

# Lenovo ThinkEdge SE100 Edge Server

## Product Guide

The ThinkEdge SE100 is a purpose-built server that is 1/3 width and significantly shorter than a traditional server, making it ideal for deployment in tight spaces. It can be mounted on a wall, ceiling mount, placed on a desk or mounted in a rack. The ThinkEdge SE100 puts increased processing power, storage and network closer to where data is generated, allowing actions resulting from the analysis of that data to take place more quickly.

Target workloads for retail and manufacturing markets: Machine Learning, Augmented Reality, Video Analytic, Workload consolidation and Smart surveillance, Edge AI, Realtime processing.



Figure 1. Lenovo ThinkEdge SE100

[Full 3D Tour](#)

### Did you know?

The ThinkEdge SE100 fits those customers that want to install a server outside the data center looking for reduced latency by processing at the edge, avoiding transmission of data between the core and edge where possible and also adhering to the regulatory security requirements of the geography and industry by storing and analyzing data at the edge. The ThinkEdge SE100 has a compact design, low power usage, and high performance are just the right combination for edge locations. It can be wall mounted, placed on a desk or installed in a rack. It is also designed to operate in a semi rugged environment, 5°C to 45°C, dust protection and vibration.

## Key features

The ThinkEdge SE100 is a purpose-built server that is half the width and significantly shorter than a traditional server, making it ideal for deployment in tight spaces. The 2.1 liter (base node unit) can be mounted on a wall, ceiling mount, placed on desk or mounted in a rack.

The ThinkEdge SE100 puts increased processing power, storage and network closer to where data is generated, allowing actions resulting from the analysis of that data to take place more quickly. The server supports a wired connections up to 10GbE via optional PCIe expansion.

Since these edge servers are typically deployed outside of secure data centers, they include technology that encrypts the data stored on the device if it is tampered with, only enabling authorized users to access it.

## Scalability and performance

The SE100 offers numerous features to boost performance, improve scalability and reduce costs:

- Support a single processor from the Intel Arrow-Lake Processor family. Supports processors up to 16 cores, core speeds of up to 2.0 GHz, and TDP ratings of up to 28W.
- Intel Virtualization Technology integrates hardware-level virtualization hooks that allow operating system vendors to better use the hardware for virtualization workloads.
- Support for up to 2 TruDDR5 memory CSODIMM and up to 64 GB of memory using 32 GB DIMMs.
- Supports 1x SATA+2x NVMe or 3x NVMe at the same time.
- Supports 1x boot drive (2280 M.2 SATA/NVMe SSD) for OS, 2x data drives (2280, 22110 NVMe SSD) for applications, allowing the convenience of separating application code from data.
- The use of NVMe drives increased performance over SATA drives, in terms of throughput, bandwidth, and latency.
- 1GbE LOM(LAN on motherboard), 10GbE by NIC(Network Interface Card) to support low and high-speed networking to back-end servers.
- 1x PCIe slot (for GPU support, or optional Network Adapters support).

## Availability and serviceability

The SE100 provides many features to simplify serviceability and increase system uptime:

- Supports remote management, including remote control functions down to the UEFI level (most models) makes managing the edge servers easy even without onsite IT personnel.
- ARL-H CPU do not support HW ECC DIMM instead of SW ECC function(call in-band ECC from intel design).
- Two redundant external AC Adapter power supplies and server also supports 3 type of FANs. Note that each type of fans are supported in pairs (Qty = 2) for redundancy.
- Built-in XClarity Controller continuously monitors system parameters, triggers alerts, and performs recovery actions in case of failures to minimize downtime.
- Built-in diagnostics in UEFI, using Lenovo XClarity Provisioning Manager, speed up troubleshooting tasks to reduce service time.
- Lenovo XClarity Provisioning Manager collects and saves service data to USB key drive or remote CIFS share folder, for troubleshooting and to reduce service time.
- Auto restart in the event of a loss of AC power
- Support for the XClarity Administrator Mobile app running on a supported smartphone and connected to the server through the service-enabled USB port, enables additional local systems management functions.
- Three-year customer-replaceable unit and onsite limited warranty, 9 x 5 next business day. Optional service upgrades are available.

## Manageability and security

Systems management features simplify local and remote management of the SE100:

- The server includes XClarity Controller 2 (XCC2) to monitor server availability. Optional upgrade to XCC Platinum to provide remote control (keyboard video mouse) functions, support for the mounting of remote media files (ISO and IMG image files), boot capture, power capping and new XCC2 Platinum features. New XCC2 Platinum features include System Guard, new security modes including a CNSA-compliant mode, FIPS 140-3 and NIST 800-193 support, and a new Neighbor Group feature.
- Lenovo XClarity Administrator offers comprehensive hardware management tools that help to increase uptime, reduce costs and improve productivity through advanced server management capabilities.
- IT Administrators can securely claim and activate the SE100 remotely through the ThinkShield Key Vault Portal, available on the web. They can also manage and unlock their global IoT edge fleet for initial operation and in case of tamper. The ThinkShield Edge Mobile Management app enables Edge Users to securely claim and activate the ThinkSystem SE100 in an easy to use Web UI.
- New UEFI-based Lenovo XClarity Provisioning Manager, accessible from F1 during boot, provides system inventory information, graphical UEFI Setup, platform update function, operating system installation function, and diagnostic functions. Note that RAID is not supported.
- Support for Lenovo XClarity Energy Manager, which captures real-time power and temperature data from the server and provides automated controls to lower energy costs.
- Integrated Trusted Platform Module (TPM) 2.0 support enables advanced cryptographic methods, such as digital signatures and remote attestation.
- Supports Secure Boot to ensure only a digitally signed operating system can be used.
- Industry-standard Advanced Encryption Standard (AES) NI support for faster, stronger encryption.
- Intel Execute Disable Bit functionality can prevent certain classes of malicious buffer overflow attacks when combined with a supported operating system.
- Intel Trusted Execution Technology provides enhanced security through hardware-based resistance to malicious software attacks, allowing an application to run in its own isolated space, protected from all other software running on a system.

## View in Augmented Reality

View the SE100 in augmented reality (AR) using your smartphone or tablet.

Simply follow these steps:

1. Scan the QR code\* with the camera app on your phone
2. Point your phone at a flat surface
3. Wait a few seconds for the model to appear

Once the server appears, you can move your phone around it. You can also drag or rotate the server to reposition it.



For more information about the AR viewer, see the article "Introducing the Augmented Reality Viewer for Lenovo Servers", available from <https://lenovopress.lenovo.com/lp1952>

\* If you're viewing this document on your phone or tablet, simply tap the QR code

## Components and connectors

The following figure shows the components on the front of the ThinkEdge SE100 server.

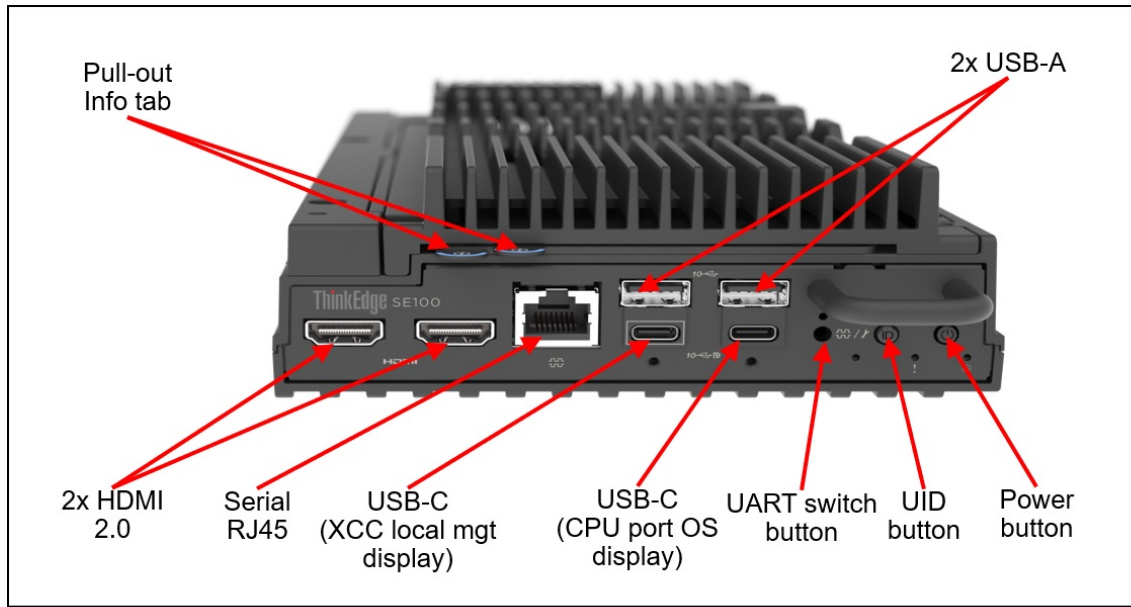


Figure 2. Front view of the ThinkEdge SE100 server

The following figure shows rear view of the ThinkEdge SE100 server and the connectivity capabilities.

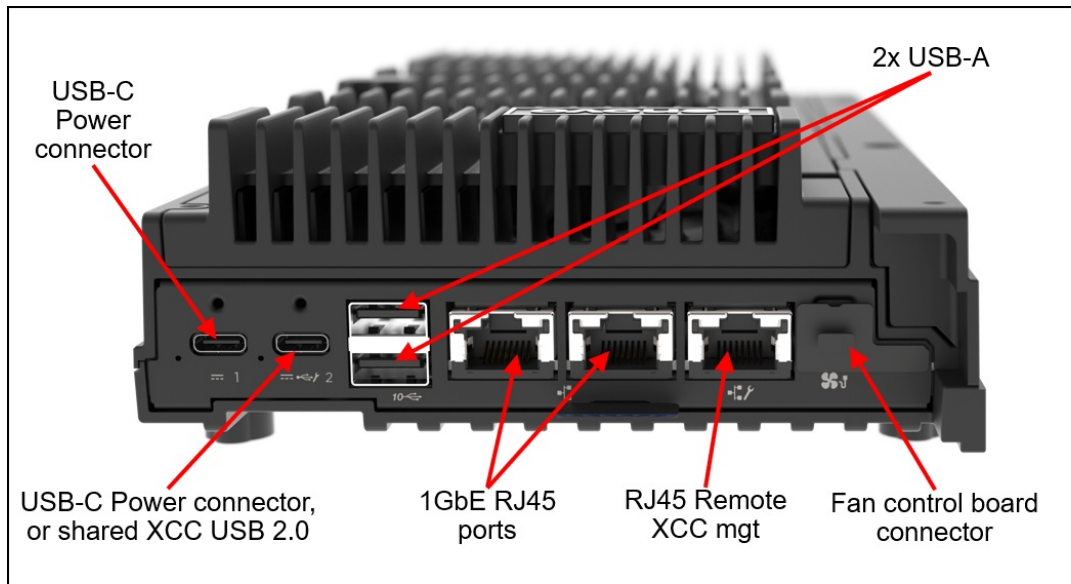


Figure 3. Rear view of the ThinkEdge SE100 server

The following two figures show front and rear buttons and LEDs in the SE100 server.

