Std Bezel for x8 /x10 Chassis, R6615</p> <p>Trilhos de rack</p> <p>1U Combo Drop-In/Stab-In Rails With Cable Management</p> <p>Arm</p> <p>Cartões de armazenamento com boot otimizado</p> <p>No BOSS Card</p> <p>Kits de mídia do sistema operacional</p> <p>No Media Required</p> <p>Serviço iDRAC</p> <p>iDRAC Service Module (ISM), NOT Installed</p> <p>Regulatório</p> <p>PowerEdge R6615 CCC Marking, No CE or BIS Marking</p> <p>Configurações avançadas do sistema</p> <p>UEFI BIOS Boot Mode with GPT Partition</p> <p>Backplane</p> <p>SAS/SATA Backplane</p> <p>Definições das configurações avançadas do sistema e do BIOS</p> <p>Performance BIOS Setting</p>	Un	Dell/PowerEdge R6615	1	R\$ 60.844,00	R\$ 60.844,00

<p> Armazenamento frontal  Chassis with up to 10x2.5" Drives  GPU/FPGA/Acceleration Cards  NVIDIA Ampere A2, PCIe, 60W, 16GB Passive, Single Wide,  Low Profile GPU,V2  Tipo de configuração da memória  Performance Optimized  Tipo e velocidade de memória DIMM  4800MT/s RDIMMs  Placa-mãe  PowerEdge R6615 Motherboard V2  Network Daughter Card (NDC)  Broadcom 5720 Quad Port 1GbE BASE-T Adapter, OCP NIC 3.0  PCIe Riser  Riser Config 2, 3 x16 LP (2x Gen5)  Armazenamento traseiro  No Rear Storage  Sync  Quick Sync 2 (At-the-box mgmt)  Senha  iDRAC Factory Generated Password for OCP cards  Documentação do Sistema  No Systems Documentation, No OpenManage DVD Kit  Envio  PowerEdge R6615 Shipping BCC  Material de envio  Shipping Material for backplane chassis, BCC  Gerente do Grupo  iDRAC Group Manager, Disabled  ECCN  Decline Selection  Assistência técnica  3 anos de serviço ProSupport  Serviços de implementação  Sem serviço de Instalação </p> 					
--	--	--	--	--	--

Propomos, sob nossa integral responsabilidade, o fornecimento de equipamentos/serviço, na forma prevista na Presente Seleção e seus anexos, pelo valor global de: **R\$60.844,00 (Sessenta mil e oitocentos e quarenta e quatro reais)**

Declaramos que nos preços ofertados estão incluídas todas as despesas, tributos e demais encargos de qualquer natureza, incidentes sobre o fornecimento dos equipamentos, nada mais podendo ser cobrado da FINATEC.

Declaramos total concordância com os termos e condições desta Sessão Pública.

**Garantia:** 3 anos de serviço ProSupport

**Prazo de Entrega:** 30 dias corrido

**Validade da Proposta:** 30 dias

**Endereço de entrega:** Campus Darcy Ribeiro, Av. L3 Norte, Asa Norte, Cep. 70910-900, edifício FINATEC

**DADOS DA EMPRESA**

**CNPJ:** 42.669.518/0001-62

Telefone:

(61) 99335-9798 (Antonio - Administrativo/Financeiro)

(61) 99915-2812 (Eduardo - Licitações / Compras)


Email: contato@emzonline.com.br

Banco: 748 (Banco Sicredi)

Agência: 3953

Conta: 11779-6

Pix: 42.669.518/0001-62


Documento assinado digitalmente  
**EDUARDO ROCHA DA SILVA**  
Data: 29/08/2024 21:29:45-0300  
Verifique em <https://validar.iti.gov.br>

Brasília-DF, 29 de Agosto de 2024

Representante legal  
**EDUARDO ROCHA DA SILVA**  
RG: 2556608 SSP-DF



SHIN CA 02, LOTE 01, BLOCO G, TORRE 02  
SALA 314 - ED. PREMIUM CORPORATE

**SELEÇÃO PÚBLICA Nº 092/2024**  
**TIPO: MENOR PREÇO POR ITEM**  
**DATA: 30/08/2024**  
**HORÁRIO: 10h00min**

Prezados Senhores:

NATHAN ´S Comercial LTDA., inscrita no CNPJ nº 04.191.350/0001-33, com sede na SHIN CA 02, LOTE 01, BLOCO G, TORRE 02, SALA 314. ED. PREMIUM CORPORATE – CEP 71.503-502 – Brasília – DF –  
Telefone: (61) 38776849 - 99672-7269 E-mail [nathans.ltda@gmail.com](mailto:nathans.ltda@gmail.com),  
[casa.computadores@gmail.com](mailto:casa.computadores@gmail.com), tem a honra de apresentar sua proposta abaixo:

Valores Expressos em Reais (R\$).

Item	Descrição	Qtde	Valor Unitário	Valor Total
01	Dell Technologies   PowerEdge R7615	01	108.850,00	108.850,00

- Servidor PowerEdge R7615 configurada pelo fabricante Dell
- 2.5" Chassis with up to 8 NVMe Direct Drives
- AMD EPYC 9124 3.0GHz, 16Cores/32Threads, 64M Cache (200W) DDR5-4800
- 4 x módulos de 32GB RDIMM DDR5 ECC, 4800MT/s Dual Rank
- Broadcom 5720 Dual Port 1GbE Optional LOM
- 2 x 1.92TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4 with carrier
- [iDRAC9 Enterprise 16G](#) Gerenciamento remoto completo.
- Placa de rede 57414 Dual Port 10/25GbE SFP28, OCP NIC 3.0
- Sem RAID para Chassi de NVMe\*
- Servidor configurado sem discos rígidos. Consulte seu representante técnico para validar quanto a necessidade de adicionar discos posteriormente.\*
- Sem placa controladora\*
- 2 x Cabos de 25GbE, SFP28 para SFP28, Passive Copper Twinax Direct Attach Cable, 2 metros
- Riser Config 3, 2 x16 LP + 2 x8 FH + 2 x16 DW, Full Length
- PERC H965e, Adapter Full Height/Low Profile, DIB
- Dell Mouse otico MS116, preto
- Dell KB216 Wired Multi-Media teclado em inglês, preto
- Braço de gerenciamento de cabos, 2U
- Trilhos deslizantes ReadyRails
- PowerEdge 2U Standard Bezel
- BOSS card Blank para R7525
- Quick Sync 2 (At-the-box mgmt)
- No Energy Star
- Fonte de Energia Redundante 800W RDNT D, Mixed Mode (performance do servidor pode ser reduzida para mante-lo operacional em caso de falha de uma das fontes)

- 2 x Cabos de força 250V, NBR14136/C13 de 2 metros
- Trusted Platform Module 2.0 V3
- **GPU NVIDIA Ampere A2, PCIe, 60W, 16GB Passive, Single Wide, Full Height GPU, V2**
- **Serviço de implementação ProDeploy para servidores em rack.**
- **3 anos de Serviço ProSupport: Atendimento telefônico (24hs x 7 dias). Com direito à reposição de peças no local, após diagnóstico remoto (Cobertura total: peças e softwares OEM).**
- Sem Sistema Operacional e sem Partição de Utilidade

### **CONDIÇÕES DE COMERCIALIZAÇÃO**

**1. LOCAL DE ENTREGA:**

Os equipamentos deverão ser entregues no Item 1: Faculdade UnB Gama - FGA, Universidade de Brasília, Área Especial de Indústria Projeção A, Setor Leste, Gama - DF CEP: 72.444-240

**2. PRAZO DE ENTREGA:**

A entrega será realizada em até 30 (trinta) dias úteis, após o recebimento da autorização de fornecimento.

**3. PRAZO DE PAGAMENTO:**

Até 15 (quinze) dias, após o recebimento da NFe.

**4. VALIDADE DA PROPOSTA:**

O prazo de validade da proposta de preços é de 30 (trinta) dias, a contar da data de sua apresentação.

**5. EMPRESA OPTANTE PELO SIMPLES NACIONAL.**

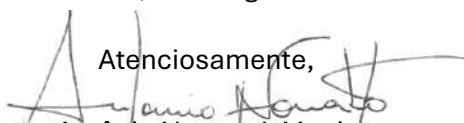
**6. INFORMAÇÃO BANCÁRIA:**

Banco do Brasil - Agência: 1507-5

Conta Corrente: 40.057-2

Brasília – DF, 29 de agosto de 2024.

Atenciosamente,



Antônio Nonato L Muniz

Gerente de Negócios




**F.ZORDAN**

**FELIPE PINHEIRO DE ABREU ZORDAN**

**CNPJ: 55.522.472/0001-04**

À FINATEC,

Em atendimento ao certame apresento nossa proposta de preço para fornecimento dos materiais objeto da referida cotação, conforme abaixo especificado:

ITEM	DISCRIMINAÇÃO	UNID	QTD E	PREÇO UNITÁRIO R\$	PREÇO TOTAL R\$
	<ul style="list-style-type: none"><li><b>Modelo:</b></li></ul> <p>Servidor Rack PowerEdge R6615</p>  <p>Base PowerEdge R6615 Server BCC Sistema operacional No Operating System Trusted Platform Module (TPM) Trusted Platform Module 2.0 V3 Configuração de Chassi 3.5" Chassis with up to 4 SAS3/SATA Drives, Front PERC 11 Processor AMD EPYC 9124 3.0GHz, 16C/32T, 64M Cache (200W) DDR5-4800 Configuração térmica do processador High Performance Heatsink, V2 Memória (2) 64GB RDIMM, 4800MT/s, Dual Rank 16Gb Base x4, BCC RAID C1, No RAID for HDDs/SSDs (Mixed Drive Types Allowed) Controlador RAID Front PERC H355 Front Load Armazenamento</p>	01	01	<b>R\$83.280,00</b>	<b>R\$83.280,00</b>

**F ZORDAN SOLUÇÕES**

Rua Copaíba, Lote 01 Ed. DF Century Plaza Sala 1112 Torre B - Brasília-DF

CEP: 71.919-540

Tel./WhatsApp: (61) 998700744

E-mail: fzordan@pinheirozordan.com



**F.ZORDAN**

**FELIPE PINHEIRO DE ABREU ZORDAN**

**CNPJ: 55.522.472/0001-04**

(2) 1.92TB SSD SATA Read Intensive 6Gbps 512 2.5in  
Hot-plug AG Drive, 3.5in HYB CARR, 1 DWPD  
Ventiladores  
4 Very High Performance Fan for 1 CPU  
Fonte de alimentação  
Dual, Hot-plug, Power Supply Fully Redundant (1+1),  
800W, Mixed Mode, NAF  
Cabo de alimentação  
(2) C13 to C14, PDU Style, 12 AMP, 13 Feet (4m)  
Power Cord, North America  
Gerenciamento de sistemas integrado  
iDRAC9, Enterprise 16G  
Placa de rede adicional  
LOM Blank; Broadcom 5719 Quad Port 1GbE BASE-T  
Adapter, PCIe Low Profile, V2, FIRMWARE  
RESTRICTIONS APPLY; Broadcom 57414 Dual Port  
10/25GbE SFP28 Adapter, PCIe Low Profile, V2  
Tampa frontal  
Standard Bezel for x4 Chassis, R6615  
Trilhos de rack  
ReadyRails Sliding Rails Without Cable Management  
Arm or Strain Relief Bar  
Cartões de armazenamento com boot otimizado  
No BOSS Card  
Kits de mídia do sistema operacional  
No Media Required  
Serviço iDRAC  
iDRAC Service Module (ISM), NOT Installed  
Regulatório  
PowerEdge R6615 CCC Marking, No CE or BIS  
Marking  
Configurações avançadas do sistema  
UEFI BIOS Boot Mode with GPT Partition  
Backplane  
SAS/SATA Backplane  
Definições das configurações avançadas do sistema  
e do BIOS  
Performance BIOS Setting  
Armazenamento frontal  
Chassis with up to 4x3.5" Drives  
GPU/FPGA/Acceleration Cards  
NVIDIA Ampere A2, PCIe, 60W, 16GB Passive, Single  
Wide, Low Profile GPU, V2

**F ZORDAN SOLUÇÕES**

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Tel./WhatsApp: (61) 998700744

E-mail: fzordan@pinheirozordan.com



**F.ZORDAN**

**FELIPE PINHEIRO DE ABREU ZORDAN**

**CNPJ: 55.522.472/0001-04**

Tipo de configuração da memória  
Performance Optimized  
Tipo e velocidade de memória DIMM  
4800MT/s RDIMMs  
Placa-mãe  
PowerEdge R6615 Motherboard V2  
Network Daughter Card (NDC)  
Broadcom 57414 Dual Port 10/25GbE SFP28, OCP  
NIC 3.0  
PCIe Riser  
Riser Config 2, 3 x16 LP (2x Gen5)  
Armazenamento traseiro  
No Rear Storage  
Acessórios de servidor  
Keyboard and Optical Mouse, USB, Black, English  
Sync  
Quick Sync 2 (At-the-box mgmt)  
ECCN  
Assistência técnica  
3 anos de serviço ProSupport



**VALOR TOTAL R\$83.280,00**

- 1 - Preço total da proposta **R\$ OITENTA E TRÊS MIL DUZENTOS E OITENTA REAIS.**
- 2 - Prazo de validade da proposta: 20 dias.
- 3 - Prazo para a entrega do material: 30 dias úteis.
- 4 - Prazo de garantia: De acordo com o fabricante .
- 5 - O material será entregue de acordo com as especificações contidas no edital.
- 6 - Garantimos a substituição do produto ofertado, em caso de defeito de fabricação.
- 7 - Estão inclusos no preço todos os custos e despesas, tais como e sem se limitar com: custos diretos e indiretos, tributos incidentes, taxas de administração, materiais, serviços e encargos sociais.