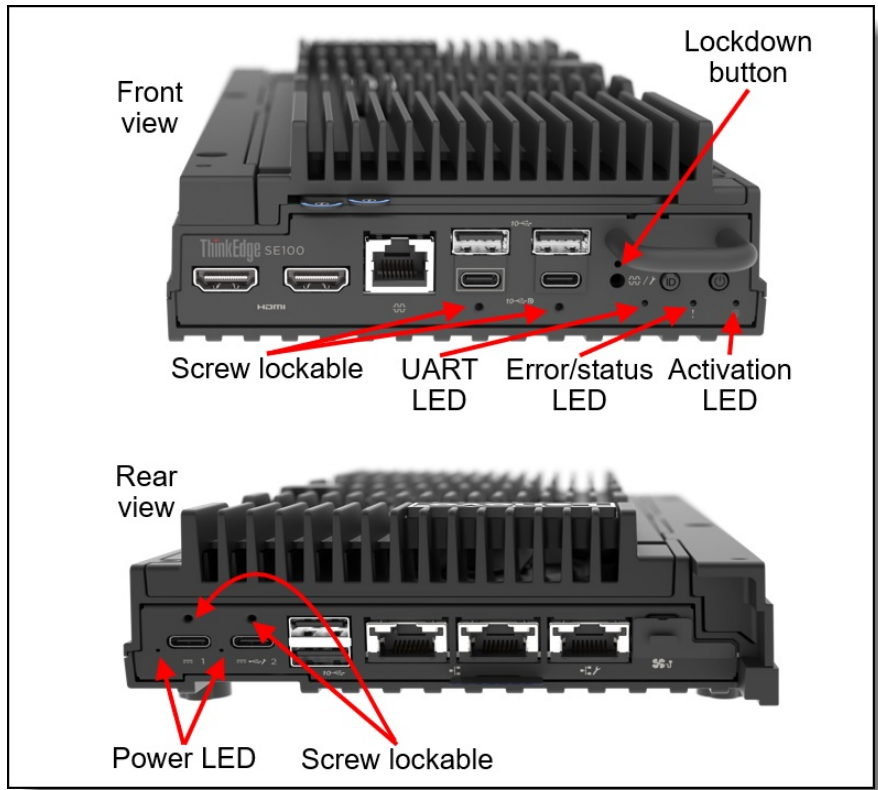


Figure 4. Front and Rear view of the ThinkEdge SE100 with LED buttons  
 The following figure shows the locations of key components inside the server.

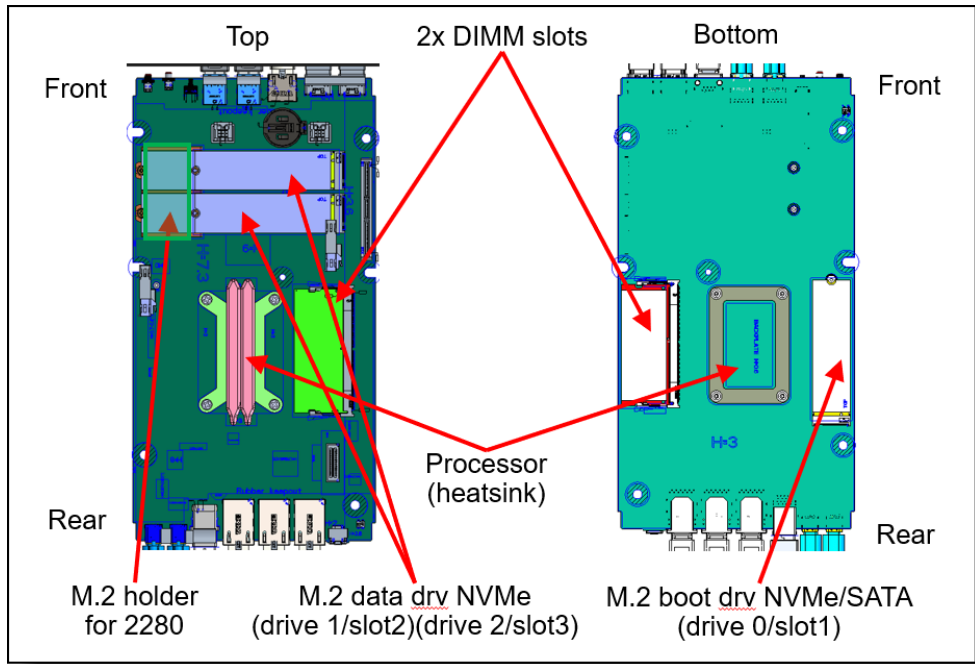


Figure 5. Internal view of the ThinkEdge SE100

## System architecture

The following figure shows the architectural block diagram of the SE100 system, showing the major components and connections.

**Tip:** The wrench icons show where the local and remote management functions are enabled

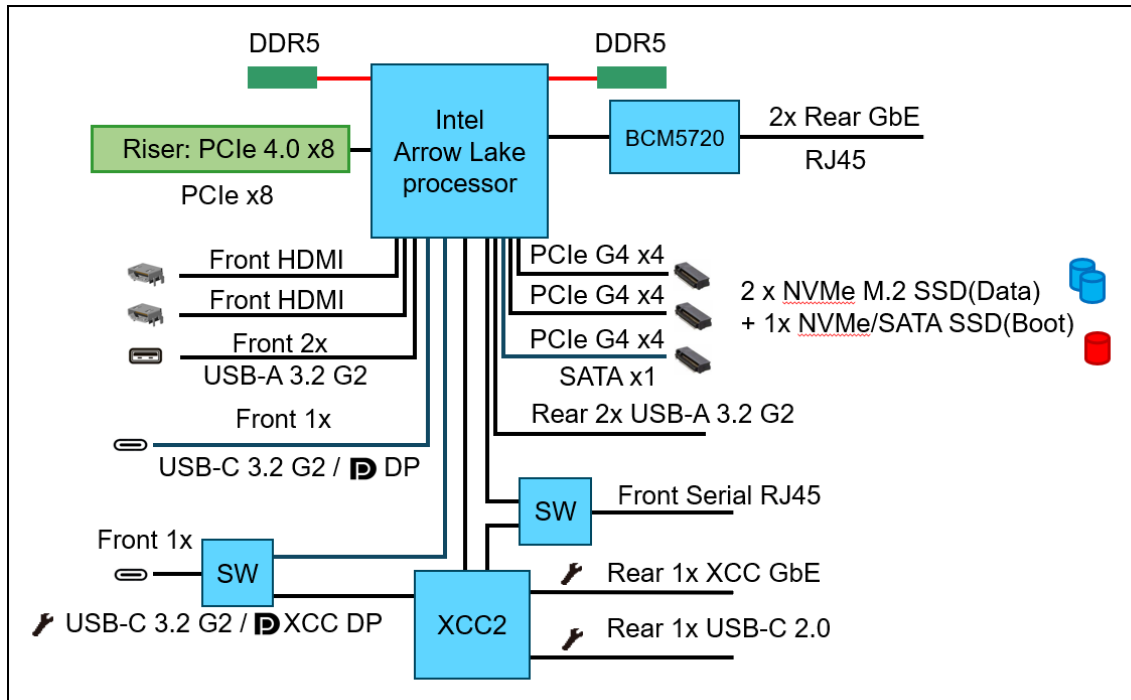


Figure 6. SE100 system board - architectural block diagram

The system board also connects to a PCIe expansion kit which provides 1x wired network connection or 1x GPU adapter.

## Standard specifications

The following table lists the standard specifications.

Table 1. Standard specifications

Components	Specification
Machine types	7DGR - Lenovo ThinkEdge SE100 - 3 Year Warranty 7DGV - Lenovo ThinkEdge SE100 1U2N Enclosure 7DGV - Lenovo ThinkEdge SE100 1U3N Enclosure
Form factor	Edge server, 1U high
Processor	One Intel Ultra Series 2 processor (formerly codenamed "Arrow Lake"). Supports processors up to 16 cores, core speeds of up to 2.0 GHz. Processor is soldered onto system board.
Memory	2 DIMM slots. The processor has 2 memory channels, with 1 DIMM per channel. Lenovo TruDDR5 DIMMs supporting CSODIMM at 6400 MHz and SODIMM at 5600 MHz.
Memory maximum	Up to 64GB with 2x 32 GB CSODIMM
Memory	Independent mode
Drive bays	<ul style="list-style-type: none"> <li>• Up to 1x M.2 drives for boot (NVMe/SATA)</li> <li>• Up to 2x M.2 drives for data (NVMe)</li> <li>• No Support for 2.5"/3.5" SSD/HDD drives</li> </ul>
Maximum data storage	NVMe drives: <ul style="list-style-type: none"> <li>• 3.84TB using 2x 1.92TB NVMe</li> </ul>
Network interfaces	Base node: <ul style="list-style-type: none"> <li>• Front:               <ul style="list-style-type: none"> <li>◦ 1x Serial Console RJ45 COM port</li> </ul> </li> <li>• Rear:               <ul style="list-style-type: none"> <li>◦ 2x 1GbE RJ45</li> <li>◦ 1x 1GbE RJ45 for remote XCC management</li> </ul> </li> </ul> With the expansion kit selected: <ul style="list-style-type: none"> <li>• 10GBASE-T 2-Port PCIe</li> <li>• 1GbE RJ45 4-Port PCIe</li> </ul>
PCI Expansion slots	<ul style="list-style-type: none"> <li>• Expansion Node/Kit to support one PCIe Riser to support Active FAN HHHH GPU/PCIe (Gen4 x8 PCIe) under 75W, or FANless PCI LAN Card</li> </ul>
Ports	Front: 2x HDMI ports, 1x RJ45 console serial (for system console and shared for XCC), 2x USB 3.2 Type-A ports, 1x USB 2.0 G1 Type-C port (for local management display), 1x USB 3.2 Type-C port (for OS display)  Rear: 2x USB Type-C for power connectors (one of the USB-C shared with XCC USB 2.0), 2x USB 3.2 Type-A ports, 2x 1GbE RJ45, 1x 1GbE RJ45 for remote XCC management.

Components	Specification
Cooling	<p>Configurations:</p> <ul style="list-style-type: none"> <li>● Base node (7DGR): two system fans (Fan 1 &amp; 2) <ul style="list-style-type: none"> <li>○ Air flow in the node is from top down in the chassis</li> </ul> </li> <li>● Enclosure for standard Rack: <ul style="list-style-type: none"> <li>○ Enclosure Air flow is front to rear</li> <li>○ Each fan module (set) supports 2 fans</li> <li>○ 1U3N Enclosure (7DGV) supports 1x fan module per node (Fan 3 &amp; 4) <ul style="list-style-type: none"> <li>■ 3 nodes supported</li> <li>■ Fan 1 &amp; 2 are not supported when (Fan 3 &amp; 4) are available</li> </ul> </li> <li>○ 1U2N Enclosure (7DGV) supports 1x fan module per node (Fan 3 &amp; 4) <ul style="list-style-type: none"> <li>■ 2 nodes supported</li> <li>■ With Expansion Kit with Passive Cooling Card (GPU EXP kit does not support Fan 5 &amp; 6 inside)</li> <li>■ Fan 1/2/5/6 are supported on base node SE100 (7DGR) with Expansion Kit with Passive Cooling Card.</li> <li>■ Fan 1 &amp; 2 are not supported when (Fan 3 &amp; 4) are available, but Fan 5 &amp; 6 set is dependent on NIC EXP kit.</li> </ul> </li> </ul> </li> </ul>
Video	<p>SE100 supports two video controllers on board:</p> <p><b>XCC Video:</b>  Embedded graphics with 16 MB memory not expandable with 2D hardware accelerator, integrated into the XClarity Controller 2 management controller:</p> <ul style="list-style-type: none"> <li>● Port/s: <ul style="list-style-type: none"> <li>○ Front 1x DP (display port) output by USB-C port</li> </ul> </li> <li>● Maximum resolution 1920x1200 32bpp at 60Hz.(AST2600 chipset)</li> </ul> <p><b>CPU Video:</b>  Integrated Intel® Graphics or Intel® Arc™ GPUs driven by Xe2 architecture:</p> <ul style="list-style-type: none"> <li>● Port/s: <ul style="list-style-type: none"> <li>○ Front 2x HDMI 2.0 outputs</li> <li>○ Front 1x DP output by USB-C port</li> </ul> </li> <li>● Maximum resolution 3840 x 2160 pixels (4K) at 60Hz.</li> </ul>
Wireless	No support
Power supply	<p>Choices for power input:</p> <ul style="list-style-type: none"> <li>● (7DGR): Single or dual external 140W AC power adapter.</li> <li>● (7DGV): Single or dual external 300W AC power adapter to support 1U2N or 1U3N usage.</li> <li>● In dual external adapter mode, system supports the same wattage with 1+1 redundant mode. (7DGV 1U3N are 100W for each node only).</li> </ul>
Systems management	<p>Status LEDs on front side of node system. Dedicated ports for local management (USB type-C ) and remote management (RJ45 Ethernet ports). Remote management can also be performed. XClarity Controller 2 (XCC2) embedded management controller, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management. XClarity Controller Advanced to enable remote control functions for SE100 server management.</p>



Components	Specification
Security features	ThinkShield Key Vault Portal web site for security management. Trusted Platform Module, supporting TPM 2.0. Nationz TPM 2.0 not supported. TPM2.0 for customers in China only is disabled. No front security bezel. Kensington cable slot, however it is not with lock position switch feature. No support for G sensor for motion detection, intrusion detection, self-encrypting drive (SED) support, power-on password, administrator's password.
Operating systems supported	Microsoft Windows 11 Enterprise, Ubuntu Server certification. See the <a href="#">Operating system support</a> section for specifics.
Mounting options	Desktop mode (1 Node), with or without expansion Kit. VESA Mount (1 Node), with or without expansion Kit. Standard Rack (1U3N supports 3x nodes without expansion Kit), (1U2N with expansion Kit supports 2x nodes).
Limited warranty	Three-year customer-replaceable unit and onsite limited warranty with 9x5 next business day (NBD).
Service and support	Optional service upgrades are available through Lenovo Services: 4-hour or 2-hour response time, 6-hour fix time, 1-year or 2-year warranty extension, software support for Lenovo hardware and some third-party applications.
Dimensions	Compact Edge Server, 1U height, 1/3 width, short depth  Node: Height: 53 mm (2.09 inches), Width: 142.3 mm (5.6 inches), Depth: 278 mm (10.94 inches)
Volume	Base node: (2.1L)
Weight*	Base node: Maximum: 2.36 kg (5.2 lbs)

\*May vary by configuration

## Models

ThinkEdge SE100 models can be configured by using the [Lenovo Data Center Solution Configurator \(DCSC\)](#).

Topics in this section:

- [CTO models](#)

### CTO models

ThinkEdge SE100 models can be configured by using the [Lenovo Data Center Solution Configurator \(DCSC\)](#).

Configure-to-order (CTO) models are used to create models with factory-integrated server customizations. One CTO model is available for the SE100 as listed in the following table:

- The CTO1WW base CTO model is for general business and is selectable by choosing **General Purpose** mode in DCSC.

Table 2. Base CTO models

Description	Machine Type/Model General purpose
Lenovo ThinkEdge SE100 - 3 year Warranty	7DGRCTO1WW
Lenovo ThinkEdge SE100 1U3N Enclosure	7DGVCTO1WW
Lenovo ThinkEdge SE100 1U2N Enclosure	7DGVCTO2WW

## Processors

The SE100 supports processors in the Intel Ultra family of processors (formerly codenamed "Arrow Lake"). The server supports one processor and the processor is soldered on the system board.

The table below lists the supported processors.

All supported processors have the following characteristics:

- AI capable: Intel AVX2, OpenVINO
- Intel Virtualization Technology (VT-x, VT-d)
- Intel AES New Instructions
- Intel Trusted Execution Technology (\*Planned for future support)
- Intel Boot Guard
- Intel OS Guard (\*Planned for future support)
- Mode-based Execute Control (MBEC)
- Secure key

**Part numbers:** There are no part numbers for processors because there are no field upgrades supported.

Table 3. Processor options for the ThinkEdge SE100

Feature code	Description
C31W	ThinkEdge SE100 Planar with Intel Ultra 7-255H ,16C, 28W, 2.0GHz
C30L	ThinkEdge SE100 Planar with Intel Ultra 5-225H ,14C, 28W, 1.7GHz

The following table lists the features of the supported processors.

Table 4. Processor specifications

Intel model	Cores / Threads	HT	TB	Base Frequency	L3 Cache	Memory channels	Memory bus	Processor Base Power
255H	16 / 16	No	Y	2.00 GHz	24 MB	2	6400 MHz	28 W
225H	14 / 14	No	Y	1.70 GHz	18 MB	2	6400 MHz	28 W

## Memory options

The server uses processors with 2 memory channels and supports 1 DIMM per channel, for a total of 2 DIMMs. The server supports up to 64GB of memory using 2x 32 GB CSODIMM or SODIMM.

The following table lists the memory options that are available for the server.

Lenovo TruDDR5 memory uses the highest quality components that are sourced from Tier 1 DRAM suppliers and only memory that meets the strict requirements of Lenovo is selected. It is compatibility tested and tuned to maximize performance and reliability. From a service and support standpoint, Lenovo TruDDR5 memory automatically assumes the system warranty, and Lenovo provides service and support worldwide.

Table 5. Supported memory options

Part number	Feature code	Description	Minimum supported	Maximum supported
RDIMMs				
4X77A93600	C39M	ThinkEdge 32GB TruDDR5 5600MHz (2Rx8) SODIMM	1	2
4X77A96509	C39K	ThinkEdge 32GB TruDDR5 6400MHz CSODIMM	1	2
4X77A93599	C39L	ThinkEdge 16GB TruDDR5 5600MHz (1Rx8) SODIMM	1	2
4X77A96508	C39J	ThinkEdge 16GB TruDDR5 6400MHz CSODIMM	1	2
4X77A96507	C39H	ThinkEdge 8GB TruDDR5 6400MHz CSODIMM	1	2

The following rules apply when selecting the memory configuration:

- DIMM installation sequence 1, 2
- One DIMM per channel only
- Mixed different Frequency Memory is not allowed. Mixing of DDR5-6400 and DDR5-5600 is not supported
- It's not allowed to mix capacity across channel
- Mixed Vendor Memory DIMM population is allowed
- No support ECC SODIMM
- Supports 5600 MHz SODIMM and 6400 MHz CSODIMM DRAM
- Memory mirroring and memory rank sparing are not supported
- Server supports Independent mode
- Rank sparing, ADDC, channel mirroring, hemisphere modes, and 2LM are not supported with Software Guard Extensions (SGX)
- Single Device Data Correction (SDDC, also known as Chipkill), not supported
- SE100 supports in-band ECC feature with single or dual memory modules with same capacity only, if for example installing different memory modules 16 GB and 32 GB DIMMs in the same configuration server will not have in-band ECC function

## Internal storage

The internal storage of the SE100 server is implemented as follows:

- Up to 1x SATA/NVMe SSD drive.
- Up to 2x NVMe SSD drives.
- No Hardware RAID support and currently no Intel VROC RAID support.

## Internal drive options

The SE100 supports the following type of drive bays.

- M.2 drives for boot:
  - One 2280 size M.2 SATA/NVMe SSD (Supported M.2 slot is a PCIe 4.0 x4)
- Data drives:
  - Two 2280 NVMe SSD, or two 22110 NVMe SSD
  - Not allowed to mix M.2 length 2280 and 22110
  - A mechanical Holder (4XF7A96691) is need for 2280 M.2 installation for Data drives

The following table lists the supported drive options.

Table 6. Supported list of drives

Part number	Feature code	Description	Max Qty
<b>Boot drives (2280)</b>			
4XB7A82636	BS2P	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	1
4XB7A13999	BKSR	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	1
4XB7A89422	BYF7	ThinkSystem M.2 ER3 240GB Read Intensive SATA 6Gb NHS SSD	1
4XB7A90049	BYF8	ThinkSystem M.2 ER3 480GB Read Intensive SATA 6Gb NHS SSD	1
4XB7A90230	BYF9	ThinkSystem M.2 ER3 960GB Read Intensive SATA 6Gb NHS SSD	1
<b>Data drives (2280)*</b>			
4XB7A82636	C8V3	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2
4XB7A13999	C8V2	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2
<b>Data drives (22110)</b>			
4XB7A14000	BKSS	ThinkSystem M.2 7450 PRO 1.92TB Read Intensive Entry NVMe PCIe 4.0 x4 NHS SSD	2
4XB7A90102	BXMH	ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2
4XB7A90103	BXMG	ThinkSystem M.2 PM9A3 1.92TB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2

\*Require: 1x ThinkEdge SE100 2280 M.2 Holder (4XF7A96691)

**Note:** 2.5" SSD drives are not supported

To view the technical specifications of these drives, see the ThinkSystem SSD Portfolio:  
<https://lenovopress.lenovo.com/lp1261-lenovo-thinksystem-ssd-portfolio#availability=Available>

## I/O expansion

SE100 server has the following I/O characteristics:

- **Front:**
  - 2x HDMI 2.0 - directly connected to host CPU
  - 1x RJ45 RS232 Serial COM - COM port from XCC or host CPU
  - 2x USB3.2 Gen2 Type-A
  - 1x USB3.2 Gen2 Type-C (display from XCC or USB from CPU), with locking screw
  - 1x USB3.2 Gen2 Type-C (OS display directly connected to host CPU), with locking screw
- **Rear:**
  - 1x Type-C (Power), with locking screw
  - 1x Type-C (Power or BMC USB 2.0 ), support power redundancy. with locking screw
  - 2x USB3.2 Gen2 Type-A

- 2x 1GbE+ 1x GbE BMC management (XCC)

The SE100 front and rear I/O network ports are shown in the following figure.