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**F.ZORDAN**

**FELIPE PINHEIRO DE ABREU ZORDAN**

**CNPJ: 55.522.472/0001-04**

8 - Banco: 336-Banco C6 S.A. | Agência: 0001 | Conta: 13201290-1.

**Brasília, 30 de Agosto de 2024.**

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Diretor e Representante Legal  
Felipe Pinheiro de Abreu Zordan  
RG: 2.275.746

**F ZORDAN SOLUÇÕES**

Rua Copaíba, Lote 01 Ed. DF Century Plaza Sala 1112 Torre B - Brasília-DF

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E-mail: [fzordan@pinheirozordan.com](mailto:fzordan@pinheirozordan.com)



ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.

Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC

PREGÃO ELETRONICO Nº 092/2024

Razão social	Teczap Comércio e Distribuição LTDA
CNPJ	08619872000144
Inscrição estadual	0010287510050
Endereço	Av. Doutor José Gonçalves da Cunha nº679 Centro – Entre Rios de Minas – MG – 35.490-000
Telefone/fax	(31) 2626-0009
Nome do signatário	Saulo Henrique de Faria Pereira
Estado civil do signatário	Solteiro
Cargo	Sócio Administrador
Identidade do signatário	MG-10133557
CPF	042.060.396-40
Nacionalidade do signatário	Brasileiro
Banco	Banco do Brasil
Agência	1222-x
Conta Corrente	121096-3
Praça de pagamento	Belo Horizonte
Procedência	Nacional



**Saulo Henrique de Faria Pereira**

ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.

Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC

PREGÃO ELETRONICO Nº 092/2024

LOTE	ESPECIFICAÇÃO	QUANT/ UNID	PREÇO UNIT.(R\$)	PREÇO TOTAL (R\$)
ITEM 1	<p><b>Marca: TECZAP</b></p> <p><b>Fabricante: TECZAP</b></p> <p><b>Modelo: TZ SUPER 9000</b></p> <ul style="list-style-type: none"> <li>➤ Processador: AMD EPYC 9124, 3.0GHz, 16C/32T, 64M Cache (200W) DDR5-4800, ou superior, desde que seja da família AMD EPYC Série 9004 (mais detalhes em <a href="https://www.amd.com/pt/products/embedded/epyc/epyc-9004-series.html">https://www.amd.com/pt/products/embedded/epyc/epyc-9004-series.html</a>)</li> <li>➤ Memória: 128GB DDR5 de memória RDIMM 4800MT/s Dual 4 x módulos de 32GB)</li> <li>➤ Armazenamento: 2 (dois) discos NVMe Enterprise de 1.92TB em gaveta</li> <li>➤ Placa aceleradora: RTX 4060 TI PNY NVIDIA GeForce Verto Dual Fan, 16GB GDDR6</li> <li>➤ Controladora de discos: Controladora capaz de suportar os 2 discos NVMe citados, configurados em modo RAID 1</li> <li>➤ Conectividade: 2 (duas) interfaces/portas de rede de 10/25GbE e 2 (duas) interfaces/portas de rede de 1GbE</li> <li>➤ Sistema operacional: Ubuntu Server</li> <li>➤ Gestão do hardware: Solução de acesso remoto do servidor IMPI/BMC</li> <li>➤ Energização: Fonte de energia Redundante Dual, Hot-plug, (1+1), 800W e cabos de força compatíveis</li> </ul>	1	<b>R\$ 74.900,00</b>	<b>R\$ 74.900,00</b>

	(250V, NBR14136/C13 de 2 metros) <ul style="list-style-type: none"><li>➤ Interfaces de uso: Teclado, mouse e 4 portas USB</li><li>➤ Instalação física: Estrutura para encaixe do servidor em rack (trilhos deslizantes com braço gerenciador de cabos)</li></ul>			
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Qualquer dúvida quanta a especificação favor entrar em contato via 0800 ou email [saulo@teczap.com.br](mailto:saulo@teczap.com.br) nos termos da Lei 14.133/21, art. 64, e IN 73/2022, art. 39, §4º):

Bem como entendimento do TCU "atente para o disposto no art. 43, § 3º, abstendo-se, em consequência, de inabilitar ou desclassificar empresas em virtude de detalhes irrelevantes ou que possam ser supridos pela diligência autorizada por lei" (Acórdão nº 2.521/2003, Rel. Min. AUGUSTO SHERMAN CAVALCANTI, j. 21/10/2003, DOU 29/10/2003).

**Pagamento:**

O pagamento será efetuado no prazo de até 15 (quinze) dias úteis contados da finalização da liquidação da despesa, conforme seção anterior, nos termos da Instrução Normativa SEGES/ME nº 77/2022.

**Prazo de entrega:**

O prazo de entrega dos bens é de 30 (trinta) dias úteis após a emissão da Autorização de Fornecimento – AF.

**Garantia:**

O prazo de garantia será de 36 meses.

**Prazo de validade da proposta:**

A proposta terá validade de 30 dias corridos, a contar da data de sua apresentação.



Declaramos estar inclusos despesas dos tributos, encargos trabalhistas, previdenciários, fiscais, comerciais, taxas, fretes, seguros, deslocamento de pessoal, prestação de garantia e quaisquer outras que incidam ou venham a incidir na execução do contrato.

Declaramos que iremos cumprir todos os itens prescritos no termo de referência.

**Telefone para suporte técnico e abertura de chamados: 08006010009**

Entre Rios de Minas, 30 de Agosto de 2024.

  
\_\_\_\_\_  
**Saulo Henrique de Faria Pereira**

**ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.**

**Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC**

**PREGÃO ELETRONICO Nº 092/2024**

### **Declarações**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – entre rios de minas – MG – 35490-000 declaramos:

(X) Declaro para efeito de Registro Cadastral, vir a informar qualquer fato superveniente impeditivo de licitar ou contratar com a Administração Pública que venha a ocorrer no período de validade do Certificado de Registro Cadastral, comprometendo-me ainda a manter atualizada a Certidão Negativa de Débito perante as Fazendas Municipal, Estadual e Federal, inclusive Instituto Nacional de Seguridade Social - INSS e Fundo de Garantia por Tempo de Serviço – FGTS.

(X) Declaro sob as penas da lei, que não foram aplicadas penalidades de suspensão temporária da participação em licitação e impedimento de contratar pela administração pública municipal direta ou indireta e que não fomos declarados inidôneos para licitar e contratar por qualquer ente ou entidade da Administração Federal, Estadual, Distrital e Municipal cujos efeitos ainda vigorem que até a presente data inexistem fatos supervenientes à emissão das certidões apresentadas, impeditivos para sua habilitação no presente certame licitatória, estando ciente da obrigatoriedade de declarar ocorrências posteriores impeditivas de tal habilitação.

(X) Declaro que não incorro nas condições impeditivas do art. 14 da Lei Federal nº 14.133/21.

(X) Declaro que atendo aos requisitos de habilitação, conforme disposto no art. 63, inciso I, da Lei Federal nº 14.133/21.