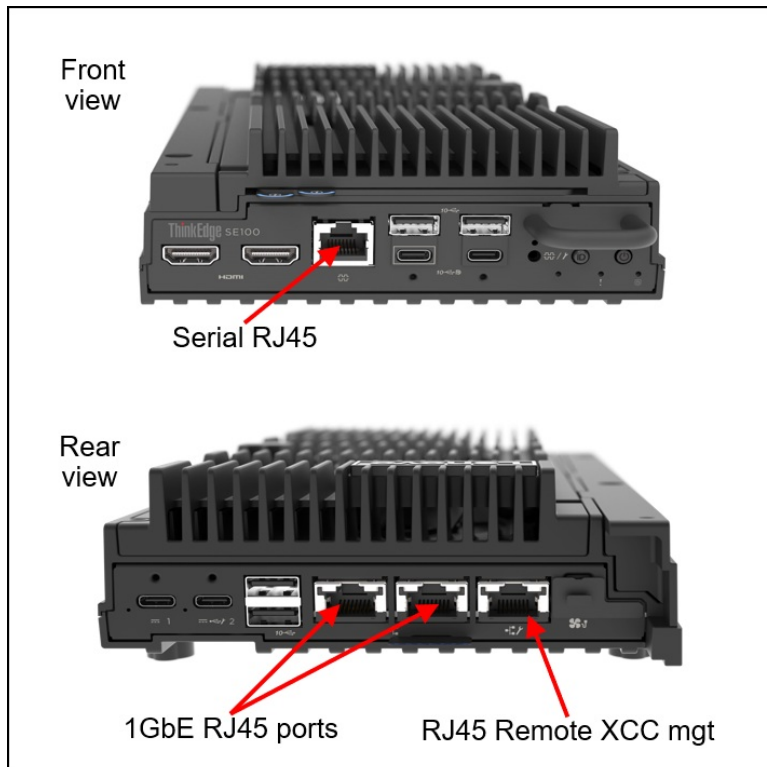


Figure 7. Front and rear view for supported I/O network ports

Additionally, the SE100 server supports 1U height PCIe Expansion kit.

The Expansion kit can only support one HHHL PCIe Card under 75W. There is one PCIe x16 slot support Gen4 x8 mode in the PCIe Expansion kit. (Two blowers are required for FANless PCIe card to support FAN fail feature.)

The SE100 and the Expansion kit are shown in the following image.

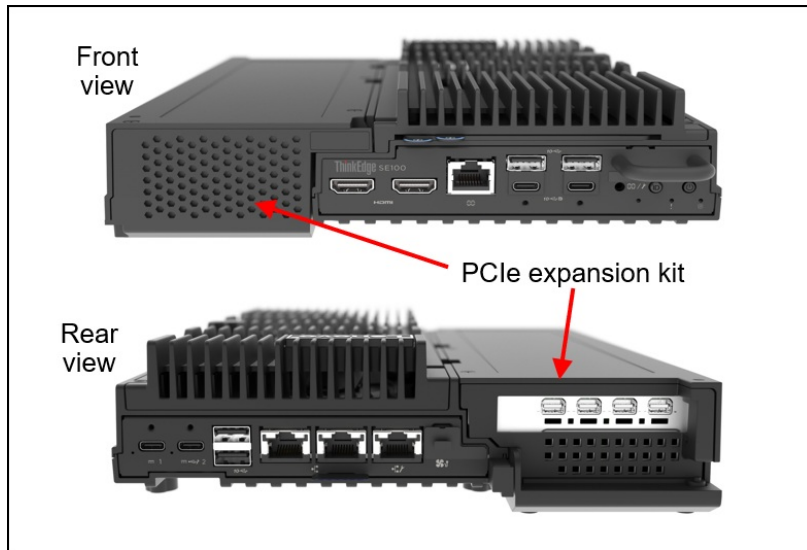


Figure 8. SE100 and the Expansion kit

## Network adapters

The SE100 supports additional network adapters.

- Additional I/O is supported via the one PCIe slot available in the optional PCIe Expansion kit.
- This PCIe x16 physical slot supports electrical PCI Express 4.0 x16 (x8 lanes, HH/HL, up to 75W).
- Blower FAN connectors are reserved to support LAN Expansion Kit or those PCIe card without FAN by itself.

Dimensions for Base node with the PCIe Expansion kit are:

- Form Factor (without shroud) : 214 x 278 x 46mm (2.73L)
  - This form factor for base node without Node Fan Shroud applies for rack mount only
- Form Factor (with shroud): 214 x 278 x 53mm (3.1L)

The following table lists the Expansion Kits.

**Note:** Expansion kits below share the same PCIe Riser card inside. For more information go to user guide: <https://pubs.lenovo.com/>

Table 7. Supported Expansion kit

Part number	Feature code	Description	Max Qty
4XF7A96686	C30E	SE100 Expansion Kit for NIC Adapter	1
4XF7A96684	C30F	SE100 Expansion Kit for Active Cooling GPU	1
4XF7A96687	C30D	ThinkEdge SE100 Expansion Connection Cover	1

The Expansion kits have the following characteristics:

- ThinkEdge SE100 I/O Expansion Kit (C30E)
  - Supports: Broadcom 5719 (AUZV), Broadcom 57416 (AUKP)
- ThinkEdge SE100 I/O Expansion Kit with Active Cooling Card (C30F)
  - Supports: NVIDIA Quadro RTX A1000 (C39N)

- Supports: NVIDIA Quadro RTX 2000E (C39P)
- One PCIe x16, single wide, low profile GPU
- However if no Expansion Kit is needed, need to add ThinkEdge SE100 Expansion Connection Cover (C30D)

The following table lists the supported adapters.

Table 8. Supported adapters

Part number	Feature code	Description	Max Qty	Host interface	Hot plug	Length	Height
7ZT7A00484	AUZV	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	1	x4	N	Half	LP
7ZT7A00496	AUKP	ThinkSystem Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter	1	x8	N	Half	LP

For more information on the technical specifications of these adapters, search Product Guide home page: [https://lenovopress.lenovo.com/#resource\\_type=product-guide&sort=relevance](https://lenovopress.lenovo.com/#resource_type=product-guide&sort=relevance)

The RJ45 ports support the following Category 6 (CAT 6) or CAT5e cables.

Table 9. Supported cables

Part number	Feature code	Description
<b>CAT6 Green Cables</b>		
00WE123	AVFW	0.75m Green Cat6 Cable
00WE127	AVFX	1.0m Green Cat6 Cable
00WE131	AVFY	1.25m Green Cat6 Cable
00WE135	AVFZ	1.5m Green Cat6 Cable
00WE139	AVG0	3m Green Cat6 Cable
90Y3718	A1MT	10m Green Cat6 Cable
90Y3727	A1MW	25m Green Cat6 Cable
<b>CAT6 Blue Cables</b>		
90Y3721	A1MU	10m Blue Cat6 Cable
90Y3730	A1MX	25m Blue Cat6 Cable
<b>CAT6 Yellow Cables</b>		
90Y3715	A1MS	10m Yellow Cat6 Cable
90Y3724	A1MV	25m Yellow Cat6 Cable
<b>CAT6 RJ45/RJ45</b>		
4X97A83980	BRW9	Lenovo 750mm Cat6 RJ45 White Cable without Jacket
4X97A83981	BRWA	Lenovo 1000mm Cat6 RJ45 White Cable without Jacket
4X97A83982	BRWB	Lenovo 1250mm Cat6 RJ45 White Cable without Jacket
4X97A83983	BRWC	Lenovo 1500mm Cat6 RJ45 White Cable without Jacket
4X97A83984	BRWD	Lenovo 3000mm Cat6 RJ45 White Cable without Jacket
<b>CAT5e Green Cable</b>		
40K5563	BQ6P	0.6m Green Cat5e Cable
00WE099	AVFQ	0.75m Green Cat5e Cable
00WE103	AVFR	1.0m Green Cat5e Cable

Part number	Feature code	Description
00WE107	AVFS	1.25m Green Cat5e Cable
40K5643	3797	e1350 1.5 Meter Green Ethernet Cable
40K5793	3798	e1350 3 Meter Green Ethernet Cable
40K5794	3799	10m Green Cat5e Cable
40K8869	3800	25m Green Cat5e Cable
<b>CAT5e Blue Cables</b>		
40K5679	3801	e1350 .6 Meter Blue Ethernet Cable
00WE111	AVFT	0.75m Blue Cat5e Cable
00WE115	AVFU	1.0m Blue Cat5e Cable
00WE119	AVFV	1.25m Blue Cat5e Cable
40K8785	3802	1.5 Meter Blue Ethernet Cable
40K5581	3803	3m Blue Cat5e Cable
40K8927	3804	e1350 10 Meter Blue Ethernet Cable
40K8930	3805	25m Blue Cat5e Cable
<b>CAT5e Yellow Cables</b>		
40K8933	3791	e1350 .6 Meter Yellow Ethernet Cable
40K8951	3792	1.5m Yellow Cat5e Cable
40K8957	3793	Ethe 3m Yellow
40K8801	3794	10 Meter Yellow Ethernet Cable
40K8807	3795	25m Yellow Cat5e Cable

## Optical drive

The server supports the external USB optical drive listed in the following table.

Table 10. External optical drive

Part number	Feature code	Description
7XA7A05926	AVV8	ThinkSystem External USB DVD RW Optical Disk Drive

The drive is based on the Lenovo Slim DVD Burner DB65 drive and supports the following formats: DVD-RAM, DVD-RW, DVD+RW, DVD+R, DVD-R, DVD-ROM, DVD-R DL, CD-RW, CD-R, CD-ROM.

## Serial port

The server supports RJ45 connector at rear side with RS-232 serial port function.

Below console cable able to provide DB-9 female interface connection.

Table 11. RJ45 to DB-9 female cable

Part number	Feature code	Description
CTO only	B6EX	ThinkEdge 1.2m RJ45 to RS232 Console Cable



## GPU adapters

The SE100 supports graphics processing units (GPUs).

The following table lists supported GPUs that can be installed in the PCIe expansion kit's slot.

Refer to the PCIe Expansion Kit details listed in the [Network adapters](#) section.

Table 12. Supported adapters

Part number	Feature code	Description	Max Qty	Host interface	Hot plug	Length	Height
4X67A96431	C39N	ThinkSystem NVIDIA RTX A1000 8GB PCIe Gen4 Active GPU	1	x16	N	Half	LP
4X67A96430	C39P	ThinkSystem NVIDIA RTX 2000E Ada 16GB PCIe Active GPU	1	x16	N	Half	LP

Configuration notes:

- **GPUs above:** Not supported under Win 11 IoT Enterprise.

For information about the GPU, see the ThinkSystem GPU Summary, available at:

<https://lenovopress.com/lp0768-thinksystem-thinkagile-gpu-summary>

## Cooling

Depending on the configuration for the Lenovo ThinkEdge SE100 the following types of fans are supported:

- **Base node:** Support up to two 6513 non-hot swap fans.
- **Enclosure:** Depends on the model type, 1U2N enclosure supports up to four 4028 non-hot swap fans while 1U3N enclosure supports up to six 4028 non-hot swap fans.
- **Expansion Kit with Passive Cooling Card:** The expansion kit with Ethernet adapter supports up to two 5010 blower fans.
- **Fans are redundant** in: base node, in expansion kit (passive), and in enclosures.
- Fans are not hot-swappable.

The following table illustrates the supported fans across configurations.

Table 13. Supported fans

Configuration	Base node		1U2N or 1U3N Enclosures		Expansion Kit with Passive Cooling Card	
	Fan 1	Fan 2	Fan 3	Fan 4	Fan 5	Fan 6
Base node (7DGR)	Y	Y	N	N	N	N
Node with PCIe Expansion kit	Y	Y	N	N	Y	Y
1U2N Enclosure (7DGV)	N	N	Y	Y	Y	Y
1U3N Enclosure (7DGV)	N	N	Y	Y	N	N

## Power supplies

The Lenovo ThinkEdge SE100 server supports two types of power adapters:

- 140W for standalone Desktop mode and VESA Mode
- 300W for Rack Enclosure Mode

SE100 supports one or two 28V AC/DC power adapter with Type-C PD (Output 28V) connected to one or two plug-in external AC adapters.

The Lenovo ThinkEdge SE100 server supports redundant power function if connected to two plug-in external AC adapters, any combinations of vendor's adapter can be mixed with system application.

Additionally, the following power features are supported:

- 300W adapter for rack enclosure mode will detect how many "node system connection" to "switch output watts" for each node.
- 300W adapter will output each node with 140 Watts if one or two nodes connection to 300W adapter.
- 300W adapter will output each node with 100 Watts if three nodes connection to 300W adapter.
- The 300W adapter will not provide over 140 Watts to single node rack enclosure usage.

Ordering information is listed in the following table.

Table 14. Power options

Part number	Feature code	Description	Maximum supported
External AC Power Supply (230V/115V)			
4X27A92701	C3GQ	ThinkEdge 300W 230V/115V External Power Supply	2
4X27A92699	C39R	ThinkEdge 140W 230V/115V External Power Supply	2

## Power cords

Line cords and rack power cables can be ordered as listed in the following table.

Table 15. Power cords

Part number	Feature code	Description
Power cord for AC adapters		
90Y3017	6496	Line cord - 1.8m, 10 AMP/125 VAC - IEC 320 C13 Inline (Thailand)
39Y7930	6222	2.8m, 10A/250V, C13 to IRAM 2073 (Argentina) Line Cord
81Y2384	6492	4.3m 10A/220V, C13 to IRAM 2073 (Argentina) Line Cord
39Y7924	6211	2.8m, 10A/250V, C13 to AS/NZ 3112 (Australia/NZ) Line Cord
81Y2383	6574	4.3m, 10A/230V, C13 to AS/NZS 3112 (Aus/NZ) Line Cord
69Y1988	6532	2.8m, 10A/250V, C13 to NBR 14136 (Brazil) Line Cord
81Y2387	6404	4.3m, 10A/250V, C13 - 2P+Gnd (Brazil) Line Cord
39Y7928	6210	2.8m, 10A/220V, C13 to GB 2099.1 (China) Line Cord
81Y2378	6580	4.3m, 10A/220V, C13 to GB 2099.1 (China) Line Cord
39Y7918	6213	2.8m, 10A/250V, C13 to DK2-5a (Denmark) Line Cord
81Y2382	6575	4.3m, 10A/230V, C13 to DK2-5a (Denmark) Line Cord
39Y7917	6212	2.8m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord
81Y2376	6572	4.3m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord
39Y7927	6269	2.8m, 10A/250V, C13(2P+Gnd) (India) Line Cord
81Y2386	6567	4.3m, 10A/240V, C13 to IS 6538 (India) Line Cord
39Y7920	6218	2.8m, 10A/250V, C13 to SI 32 (Israel) Line Cord
81Y2381	6579	4.3m, 10A/230V, C13 to SI 32 (Israel) Line Cord
39Y7921	6217	2.8m, 220-240V, C13 to CEI 23-16 (Italy/Chile) Line Cord
81Y2380	6493	4.3m, 10A/230V, C13 to CEI 23-16 (Italy/Chile) Line Cord
39Y7922	6214	2.8m, 10A/250V, C13 to SABS 164 (S Africa) Line Cord
81Y2379	6576	4.3m, 10A/230V, C13 to SABS 164 (South Africa) Line Cord
39Y7925	6219	2.8m, 220-240V, C13 to KETI (S Korea) Line Cord
39Y7919	6216	2.8m, 10A/250V, C13 to SEV 1011-S24507 (Swiss) Line Cord
81Y2390	6578	4.3m, 10A/230V, C13 to SEV 1011-S24507 (Sws) Line Cord
23R7158	6386	2.8m, 10A/125V, C13 to CNS 10917-3 (Taiwan) Line Cord
81Y2375	6317	2.8m, 10A/240V, C13 to CNS 10917-3 (Taiwan) Line Cord
4L67A08363	AX8B	4.3m, 10A 125V, C13 to CNS 10917 (Taiwan) Line Cord
81Y2389	6531	4.3m, 10A/250V, C13 to 76 CNS 10917-3 (Taiwan) Line Cord
39Y7923	6215	2.8m, 10A/250V, C13 to BS 1363/A (UK) Line Cord
81Y2377	6577	4.3m, 10A/230V, C13 to BS 1363/A (UK) Line Cord
90Y3016	6313	2.8m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord
4L67A08359	6370	4.3m, 10A/125V, C13 to NEMA 5-15P (US) Line Cord
4L67A08361	6373	4.3m, 10A/250V, C13 to NEMA 6-15P (US) Line Cord
Rack jumper cables for AC adapters		
00Y3043	A4VP	1.0m, 10A/100-250V, C13 to C14 Jumper Cord
39Y7932	6263	4.3m, 10A/100-250V, C13 to C14 Jumper Cord

## Systems management

The SE100 contains an integrated service processor, XClarity Controller 2 (XCC2), which provides advanced control, monitoring, and alerting functions. The XCC2 is based on the AST2600 baseboard management controller (BMC) using a dual-core ARM Cortex A9 service processor.

Topics in this section:

- [Local management](#)
- [System status with XClarity Mobile](#)
- [Remote management](#)
- [MicroSD for XCC local storage](#)
- [XCC2 Platinum](#)
- [Lenovo XClarity Provisioning Manager](#)
- [Lenovo XClarity Administrator](#)
- [Lenovo XClarity Integrators](#)
- [Lenovo XClarity Essentials](#)
- [Lenovo XClarity Energy Manager](#)
- [Lenovo Capacity Planner](#)

## Local management

The SE100 offers LED status indicators (front and rear), as shown in the following figure.

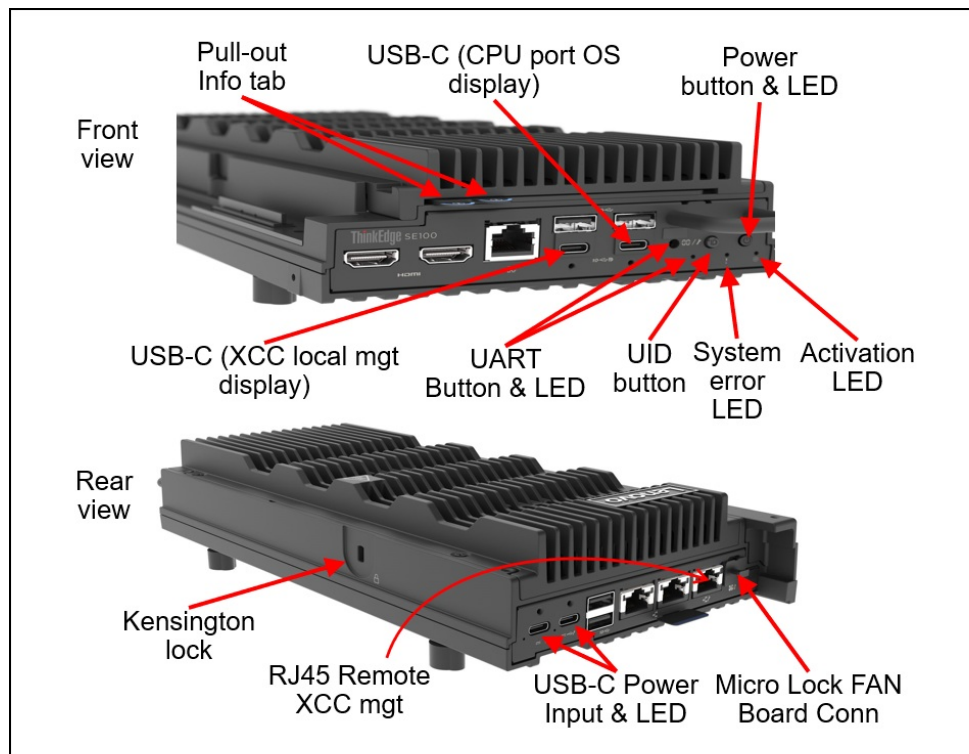


Figure 9. LEDs status indicators (front and rear)

The buttons on the front of the server:

- UART status LED (white)
  - On - UART output with XCC log
  - Off - UART output with CPU log
- UID button with LED (blue) - System is identified
- System Error LED (yellow) - System error alarm

- Power button with power status LED (green)
- Activation/Security LED(green)
  - On - System is activated with security feature ON (SED enabled or intrusion enabled)
  - Blinking - System is in lockdown state, Activation is required
  - Off - System is activated but no security features are enabled

The buttons on the rear of the server:

- USB-C PD 28V Power Adapter Input x2
  - Power input Jack to support two 28V AC/DC power adapter. USB Power Adapter input 2 also shared with XCC USB2.0 port.
    - On (Green) - The server is connected to the power adapter and working normally.
    - On (Amber) - The server is connected to the power adapter but can not be powered on since the power capability is unable to support the system requirement.
    - Off - The power adapter is disconnected or a power problem occurs.
- Micro Lock FAN Board Conn
  - FAN Board Connector to support two External Rack Enclosure FAN via cable (Enclosure FAN via cable connects to node inside the enclosure for proper usage).
- Kensington lock - on the side

The front of the server also houses an information pull-out tab (also known as the network access tag). A label on the tab shows the network information (MAC address and other data) to remotely access the XCC service processor.

The SE100 also supports optional connection to local VGA monitor.