(X) Declaro que cumpro as exigências de reserva de cargos para pessoa com deficiência e para reabilitado da Previdência Social, previstas em lei e em outras normas específicas, conforme art. 63, inciso IV, da Lei Federal nº 14.133/21.

(X) Declaro que a proposta apresentada para essa licitação está em conformidade com as exigências do instrumento convocatório e me responsabilizo pela veracidade e autenticidade dos documentos apresentados.

(X) Declara, que em seu quadro de funcionários não há portadores de deficiência, visto que a obrigatoriedade são para empresas que possuem mais de 100(cem) funcionários, conforme lei microempresas/portadores de deficiência.

(X) Declaro que minha proposta econômica compreendem a integralidade dos custos para atendimento dos direitos trabalhistas assegurados na Constituição Federal, nas leis trabalhistas, nas normas infralegais, nas convenções coletivas de trabalho e nos termos de ajustamento de conduta vigentes na data de entrega da proposta, conforme art. 63, §1º, da Lei Federal nº 14.133/21.

(X) Declaro que estou ciente do edital e concordo com as condições locais para o cumprimento das obrigações objeto da licitação, conforme o art. 67, inciso VI, da Lei Federal nº 14.133/21;

(X) Declaro para fins do disposto no inciso VI do art. 68, da Lei nº 14.133/21, que não emprego menor de 18 (dezoito) anos em trabalho noturno, perigoso ou insalubre e não emprego menor de 16 (dezesesseis) anos, salvo menor, a partir dos 14 (quatorze) anos, na condição de aprendiz, nos termos do inciso XXXIII, do art. 7º, da Constituição Federal/88.

(X) Declaro sob as penas da Lei N. 9.841/99 trata de pequeno porte, no seu artigo 11. dispõe que: “a Microempresa e a Empresa de pequeno porte são dispensadas do cumprimento das obrigações acessórias a que se referem os Arts. 74; 135, § 2o; 360; 429 e 628, § 1o, da Consolidação das Leis do Trabalho – Clt.”

(X) Declaro que não possuo, em minha cadeia produtiva, empregados executando trabalho degradante ou forçado, observando o disposto nos incisos III e IV do art. 1º e no inciso III do art. 5º da Constituição Federal/88.

(X) Declaro para os devidos fins legais, sem prejuízo das sanções e multas previstas neste ato convocatório, estar enquadrado como ME/EPP/Cooperativa, conforme a

4 Lei Complementar nº 123/2006, cujos termos declaro conhecer na íntegra, estando apto, portanto, a exercer o direito de preferência.

(X) Declaro ter o pleno conhecimento e atendimento às exigências do edital e de habilitação.

(X) Declaro ter o pleno conhecimento e atendimento às exigências de habilitação, ressalvada, na forma do §1º do art. 43 da Lei complementar nº 123/06, a existência de restrição fiscal.

(X) Declaro não possuir parentesco até o 3º grau civil (afim ou consanguíneo) com servidor público Municipal, Estadual e Federal, (Prefeito, Vice-Prefeito, Vereadores servidores municipais e estaduais. Deputados estaduais, secretários estaduais, deputados federais, senadores, ministros, secretários federais, presidente da república, vice presidente da república. ,

(X) Declaro que não possui em seu quadro societário e de funcionários, qualquer servidor efetivo ou comissionado ou empregado do referido órgão público, como também em nenhum outro órgão ou entidade a ela vinculada, exercendo funções técnicas, gerenciais, comerciais, administrativas ou societárias.

(X) Declaro sob as sanções administrativas cabíveis, inclusive as criminais e sob as penas da lei, que toda documentação anexada ao sistema são autênticas.

(X) Declaro sob as penalidades da lei que não se enquadra em nenhum dos impedimentos previstos nos artigos 38 e 44 da Lei nº 13.303/2016.

(X) Declaro ter pleno conhecimento da legislação pertinente à contratação em pauta e demais condições previstas no Edital e seus anexos;

(X) Declaro, sob as sanções administrativas cabíveis e sob as penas da lei, que se comprometo a fornecer informações adicionais, solicitadas pelo o pregoeiro como: laudos técnicos de análises do produto, catálogos, e outros, a qualquer tempo e/ou fase do processo licitatório, com finalidade de dirimir dúvida e instruir as decisões relativas ao julgamento.

(X) Declaro que cumprimos plenamente os requisitos exigidos para a habilitação, conforme prescreve o inciso VII, do artigo 4º, da Lei 10.520, de 17 de julho de 2002, referente ao Pregão Eletrônico, estando ciente das penalidades aplicáveis nos casos de descumprimento.

(X) Declaro atendemos aos requisitos de habilitação, respondendo pela veracidade das informações prestadas, na forma da lei. Por ser expressão da verdade, assumo inteira responsabilidade por esta declaração, sob pena do art. 299 do Código Penal.

(X) Declaro que cumprimos durante todo o período de execução do contrato, a reserva de cargos prevista em lei para pessoa com deficiência ou para reabilitado da Previdência Social, bem como as regras de acessibilidade previstas na legislação, quando a contratada houver se beneficiado da preferência estabelecida pela Lei nº 13.146, de 2015. 12.19. Guardar sigilo sobre todas as informações obtidas em decorrência do cumprimento do contrato;

(X) Declaro que não possui vínculo de natureza técnica, comercial, econômica, financeira, trabalhista ou civil com dirigente do órgão ou entidade contratante ou com agente público que desempenhe função na licitação ou atue na fiscalização ou na gestão do contrato, ou que deles seja cônjuge, companheiro ou parente em linha reta, colateral ou por afinidade, até o terceiro grau;

(X) Declaro que a tenho conhecimento e atendo a todas as exigências de habilitação e especificações técnicas previstas neste termo, e que os documentos anexados eletronicamente ou apresentados para digitalização, são fiéis aos originais e válidos para todos os efeitos legais.

(X) Declaro que comprometemo-nos a garantir o prazo de validade dos preços e condições constantes da presente proposta conforme edital a partir da data da apresentação da mesma

(X) Por ser expressão da verdade, assumo inteira responsabilidade por TODAS as declarações acima, sob pena do art. 299 do Código Penal.



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**Saulo Henrique de Faria Pereira**



**ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.**

**Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC**

**PREGÃO ELETRONICO Nº 092/2024**

### **DECLARAÇÃO DE SUSTENTABILIDADE AMBIENTAL**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – entre rios de minas – MG – 35490-000 declara sob as penas da Lei nº 6.938/1981, na qualidade de proponente, que atendemos aos critérios de qualidade ambiental e sustentabilidade socioambiental, respeitando as normas de proteção do meio ambiente.

Estou ciente da obrigatoriedade da apresentação das declarações e certidões pertinentes dos órgãos competentes, quando solicitadas, como requisito para habilitação e da obrigatoriedade do cumprimento integral ao que estabelece o Art. 6º e seus incisos, da Instrução Normativa nº 01, de 19 de janeiro de 2010, do Ministério do Planejamento, Orçamento e Gestão – MPOG, Decreto nº 7746 de 5 de junho de 2012, que estabelece critérios, práticas e diretrizes para a promoção do desenvolvimento nacional sustentável, bem como os atos normativos editados pelos órgãos de proteção ao meio ambiente.

Estou ciente da obrigatoriedade da apresentação do registro no Cadastro Técnico Federal de Atividades Potencialmente Poluidoras ou Utilizadoras de Recursos Ambientais caso minha empresa exerça uma das atividades constantes no Anexo II da Instrução Normativa nº 31, de 03 de dezembro de 2009, do IBAMA, e ainda que deve-se dar prioridade nas aquisições e contratações governamentais aos produtos reciclados e recicláveis e para bens, serviços e obras que considerem critérios compatíveis com padrões de consumo social e ambientalmente sustentáveis, conforme art. 7º, XI, da Lei nº 12.305/2010 - Política Nacional de Resíduos Sólidos.



Saulo Henrique de Faria Pereira

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**Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC**

**PREGÃO ELETRONICO Nº 092/2024**

### **DECLARAÇÃO**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – entre rios de minas – MG – 35490-000 declara:

I – que os bens são constituídos, no todo ou em parte, por material reciclado, atóxico, biodegradável, conforme ABNT NBR – 15448-1 e 15448-2;

II – que são observados os requisitos ambientais para a obtenção de certificação do Instituto Nacional de Metrologia, Normalização e Qualidade Industrial – INMETRO como produtos sustentáveis ou de menor impacto ambiental em relação aos seus similares;

III – que os bens são, acondicionados em embalagem individual adequada, com o menor volume possível, é utiliza materiais recicláveis, de forma a garantir a máxima proteção durante o transporte e o armazenamento; e

IV – que os bens não contém substâncias perigosas em concentração acima da recomendada na diretiva RoHS (Restriction of Certain Hazardous Substances), tais como mercúrio (Hg), chumbo (Pb), cromo hexavalente (Cr(VI)), cádmio (Cd), bifenil polibromados (PBBs), éteres difenil-polibromados (PBDE).

V – Que atendemos as portarias do INMETRO de Conformidade para Bens de Informática,



**Saulo Henrique de Faria Pereira**

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### DECLARAÇÃO DO FABRICANTE

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – entre rios de minas – MG – 35490-000 declara que todos os componentes do objeto são novos (sem uso, reforma ou recondicionamento) e que não estão fora de linha de fabricação.



Saulo Henrique de Faria Pereira

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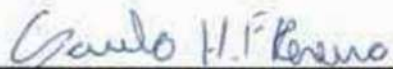
PREGÃO ELETRONICO Nº 092/2024

### DECLARAÇÃO INEXISTÊNCIA DE FATO IMPEDITIVO

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na Avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – Entre Rios De Minas – MG – 35490-000 interessada em participar deste pregão, declara que não se enquadra em nenhuma das vedações contidas no art. 14 da Lei Federal n.º 14.133/2021, em especial:

**1.1** Não mantém vínculo de natureza técnica, comercial, econômica, financeira, trabalhista ou civil com dirigente do órgão ou entidade contratante ou com agente público que desempenhe função na licitação ou atue na fiscalização ou na gestão do contrato, ou que deles seja cônjuge, companheiro ou parente em linha reta, colateral ou por afinidade, até o terceiro grau.

**1.2.** Nos 5 (cinco) anos anteriores à divulgação do edital, não foi condenado(a) judicialmente, com trânsito em julgado, por exploração de trabalho infantil, por submissão de trabalhadores a condições análogas às de escravo ou por contratação de adolescentes nos casos vedados pela legislação trabalhista.



Saulo Henrique de Faria Pereira

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**PREGÃO ELETRONICO Nº 092/2024**

**DECLARAÇÃO DE ELABORAÇÃO INDEPENDENTE DE PROPOSTA**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na Avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – Entre Rios De Minas – MG – 35490-000 interessada em participar deste pregão, declaro, sob as penas da lei, em especial o art. 299 do Código Penal Brasileiro, que:

- 1.a proposta apresentada para participar desta licitação foi elaborada de maneira independente por mim e o conteúdo da proposta não foi, no todo ou em parte, direta ou indiretamente, informado, discutido ou recebido de qualquer outro participante potencial ou de fato desta licitação, por qualquer meio ou por qualquer pessoa;
2. a intenção de apresentar a proposta elaborada para participar desta licitação não foi informada, discutida ou recebida de qualquer outro participante potencial ou de fato desta licitação, por qualquer meio ou por qualquer pessoa;
3. que não tentei, por qualquer meio ou por qualquer pessoa, influir na decisão de qualquer outro participante potencial ou de fato desta licitação quanto a participar ou não dela;
- 4.que o conteúdo da proposta apresentada para participar desta licitação não será, no todo ou em parte, direta ou indiretamente, comunicado ou discutido com qualquer outro participante potencial ou de fato desta licitação antes da adjudicação do objeto;
5. que o conteúdo da proposta apresentada para participar desta licitação não foi, no todo ou em parte, direta ou indiretamente, informado, discutido ou recebido de qualquer integrante do órgão licitante antes da abertura oficial das propostas; e
6. que estou plenamente ciente do teor e da extensão desta declaração e que detenho plenos poderes e informações para firmá-la.



**Saulo Henrique de Faria Pereira**

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### **DECLARAÇÃO EMPRESA DE PEQUENO PORTE**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na Avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – Entre Rios De Minas – MG – 35490-000 interessada em participar deste pregão, declara, cumpre os requisitos legais para a qualificação como microempresa ou empresa de pequeno porte estabelecidos pela Lei Complementar nº 123, de 14.12.2006, em especial quanto ao seu art. 3º, estando apta a usufruir o tratamento favorecido estabelecido nessa Lei complementar e no decreto nº 6.204, de 05.09.2007.

Declara, ainda, que a empresa está excluída das vedações constantes do parágrafo 4º do artigo 3º da Lei Complementar nº 123, de 14.12.2006, e que se compromete a promover a regularização de eventuais defeitos ou restrições existentes na documentação exigida para efeito de regularidade fiscal, caso seja declarada vencedora do certame.



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**Saulo Henrique de Faria Pereira**

**ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.**

**Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC**

**PREGÃO ELETRONICO Nº 092/2024**

**DECLARAÇÃO LGPD**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na Avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – Entre Rios De Minas – MG – 35490-000 interessada em participar deste pregão, declara, para os devidos fins, que tem pleno conhecimento das regras contidas no edital de licitação e que possui as condições de habilitação previstas no edital, bem como tem ciência de que:

1. Como condição para participar desta licitação e ser contratado(a), o(a) interessado(a) deve fornecer para a Administração Pública diversos dados pessoais, entre eles:

- 1.1. aqueles inerentes a documentos de identificação;
- 1.2. referentes a participações societárias;
- 1.3. informações inseridas em contratos sociais;
- 1.4. endereços físicos e eletrônicos;
- 1.5. estado civil;
- 1.6. eventuais informações sobre cônjuges;
- 1.7. relações de parentesco;
- 1.8. número de telefone;
- 1.9. sanções administrativas que esteja cumprindo perante a Administração Pública;
- 1.10. informações sobre eventuais condenações no plano criminal ou por improbidade administrativa; dentre outros necessários à contratação.