Table 16. USB type-C to VGA cable


Part number	Feature code	Description
4X97A86591	BS4E	ThinkEdge 130mm USB-C to VGA Display Cable
4X97A88620	BS4D	ThinkEdge USB-C to USB-A Console Cable

### System status with XClarity Mobile

The SE100 also supports local systems management using the XClarity Mobile app. The app includes a tethering function where you can connect your Android or iOS device to the server via the USB type-C port on the rear of server.

You will need a mobile device with a supported operating system installed (iOS 12 or later, Android 5.0 or later), plus the USB charging cable that comes with your phone. You may also need the USB type-C to USB type-A cable that ships with the SE100.

The steps to connect the mobile device are as follows:

1. Connect the mobile device via your USB cable and the supplied USB-to USB type-C cable to the SE100's USB type-C port with the management symbol 
2. In iOS or Android settings, enable Personal Hotspot or USB Tethering
3. Launch the Lenovo XClarity Mobile app

Once connected you can see the following information:

- Server status including error logs (read only, no login required)
- Server management functions (XClarity login credentials required)

The supported USB cable is listed in the following table.

Table 17. USB type-C to USB type-A cable

Part number	Feature code	Description
4X97A88620	BS4D	ThinkEdge USB-C to USB-A Console Cable

## Remote management

The server offers a dedicated RJ45 port at the rear of the server for remote management via the XClarity Controller management processor. The port supports 10/100/1000 Mbps speeds.

Remote server management is provided through industry-standard interfaces:

- Intelligent Platform Management Interface (IPMI) Version 2.0
- Simple Network Management Protocol (SNMP) Version 3 (no SET commands; no SNMP v1)
- Common Information Model (CIM-XML)
- Representational State Transfer (REST) support
- Redfish support (DMTF compliant)
- Web browser - HTML 5-based browser interface (Java and ActiveX not required) using a responsive design (content optimized for device being used - laptop, tablet, phone) with NLS support

## MicroSD for XCC local storage

The server includes a MicroSD card port to enable the use of a MicroSD card for additional storage for use with the XCC controller. XCC can use the storage as a Remote Disc on Card (RDOC) device (up to 4GB of storage). It can also be used to store firmware updates (including N-1 firmware history) for ease of deployment.

**Tip:** Without a MicroSD card installed, the XCC controller will have 100MB of available RDOC storage.

Ordering information for the supported Micro SD cards is listed in the following table.

Table 18. Media for use with the MicroSD card port

Part number	Feature code	Description
4X77A92672	C0BC	ThinkSystem MicroSD 64GB Class 10 Flash Memory Card

## XCC2 Platinum

The XCC2 service processor in the SE100 supports an upgrade to a Platinum level of features. Compared to the XCC functions of ThinkSystem and earlier systems, Platinum adds the same features as Enterprise and Advanced levels in ThinkSystem, plus additional features.

XCC2 Platinum adds the following Enterprise and Advanced functions:

- Remotely viewing video with graphics resolutions up to 1600x1200 at 75 Hz with up to 23 bits per pixel, regardless of the system state
- Remotely accessing the server using the keyboard and mouse from a remote client
- International keyboard mapping support
- The monitor needs to be connected to the USB Type-C display port marked with a white square when the customer is using the remotely function. Otherwise, do set the USB-C port with the white marking as the main display within the operating system.
  - If the operating system's main display is set to HDMI or a USB-C port without the white marking, the operating system will display a black screen on the XCC remotely usage.
- Syslog alerting

- Redirecting serial console via SSH
- Component replacement log (Maintenance History log)
- Access restriction (IP address blocking)
- Lenovo SED security key management
- Displaying graphics for real-time and historical power usage data and temperature
- Boot video capture and crash video capture
- Virtual console collaboration - Ability for up to 6 remote users to be log into the remote session simultaneously
- Remote console Java client
- Mapping the ISO and image files located on the local client as virtual drives for use by the server
- Mounting the remote ISO and image files via HTTPS, SFTP, CIFS, and NFS
- Power capping
- System utilization data and graphic view
- Single sign on with Lenovo XClarity Administrator
- Update firmware from a repository
- License for XClarity Energy Manager

XCC2 Platinum also adds the following features that are new to XCC2:

- System Guard - Monitor hardware inventory for unexpected component changes, and simply log the event or prevent booting
- Enterprise Strict Security mode - Enforces CNSA 1.0 level security
- Neighbor Group - Enables administrators to manage and synchronize configurations and firmware level across multiple servers

Ordering information is listed in the following table. XCC2 Platinum is a software license upgrade - no additional hardware is required.

Table 19. XCC2 Platinum license upgrade

Part number	Feature code	Description
CTO only	BRPJ	XCC Platinum

With XCC Platinum, for CTO orders, you can request that System Guard be enabled in the factory and the first configuration snapshot be recorded. To add this to an order, select feature code listed in the following table. The selection is made in the Security tab of the DCSC configurator.

Table 20. Enable System Guard in the factory (CTO orders)

Feature code	Description
BUT2	Install System Guard

For more information about System Guard, see [https://pubs.lenovo.com/xcc2/NN1ia\\_c\\_systemguard](https://pubs.lenovo.com/xcc2/NN1ia_c_systemguard)

## Lenovo XClarity Provisioning Manager

Lenovo XClarity Provisioning Manager (LXPM) is a UEFI-based application embedded in ThinkSystem servers and accessible via the F1 key during system boot.

LXPM provides the following functions:

- Graphical UEFI Setup
- System inventory information and VPD update
- System firmware updates (UEFI and XCC)
- OS installation wizard (including unattended OS installation)
- Diagnostics functions

## Lenovo XClarity Administrator

Lenovo XClarity Administrator is a centralized resource management solution designed to reduce complexity, speed response, and enhance the availability of Lenovo systems and solutions. It provides agent-free hardware management for ThinkSystem servers, in addition to ThinkServer, System x, and Flex System servers. The administration dashboard is based on HTML 5 and allows fast location of resources so tasks can be run quickly.

Because Lenovo XClarity Administrator does not require any agent software to be installed on the managed endpoints, there are no CPU cycles spent on agent execution, and no memory is used, which means that up to 1GB of RAM and 1 - 2% CPU usage is saved, compared to a typical managed system where an agent is required.

Lenovo XClarity Administrator is an optional software component for the SE100. The software can be downloaded and used at no charge to discover and monitor the SE100 and to manage firmware upgrades.

If software support is required for Lenovo XClarity Administrator, or premium features such as configuration management and operating system deployment are required, Lenovo XClarity Pro software subscription should be ordered. Lenovo XClarity Pro is licensed on a per managed system basis, that is, each managed Lenovo system requires a license.

The following table lists the Lenovo XClarity software license options.

Table 21. Lenovo XClarity Pro ordering information

Part number	Feature code	Description
00MT201	1339	Lenovo XClarity Pro, per Managed Endpoint w/1 Yr SW S&S
00MT202	1340	Lenovo XClarity Pro, per Managed Endpoint w/3 Yr SW S&S
00MT203	1341	Lenovo XClarity Pro, per Managed Endpoint w/5 Yr SW S&S
7S0X000HWW	SAYV	Lenovo XClarity Pro, per Managed Endpoint w/6 Yr SW S&S
7S0X000JWW	SAYW	Lenovo XClarity Pro, per Managed Endpoint w/7 Yr SW S&S



Lenovo XClarity Administrator offers the following standard features that are available at no charge:

- Auto-discovery and monitoring of Lenovo systems
- Firmware updates and compliance enforcement
- External alerts and notifications via SNMP traps, syslog remote logging, and e-mail
- Secure connections to managed endpoints
- NIST 800-131A or FIPS 140-2 compliant cryptographic standards between the management solution and managed endpoints
- Integration into existing higher-level management systems such as cloud automation and orchestration tools through REST APIs, providing extensive external visibility and control over hardware resources
- An intuitive, easy-to-use GUI
- Scripting with Windows PowerShell, providing command-line visibility and control over hardware resources

Lenovo XClarity Administrator offers the following premium features that require an optional Pro license:

- Pattern-based configuration management that allows to define configurations once and apply repeatedly without errors when deploying new servers or redeploying existing servers without disrupting the fabric
- Bare-metal deployment of operating systems and hypervisors to streamline infrastructure provisioning

For more information, refer to the Lenovo XClarity Administrator Product Guide:

<http://lenovopress.com/tips1200>

### **Lenovo XClarity Integrators**

Lenovo also offers software plug-in modules, Lenovo XClarity Integrators, to manage physical infrastructure from leading external virtualization management software tools including those from Microsoft.

These integrators are offered at no charge, however if software support is required, a Lenovo XClarity Pro software subscription license should be ordered.

Lenovo XClarity Integrators offer the following additional features:

- Deployment of firmware updates and configuration patterns to Lenovo x86 [rack servers](#) and Flex System from the virtualization management tool
- Non-disruptive server maintenance in clustered environments that reduces workload downtime by dynamically migrating workloads from affected hosts during rolling server updates or reboots
- Greater service level uptime and assurance in clustered environments during unplanned hardware events by dynamically triggering workload migration from impacted hosts when impending hardware failures are predicted

For more information about all the available Lenovo XClarity Integrators, see the Lenovo XClarity Administrator Product Guide: <https://lenovopress.com/tips1200-lenovo-xclarity-administrator>

## Lenovo XClarity Essentials

Lenovo offers the following XClarity Essentials software tools that can help you set up, use, and maintain the server at no additional cost:

- Lenovo Essentials OneCLI

OneCLI is a collection of server management tools that uses a command line interface program to manage firmware, hardware, and operating systems. It provides functions to collect full system health information (including health status), configure system settings, and update system firmware and drivers.

- Lenovo Essentials UpdateXpress

The UpdateXpress tool is a standalone GUI application for firmware and device driver updates that enables you to maintain your server firmware and device drivers up-to-date and help you avoid unnecessary server outages. The tool acquires and deploys individual updates and UpdateXpress System Packs (UXSPs) which are integration-tested bundles.

- Lenovo Essentials Bootable Media Creator

The Bootable Media Creator (BOMC) tool is used to create bootable media for offline firmware update.

For more information and downloads, visit the Lenovo XClarity Essentials web page:

<http://support.lenovo.com/us/en/documents/LNVO-center>

## Lenovo XClarity Energy Manager

Lenovo XClarity Energy Manager (LXEM) is a power and temperature management solution for data centers. It is an agent-free, web-based console that enables you to monitor and manage power consumption and temperature in your data center through the management console. It enables server density and data center capacity to be increased through the use of power capping.

LXEM is a licensed product. A single-node LXEM license is included with the XClarity Controller Enterprise upgrade as described in the [Remote Management](#) section. If your server does not have the XCC Enterprise upgrade, Energy Manager licenses can be ordered as shown in the following table.