2. Essas informações constarão do processo administrativo e serão objeto de tratamento por parte da Administração Pública.

3. O tratamento dos dados pessoais relacionados aos processos de contratação se presume válido, legítimo e, portanto, juridicamente adequado.



**Saulo Henrique de Faria Pereira**

**ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.**

**Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC**

**PREGÃO ELETRONICO Nº 092/2024**

### **DECLARAÇÃO**

A empresa Teczap Comercio e Distribuição Ltda, inscrita no CNPJ sob o nº 08.619.872/0001-44 inscrição estadual nº 0010287510050, com sede na avenida Doutor José Gonçalves Da Cunha, nº 679, por intermédio do seu representante legal o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – entre rios de minas – MG – 35490-000 na qualidade de proponente do procedimento licitatório, sob a modalidade de Pregão Eletrônica:

- a) Não somos declarados inidôneos para licitar ou contratar com o Poder Público, em qualquer de suas esferas.
- b) Declaramos que não empregamos menor de dezoito anos em trabalho noturno, perigoso ou insalubre e não emprega menor de dezesseis anos.
- c) Declaramos que não possuímos grau de parentesco consanguíneo ou afim, com servidor público Municipal.
- d) Declaramos que recebemos do órgão licitante toda a documentação relativa à licitação supramencionada, tendo tomado conhecimento de todas as informações e das condições para o cumprimento das obrigações decorrentes do objeto deste feito.
- e) Assumimos inteira responsabilidade pela autenticidade de todos os documentos apresentados, sujeitando-nos a eventuais averiguações que se façam necessárias.
- f) Comprometemo-nos a manter, durante a execução da Ata de RP, em compatibilidade com as obrigações assumidas todas as condições de habilitação e qualificação exigidas na licitação.
- g) Comprometemo-nos a repassar na proporção correspondente, eventuais reduções de preços decorrentes de mudanças de alíquotas de impostos incidentes sobre a prestação dos serviços, objeto da licitação, em função de alterações de legislação pertinente, publicadas durante a vigência do contrato.



h) Temos conhecimento e submetemo-nos ao disposto na Lei Federal nº 8.078, de 11 de setembro de 1990 - Código de Defesa do Consumidor, bem como, ao Edital e Anexos do Pregão Eletrônico realizado pela Prefeitura Municipal de Prudentópolis.

i) DECLARAMOS, que o responsável pela assinatura da Ata de RP é o Sr Saulo Henrique De Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves Da Cunha, nº 679 – entre rios de minas – MG – 35490-000, cuja função/cargo é sócio administrador;

j) DECLARAMOS, para os devidos fins que em caso de qualquer comunicação futura referente a este processo licitatório, bem como em caso de eventual contratação, concordo que a Ata de RP seja encaminhada para o seguinte endereço: E-mail: [saulo@teczap.com.br](mailto:saulo@teczap.com.br) / Telefone: (31) 2626-0009;

Caso venhamos a alterar o citado e-mail ou telefone comprometo-me em protocolizar pedido de alteração junto ao Sistema de Protocolo, sob pena de ser considerado como intimado nos dados anteriormente fornecidos.

k) Nomeamos e constituímos o Sr Saulo Henrique de Faria Pereira, portador do documento de identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40 responsável por acompanhar a execução da Ata de RP, referente processo supracitado e todos os atos necessários ao cumprimento das obrigações contidas no instrumento convocatório, seus Anexos e na Ata de Registro de Preço.

Por ser expressão da verdade, firmamos a presente declaração.



**Saulo Henrique de Faria Pereira**

ENTRE RIOS DE MINAS, 30 DE AGOSTO DE 2024.

Fundação de Empreendimentos Científicos e Tecnológicos – FINATEC

PREGÃO ELETRONICO Nº 092/2024

**DECLARAÇÃO DE ATENDIMENTO À POLÍTICA AMBIENTAL DE LICITAÇÃO  
SUSTENTÁVEL**

A empresa TECZAP Comercio e Distribuição LTDA, inscrita no CNPJ sob o nº08.619.872/0001-44 Inscrição Estadual nº 0010287510050, com sede na Avenida Doutor José Gonçalves da Cunha, Nº 679, por intermédio do seu representante legal o Sr Saulo Henrique de Faria Pereira, portador do Documento de Identidade – RG nº MG-10133557 PC e do CPF nº042.060.396.40, residente e domiciliado na Avenida Doutor José Gonçalves da Cunha, Nº 679 – Entre Rios de Minas – MG – 35490-000, declara que atesta o atendimento à política pública ambiental de licitação sustentável, em especial que se responsabiliza integralmente com a logística reversa dos produtos, embalagens e serviços pós-consumo no limite da proporção que fornecerem ao poder público, assumindo a responsabilidade pela destinação final, ambientalmente adequada.



Saulo Henrique de Faria Pereira

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SERVIÇO PÚBLICO FEDERAL  
MJ – DEPARTAMENTO DE POLÍCIA FEDERAL  
SUPERINTENDÊNCIA REGIONAL NO RIO DE JANEIRO

ATESTADO DE CAPACIDADE TECNICA

Atestamos para os devidos fins que a empresa TECZAP COMÉRCIO E DISTRIBUIÇÃO LTDA, inscrita no CNPJ sob o nº 08.619.872/0001-44, estabelecida na Av. Dr. José Gonçalves da Cunha, 679- Centro- Entre Rios de Minas- MG CEP 35490-000, forneceu a SUPERINTENDENCIA REGIONAL DO DPF EM BRASÍLIA, inscrita sob o CNPJ 00.394.494/0024-22, estabelecida em SAIS, QUADRA 07, LOTE 23, S/N Setor Policial Sul, Brasília – DF CEP 70.610-200, os produtos abaixo especificados, constantes no pregão nº28/2012.

**MARCA: TECZAP**

**Quantidade: 25 Servidores**

**Descrição:**

- ✓ Servidor no formato Rack de 2U com suporte para instalação sem ferramentas em Rack de 19”;
- ✓ Processador Intel Xeon Quad Core com suporte à virtualização;
- ✓ Armazenamento de 6 TB em RAID 5 HW expansível a 24 TB;
- ✓ Memória RAM de 16 GB;
- ✓ Quatro entradas Ethernet Gigabit RJ45 no mínimo;
- ✓ Fonte redundante 700W;
- ✓ Dois conectores de energia com boa eficiência energética e sistema de ventilação redundante;
- ✓ Sistema Operacional Microsoft Windows Server 2008;
- ✓ Garantia 36 meses On-site.

**Valor: R\$407.250,00**

Atestamos ainda que tais fornecimentos foram executados satisfatoriamente, não existindo em nossos registros, até a presente data, fatos que desabonem sua conduta e responsabilidades com as obrigações assumidas.

  
\_\_\_\_\_  
CELSOGABRIEL CASTRO DE LUCENA  
Agente de Polícia Federal  
Classe Especial – Matrícula 1837  
Logística CGPRE/DICOR/DPF



### ATESTADO DE CAPACIDADE TÉCNICA

São Luís, 03 de janeiro de 2019.

Atestamos para os devidos fins que a empresa **TECZAP COMERCIO E DISTRIBUIÇÃO LTDA**, inscrita no CNPJ/MF sob o nº 08.619.872/0001-44, estabelecida na Av. Dr. José Gonçalves da Cunha, nº679, Bairro Centro, Município Entre Rios de Minas - MG, efetuou a entrega dos seguintes itens:

ITEM	QUANTIDADE
SERVIDOR STORANGE (Configuração: 64Gb de memória DDR4 ECC Reg 12 baias de hds SAS/SATA; Controladora SAS/SATA 12Gb raid 0,1,5,6,50,60; 3 HDs SATA 3TB; Garantia de 60 meses on site.	11 (Onze)
<b>Valor Total</b>	<b>R\$421.669,00</b>

Oriundo do Pregão Eletrônico nº001/2018, Processo nº0442/2018, aquisição de equipamentos e periféricos de informática, do Plano Nacional de Investimento em Tecnologia para uso no SENAC - MA, totalizando no valor de **R\$ 421.669,00 (Quatrocentos e Vinte e Um Mil Seiscentos e Sessenta e Nove Reais.)**

Atestamos ainda, que a referida empresa honrou com os prazos, especificações e compromissos assumidos, demonstrando possuir capacidade técnica, operacional e administrativa, não havendo nada em nossos arquivos que possa desaboná-la até a presente data.

Cordialmente,

**José Airlton Batista Lopes**  
Diretor Regional do Senac/MA

DQE



Serra - ES, 23-09-2024

## **FINATEC**

Brasília - DF

A/C DEPARTAMENTO DE LICITAÇÃO

### **REF.: Tomada de Preços nº 092/2024**

*Objeto da licitação: A presente Seleção Pública tem como objeto a contratação de empresa especializada no fornecimento de equipamento de informática (SERVIDOR), conforme as especificações mínimas e quantitativos contidos no Termo de Referência – Anexo I.*



#### **Filial**

##### **E.R. Soluções de Informática Ltda.**

CNPJ: 05.778.325/0005-47

Inscrição Estadual: 083.668.152

Inscrição Municipal: 470.913.1

Telefone: +55 (16) 99644-9918

E-mail: [isg@ersolucoes.com.br](mailto:isg@ersolucoes.com.br)

End: Av. Cem, S/N, Qd 01 - Mod 01, sala 01 - Piso 02

Terminal Intermodal, Serra, ES CEP 29.161-384



Filial - ES: End: Av. Cem, S/N, Quadra 01 - Módulo 01, Sala 01 - Piso 02  
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[gov@ersolucoes.com.br](mailto:gov@ersolucoes.com.br)





Prezados,

Vimos por meio desta, apresentar nossa proposta comercial e temos o prazer de encaminhar, para análise e apreciação, uma breve apresentação desta empresa, com o intuito de conhecerem nosso prestígio.

Desde 1997 prestando serviços em Tecnologia da Informação, a ER Soluções esteve sempre presente nos principais acontecimentos da Indústria da Informática no Brasil.

Com larga experiência varejista além da já premiada atuação no setor governamental e agora com uma ativa presença no mercado SMB regional, a E.R. Soluções obteve importantes parcerias permitindo a presença constante nos principais usuários de TI. Adquirimos competências fundamentais envolvendo as principais tecnologias e os melhores fabricantes do mercado, destacando-se Dell, Lenovo, Microsoft e VMware, entre outras parceiras.

É com este know-how que oferecemos produtos e serviços com o que há de mais moderno dentro das melhores práticas em TI, com equipes de profissionais treinados e certificados, elaborando projetos, apresentando soluções, atendendo necessidades, e prevendo demandas para os mais diversos negócios em todo o território nacional.

O documento a seguir apresenta a proposta de equipamentos, softwares e serviços para o referido pregão.

Desde já agradecemos a oportunidade de oferecer os nossos produtos e serviços, e nos colocamos à disposição para os esclarecimentos adicionais que se fizerem necessários.



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## 1. PROPOSTA COMERCIAL

Item	Descrição	Quantidade	Valor Unitário	Valor Total
1	LENOVO THINKSYSTEM SR645 V3	1,00	R\$ 93.990,00	R\$ 93.990,00

**Total Geral da proposta R\$ 93.990,00**

Serra - ES, 23-09-2024

Atenciosamente,

**George Eduardo Saliby**  
Diretor Comercial

**André Luís Machado Pelicioni**  
Diretor Administrativo



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## 2. ESPECIFICAÇÕES TÉCNICAS

### ITEM 1 - LENOVO THINKSYSTEM SR645 V3

1	X	ThinkSystem SR645 V3 ( 7D9CCTO1WW )
1	X	ThinkSystem V3 1U 10x2.5" Chassis
1	X	Operating mode selection for: "Maximum Efficiency Mode"
1	X	Data Center Environment 30 Degree Celsius / 86 Degree Fahrenheit
2	X	ThinkSystem AMD EPYC 9124 16C 200W 3.0GHz Processor
2	X	ThinkSystem SR645 V3/SR635 V3 1U High Performance Heatsink
1	X	Platform Secure Boot Enable
4	X	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 9x4 RDIMM-A
1	X	Select Storage devices - configured RAID
1	X	ThinkSystem RAID 940-16i 4GB Flash PCIe Gen4 12Gb Adapter for U.3
1	X	Controller 1 HW RAID Array 1 RAID 1
2	X	ThinkSystem 2.5" U.3 7500 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD
1	X	ThinkSystem 1U 10x2.5" AnyBay Backplane
1	X	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter
1	X	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter
1	X	ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC
1	X	ThinkSystem V3 1U x16/x16 BF PCIe Gen4 Riser1
1	X	ThinkSystem V3 1U MS LP+LP BF Riser Cage
1	X	ThinkSystem V3 1U x16 PCIe Gen4 Riser2
1	X	ThinkSystem 1100W 230V/115V Platinum Hot-Swap Gen2 Power Supply v3
1	X	2.8m, 13A/100-250V, C13 to C14 Jumper Cord
8	X	ThinkSystem V3 1U Performance Fan Option Kit v2
1	X	ThinkSystem 1U V3 10x2.5" Media Bay w/ Ext. Diagnostics Port
1	X	ThinkSystem Toolless Slide Rail Kit v2 with 1U CMA
1	X	TPM 2.0
1	X	ThinkSystem RAID 930/940 SuperCap
1	X	XCC Platinum
1	X	ThinkSystem SR645 V3 MB
1	X	MI for PXE with RJ45 Network port
1	X	940 Series Flash Adapter for U.3 Trimode Setting
1	X	RAID Configuration
2	X	Controller 1 HW RAID Array 1 HDDs
1	X	Brazil CPK
1	X	ThinkSystem 1U PLV Top Cover Sponge
1	X	ThinkSystem CFF V4 PSU Dummy
1	X	ThinkSystem V3 1U LP Riser Cage
1	X	ThinkSystem SR645 V3 Absolut-RoW RoT Module
1	X	software1 XClarity Pro, Per Endpoint w/3 Yr SW S&S
1	X	Lenovo XClarity Pro, Per Managed Endpoint w/3 Yr SW S&S



1	X	software2 XClarity Controller Platin-FOD
1	X	Lenovo XClarity XCC2 Platinum Upgrade (FOD)
1	X	software3 Configuration Instruction
1	X	Service CTO SERVER PREMIER FOUNDATION NBD
1	X	ThinkSystem Pref. Pro II USB Keyboard - Brazil/Portuguese
1	X	ThinkSystem Optical Wheel Mouse - USB



### 3. CONDIÇÕES COMERCIAIS

**Validade da Proposta:**

Validade da Proposta: 30 dias.  
Conforme definido no edital.