Table 22. Lenovo XClarity Energy Manager

Part number	Description
4L40E51621	Lenovo XClarity Energy Manager Node License (1 license needed per server)

For more information about XClarity Energy Manager, see the following resources:

- Lenovo Support page:  
<https://datacentersupport.lenovo.com/us/en/solutions/Invo-lxem>
- User Guide for XClarity Energy Manager:  
<https://pubs.lenovo.com/lxem/>

## Lenovo Capacity Planner

Lenovo Capacity Planner is a power consumption evaluation tool that enhances data center planning by enabling IT administrators and pre-sales professionals to understand various power characteristics of racks, servers, and other devices. Capacity Planner can dynamically calculate the power consumption, current, British Thermal Unit (BTU), and volt-ampere (VA) rating at the rack level, improving the planning efficiency for large scale deployments.

For more information, refer to the Capacity Planner web page:  
<http://datacentersupport.lenovo.com/us/en/solutions/lvo-lcp>

## Security

The SE100 offers a number of security features, both electronic and physical.

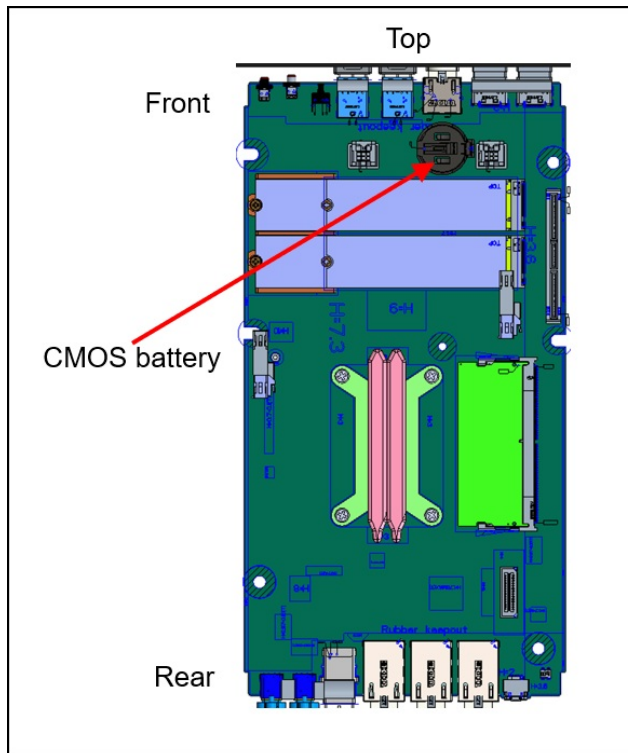


Figure 10. Security features of the SE100

Physical security features:

- The server has an intrusion switch that rests against the server cover. In the event that the cover is removed, the event is recorded and actions can be taken to secure the server. The intrusion switch is standard.
- Support for a Kensington lock and cable  
The server has a slot on the side of the server which a customer-supplied Kensington lock and cable can be attached to, to help prevent theft of the server.

Electronic security features include:

- Self-encrypting (SED) on M.2 that ensure data is secured when the drives are powered off
- Administrator password and a power-on password in UEFI
- Onboard Trusted Platform Module (TPM) supporting TPM 2.0 enables advanced cryptographic functionality in the operating system and applications.

The server is NIST SP 800-193 compliant.

Ordering information for the security components is listed in the following table.

Table 23. Security components

Part number	Feature code	Description
CTO only	AUK7	TPM 2.0 and Secure Boot

## System Lockdown Mode

System Lockdown Mode is an optional security feature of the SE100 that ensures that the system is only used by its intended recipient and that all data and applications remains secure.

System Lockdown Mode is an optional feature that can be remotely managed in two ways:

- ThinkShield Key Vault Portal Managed. This provides a centralised remote management approach, allowing the administrator to remotely managed multiple systems and to register ownership of systems to their company, which reduces the system's value is stolen.
- XClarity Controller Managed. This provides remote management level control to an individual system using XCC web interface, OneCLI or Redfish.

To select ThinkShield Key Vault Portal Managed in factory orders, select feature BYBR, as listed in the following table. The default in DCSC is to select XClarity Controller Managed, feature BYBQ.

Table 24. Feature codes to activate System Lockdown mode

Feature code	Description	Purpose
BYBR	ThinkShield Key Vault Portal Managed	System Lockdown Mode is enabled in the factory (Activation required on delivery). The server remains secured and in System Lockdown Mode until registered and activated with the ThinkEdge Key Vault Portal. Unauthorized tampering of the server will result in the server being locked down and the data secured, and will remain in this state until reauthenticated with the Key Vault Portal.
BYBQ	XClarity Controller Managed	Default choice in DCSC. System Lockdown Mode is not enabled in the factory. Configures the server security to be managed by the XCC2 management processor. Server will boot at first power on and, by default, will not be locked down on any tamper event. You can configure tamper detection in the XCC2 interface if desired. The server can be converted to be managed ThinkShield Key Vault Portal at a later stage if desired (one-way conversion).

If System Lockdown is enabled in the factory, the system will be delivered in system lockdown mode and will require activation before operation. There are three ways the server can be activated:

- Using a mobile device (iOS or Android) connect to the server to the USB management port on the rear of the server (USB-C with XCC USB2.0) and running the [ThinkShield Edge Mobile Management app](#).
- Connecting the system to the Internet via the XCC management port on the rear of the server (RJ45 for MGMT) and accessing the [ThinkShield Key Vault Portal](#) from a web browser on another system.
- In a disconnected mode, where neither a mobile device or an internet connection to the SE100 are available.

For more information, see ThinkEdge Security, available from:  
<https://lenovopress.lenovo.com/lp1725-thinkedge-security>

**Converting from XCC Managed to Portal Managed:** It is possible to convert a system from XCC Managed security to ThinkShield Key Vault Portal Managed via the XCC management interface, however the reverse is not possible. Once a server is in ThinkShield Key Vault Portal Managed mode, it cannot be converted back to XClarity Controller Managed.

The SE100 offers a Security LED that indicates the status of the server:

- LED on: Security is enabled; System is operational.
- LED blinking: Security is enabled and the server is in lockdown, either due to being delivered from the factory in lockdown mode or has entered lockdown as a result of a tamper event. System must be activated or reactivated before becoming operational.
- LED off: Security is disabled; System is operational.

## SED encryption in factory orders

The SE100 also optionally supports enabling SED drive encryption in the factory using feature BYBS as listed in the following table. This feature enables SED on the selected drives and sets and SED Authentication Key (SED AK).

**Tip:** SED encryption is a function that is independent of System Lockdown Control.

Table 25. System Lockdown

Feature code	Description	Purpose
BYBS	SED Enabled	Enables SED drive encryption on all factory installed drives and sets an SED Authentication Key (AK).

## System Guard

The System Guard feature takes a snapshot of the hardware component inventory as trusted reference, then monitors for any deviation from the reference snapshot.

When deviation occurs, it can report an event to the user, optionally, can also prevent the server from booting into the OS and prompt the user for response.

- System Guard is only enabled with XCC2 on V3 code
- Server supports this feature (BUT2) when XCC Platinum enabled only.
- The System Guard feature is disabled by default

System Guard is a feature of XCC Platinum. System Guard (BUT2) should only be selectable if XCC Platinum (BRPJ) is selected.

Table 26. XCC platinum and System Guard details

Feature code	Description
BRPJ	XCC Platinum
BUT2	Enable System Guard

## Platform Firmware Resiliency - Lenovo ThinkShield

Lenovo's ThinkShield Security is a transparent and comprehensive approach to security that extends to all dimensions of our data center products: from development, to supply chain, and through the entire product lifecycle.

The ThinkEdge SE100 includes Platform Firmware Resiliency (PFR) hardware Root of Trust (RoT) which enables the system to be NIST SP800-193 compliant. This offering further enhances key platform subsystem protections against unauthorized firmware updates and corruption, to restore firmware to an integral state, and to closely monitor firmware for possible compromise from cyber-attacks.

PFR operates upon the following server components:

- UEFI image – the low-level server firmware that connects the operating system to the server hardware
- XCC image – the management “engine” software that controls and reports on the server status separate from the server operating system
- FPGA image – the code that runs the server’s lowest level hardware controller on the motherboard

The Lenovo Platform Root of Trust Hardware performs the following three main functions:

- Detection – Measures the firmware and updates for authenticity
- Recovery – Recovers a corrupted image to a known-safe image
- Protection – Monitors the system to ensure the known-good firmware is not maliciously written

These enhanced protection capabilities are implemented using a dedicated, discrete security processor whose implementation has been rigorously validated by leading third-party security firms. Security evaluation results and design details are available for customer review – providing unprecedented transparency and assurance.

The SE100 includes support for Secure Boot, a UEFI firmware security feature developed by the UEFI Consortium that ensures only immutable and signed software are loaded during the boot time. The use of Secure Boot helps prevent malicious code from being loaded and helps prevent attacks, such as the installation of rootkits. Lenovo offers the capability to enable secure boot in the factory, to ensure end-to-end protection. Alternatively, Secure Boot can be left disabled in the factory, allowing the customer to enable it themselves at a later point, if desired.

The following table lists the relevant feature code(s).

Table 27. ThinkShield Platform Firmware Resiliency PFR TPM Secure Boot

Part number	Feature code	Description	Purpose
CTO only	AUK7	TPM 2.0 and Secure Boot	Configure the system in the factory with Secure Boot enabled.
CTO only	B0MK	Enable TPM 2.0	Configure the system without Secure Boot enabled. Customers can enable Secure Boot later if desired

**Tip:** If Secure Boot is not enabled in the factory, it can be enabled later by the customer. However once Secure Boot is enabled, it cannot be disabled.

## Mounting options

The SE100 is designed to be used in a variety of locations -- wall, ceiling, DIN-rail, table top -- as well as in a rack mount.

In this section:

- [Mounting components - Node sleeve](#)

- Desktop mount
- Wall, ceiling or DIN mount
- 1U2N rack installation
- 1U3N rack installation
- Mounting options and power
- Unmounting node from enclosure

For additional information on node sleeve and DIN Rail installation, see the Configuration Installation Guide: [https://pubs.lenovo.com/se100/install\\_node\\_to\\_din](https://pubs.lenovo.com/se100/install_node_to_din)

For additional information on wall mount/ceiling mount see the Configuration Installation Guide: [https://pubs.lenovo.com/se100/configuration\\_wall\\_mount](https://pubs.lenovo.com/se100/configuration_wall_mount)

## Mounting components - Node sleeve

Many of the mounting options share the same components.

### Node sleeve

The node sleeve, shown below without Expansion kit, holds the SE100 server when mounted on to DIN rail. The server is then slid into the node sleeve and secured with additional thumbscrews.