**Entrega**

O prazo de entrega do equipamento é de 30 (trinta) dias úteis após a emissão da Autorização de Fornecimento – AF.

**Local de Entrega**

O equipamento deverá ser entregue em perfeita condição de utilização no endereço abaixo:

Faculdade UnB Gama - FGA, Universidade de Brasília, Área Especial de Indústria Projeção A, Setor Leste, Gama - DF CEP: 72.444-24

Conforme definido no edital

**Condições de Pagamento:**

O pagamento será efetuado somente após a entrega dos equipamentos, mediante depósito bancário, em conta corrente de titularidade da empresa vencedora, no prazo de até 15 (quinze) dias úteis, contados da apresentação da respectiva Nota Fiscal, emitida de acordo com as normas e legislação aplicável, devidamente atestada pelo Coordenador do Projeto.

Conforme definido no edital

**Dados da Conta Bancária**

Banco do Brasil  
Ag. 3235-2  
Conta Corrente: 115.747-7

**DECLARAMOS**, que nos preços contidos na Proposta de Preços, estão incluídos todos os custos diretos e indiretos, sem que caiba, em qualquer caso, direito regressivo sobre a execução de serviços, objeto desta licitação, tais como: impostos, taxas, frete CIF, transportes, inclusive o lucro do fornecedor, materiais, equipamentos, mão-de-obra, encargos sociais, trabalhistas e previdenciários, tributos e contribuições de qualquer natureza ou espécie, não cabendo, portanto, nenhuma reclamação posterior no sentido de alteração de preços.

**DECLARAMOS**, que aceitamos todas as condições estabelecidas no edital e nos anexos do Tomada de Preços N° 092/2024

**DECLARAMOS**, que a fabricante possui recurso disponibilizado via website do próprio fabricante <https://pcsupport.lenovo.com/br/pt/warrantylookup>, para realizar a validação e verificação da garantia do equipamento através da inserção do número de série do equipamento e também disponibiliza em seu web



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site <http://support.lenovo.com/us/en/lenovodiagnosicsolutions>, software capaz de realizar testes de diagnóstico de hardware.

**DECLARAMOS**, ainda, que a Lenovo dispõe de telefone gratuito 0800-701-4815 (ligações fora da cidade de São Paulo) e 11 3889-8986 (ligações de São Paulo) para abertura de chamados técnicos em Língua Portuguesa e service desk com histórico dos registros, e que os drivers, atualizações e suporte dos produtos Lenovo, estão disponíveis para download no site <http://support.lenovo.com/br/pt>. Os chamados serão abertos através de código de identificação único para cada máquina. Durante o prazo de garantia, será substituída sem ônus a contratante, a parte ou peça defeituosa, salva quando o defeito for provocado por uso inadequado dos equipamentos.

A Lenovo possui um canal específico para auxiliá-lo no descarte desses produtos. Caso você possua um produto Lenovo em situação de descarte, ligue para o nosso SAC ou encaminhe um e-mail para: [reciclar@lenovo.com](mailto:reciclar@lenovo.com), informando o modelo, número de série e cidade, a fim de envio das instruções para o correto descarte do seu produto Lenovo.

**DECLARAMOS**, que todos os equipamentos a serem entregues serão novos, idênticos, com componentes externos e internos de mesmo modelo e marca dos equipamentos ofertados na proposta, salvo se o equipamento não se encontrar mais disponível no mercado no ato do pedido. Em caso de descontinuidade do produto oferecido, ou diante da indisponibilidade devidamente comprovada, este será substituído pelo sucedâneo com as mesmas características ou superiores, ou ainda, por um modelo com características idênticas ou superiores ao ofertado, mediante análise de catálogos, durante todo o período de validade da Ata de Registro de Preços ou do Contrato vigente.

Serra - ES, 23-09-2024

**George Eduardo Saliby**  
Diretor Comercial

**André Luís Machado Pelicioni**  
Diretor Administrativo



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**FINATEC**

Brasília - DF

**REF.: Tomada de Preços nº 092/2024**

**DECLARAÇÃO DE DADOS PARA ASSINATURA DA ATA**

A empresa **E.R. SOLUÇÕES INFORMÁTICA LTDA**, apresenta, a seguir, os dados de seus representantes legais para assinatura do eventual Contrato:

**Dados Do Licitante - Filial**

- 1) Razão Social/ Nome Fantasia: E.R. Soluções Informática Ltda.
- 2) CNPJ: 05.778.325/0005-47
- 3) Inscrição Estadual: 83668152
- 4) Inscrição Municipal: 470931
- 5) Endereço: AV Cem, S/N - Quadra 01, Módulo 01, Sala 01 - Piso 02  
CEP: 29.161-384 – Serra - ES
- 6) Telefone: 16 99644-9918 / 16 3234-4433
- 8) E-mail [isg@ersolucoes.com.br](mailto:isg@ersolucoes.com.br) / [janinne@ersolucoes.com.br](mailto:janinne@ersolucoes.com.br)

**Representante: George Eduardo Saliby**

Cargo: Diretor Comercial  
Endereço Residencial: Rua Severiano Amaro Dos Santos Nº  
700 Apto 93 - Jardim Botânico  
CEP 14021-620 – Ribeirão Preto -SP  
Telefones: 16-3234-4433 / 16 99132-4429  
CPF: 982.913.358-34  
RG.: 7.854.271-6/SSP  
Estado Civil: Divorciado  
Nacionalidade: Brasileiro

**Representante: André Luís Machado Pelicioni**

Cargo: Diretor Administrativo  
Endereço Residencial: - Av. Giuseppe Cilento nº 1811–  
Apto 302 - Jardim Botânico  
CEP. 14.021-650 – Ribeirão Preto / SP  
Tels: Fixo E Celular 16-3234-4433 / 16 99129-7439  
CPF: 248.785.548-78  
RG.: 18.658.107 – SSP/SP  
Estado Civil: Casado  
Nacionalidade: Brasileiro

Serra - ES, 23-09-2024

**George Eduardo Saliby**  
Diretor Comercial

**André Luís Machado Pelicioni**  
Diretor Administrativo



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