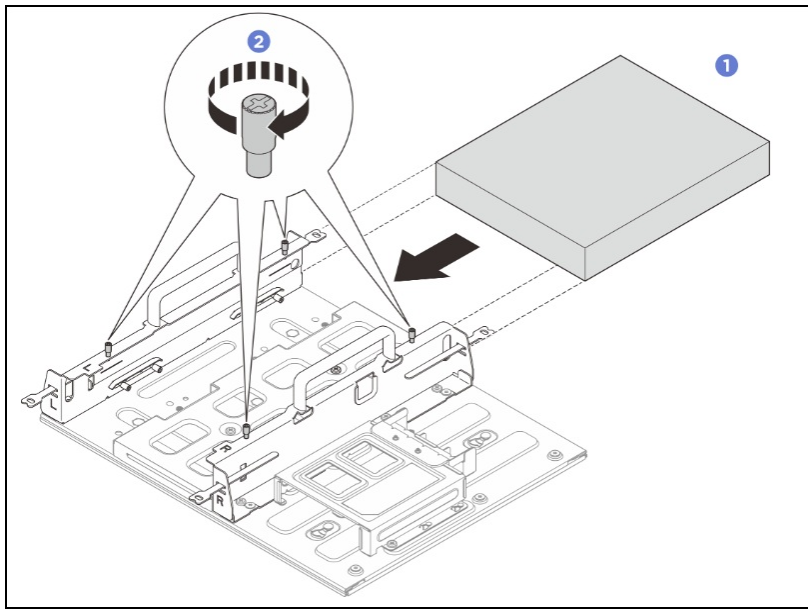


Figure 11. Node sleeve image

Table 28. Node Sleeve ordering information

Part number	Feature code	Description	Quantity required per server
4XF7A96678	C31B	ThinkEdge SE100 VESA without Expansion Kit	1
4XF7A96679	C31G	ThinkEdge SE100 VESA with Expansion Kit	1

### Configuration notes:

- C31B supports base node without EXP kit
- C31G supports base node + EXP kit.
- C31B and C31G are mutually exclusive



## Desktop mount

Desktop mounting has the server oriented horizontally with self-adhesive rubber pads mounted to its underside. Optional PCIe Expansion kit also supports rubber pads underside.

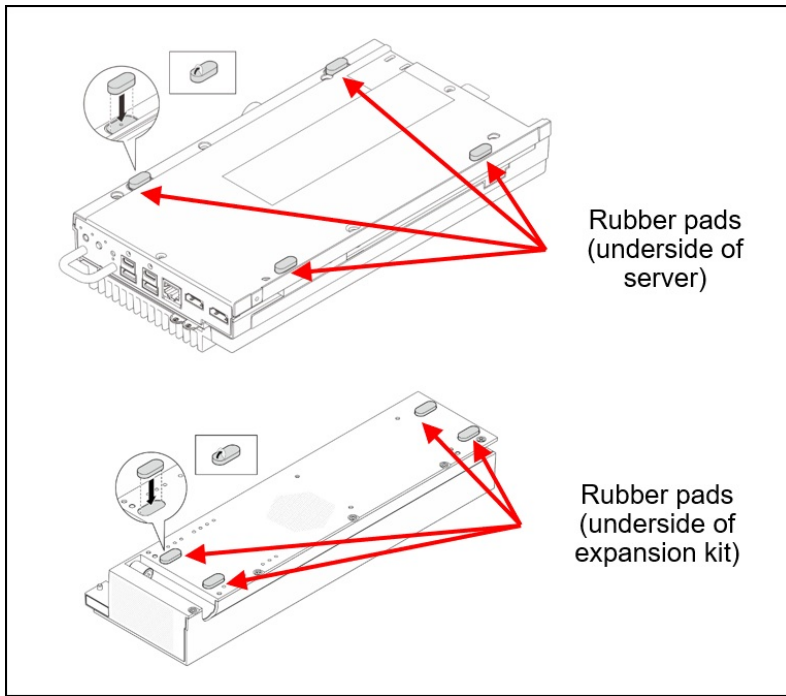


Figure 12. SE100 and expansion kit with Rubber Feet option

**Note:** The server ships with 4x rubber pads/rubber feet. Pads can be placed to the node underside or to the node sleeve underside. If installing a node onto node sleeve, install rubber pads on the node sleeve underside only.

**Tips:** 300W external adapter not supported in desktop mount.

The rubber feet are also orderable separately as listed in the following table.

Table 29. Desktop mount components

Part number	Feature code	Description	Maximum supported
4XF7A96683	N/A	ThinkEdge SE100 Node Bottom Rubber Feet  Includes: <ul style="list-style-type: none"> <li>• ThinkEdge SE100 Bottom Rubber Feet, C31J</li> <li>• ThinkEdge SE100 Expansion Kit Rubber Feet, C8UB</li> </ul>	1
4F17A96680	C31A	ThinkEdge SE100 Node Fan Kit	1

## Wall, ceiling or DIN mount

When wall, ceiling or DIN mounted, the server must be installed onto a node sleeve first. For DIN mount, the optional DIN mount kit is required.

SE100 supports the standalone and PCIe expansion kit for mounting on wall or ceiling. Additionally the following is also supported:

- Filter covers the PCIe expansion kit area for GPU or network area to reduce the dust that can enter the server through the front air holes.

**Tips:** 300W external adapter not supported in Wall / DIN mounting.

Table 30. DIN mount or wall mount

Part number	Feature code	Description	Quantity required
DIN Rail mount mode			
4M17A37285	B87S	ThinkEdge DIN Mount Kit (Extreme Shock & Vibe)	Optional, for DIN rail only, 1 per server
4XF7A96679	C31G	ThinkEdge SE100 VESA with IO Expansion Kit	1 per server (C31G or C31B 1 per server)
4XF7A96678	C31B	ThinkEdge SE100 VESA without Expansion Kit	1 per server (C31G or C31B 1 per server)
4F17A96680	C31A	ThinkEdge SE100 Node Fan Kit	1 per server
Wall /ceiling mount mode			
4XF7A96679	C31G	ThinkEdge SE100 VESA with IO Expansion Kit	1 per server (C31G or C31B 1 per server)
4XF7A96678	C31B	ThinkEdge SE100 VESA without Expansion Kit	1 per server (C31G or C31B 1 per server)
4F17A96680	C31A	ThinkEdge SE100 Node Fan Kit	1 per server

The following image illustrates DIN Rail Kit, with two brackets, mount plate and node sleeve, for mounting.

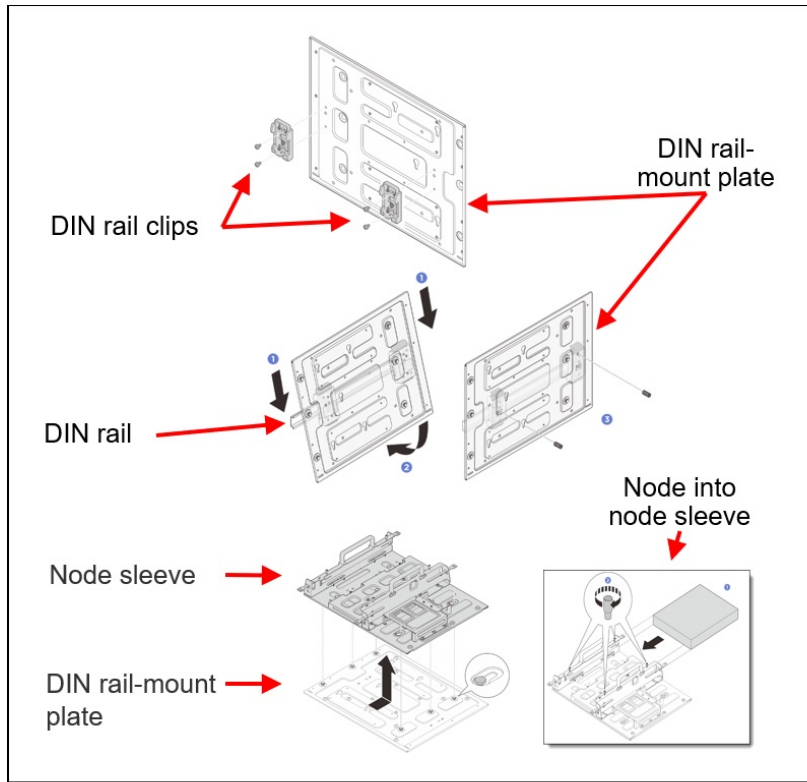


Figure 13. DIN Rail Kit for node mounting

The VESA with expansion kit supports node mounting for wall mount or ceiling mount, as shown in the following figure.

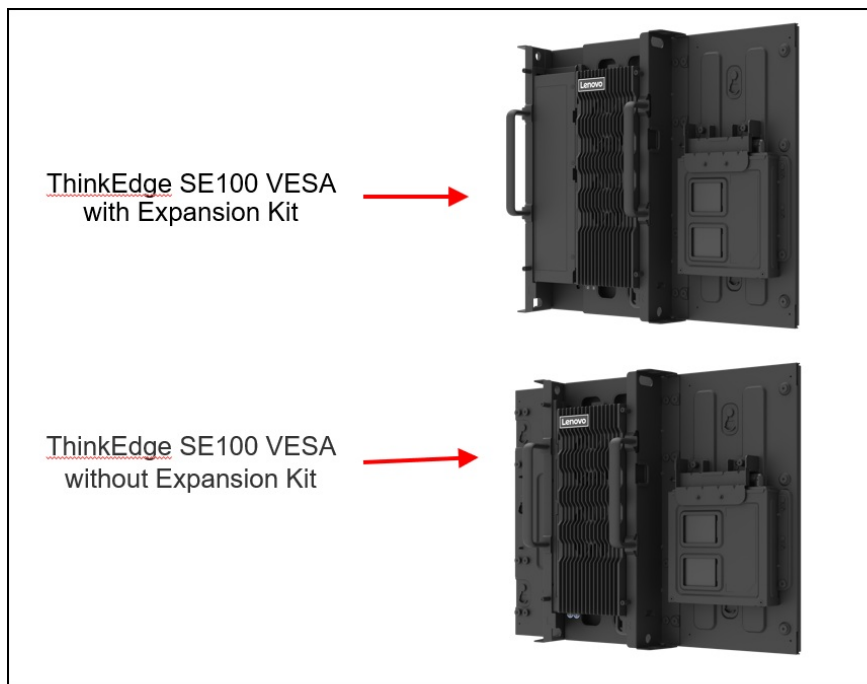


Figure 14. SE100 with expansion kit for VESA wall mount or ceiling

## 1U2N rack installation

Two SE100 servers can be mounted in a 1U space, in a rack server. The components are mounted in the Lenovo ThinkEdge SE100 1U2N Enclosure.

Make sure enclosure and server selection leverage the same power input path for installation.

### Notes:

- Lenovo ThinkEdge SE100 1U2N Enclosure is available in DCSC using CTO base model 7DGVCTO2WW
- The 1U2N Enclosure comes with one node fillers to ensure correct airflow if a node space is not populated
- The 1U2N Enclosure allows base node system with expansion kit only, however, installing a base node system without expansion kit will cause airflow bypass through expansion kit area and high risk for system cooling efficiency.

The following figure shows two SE100 servers installed in the 1U2N Enclosure.

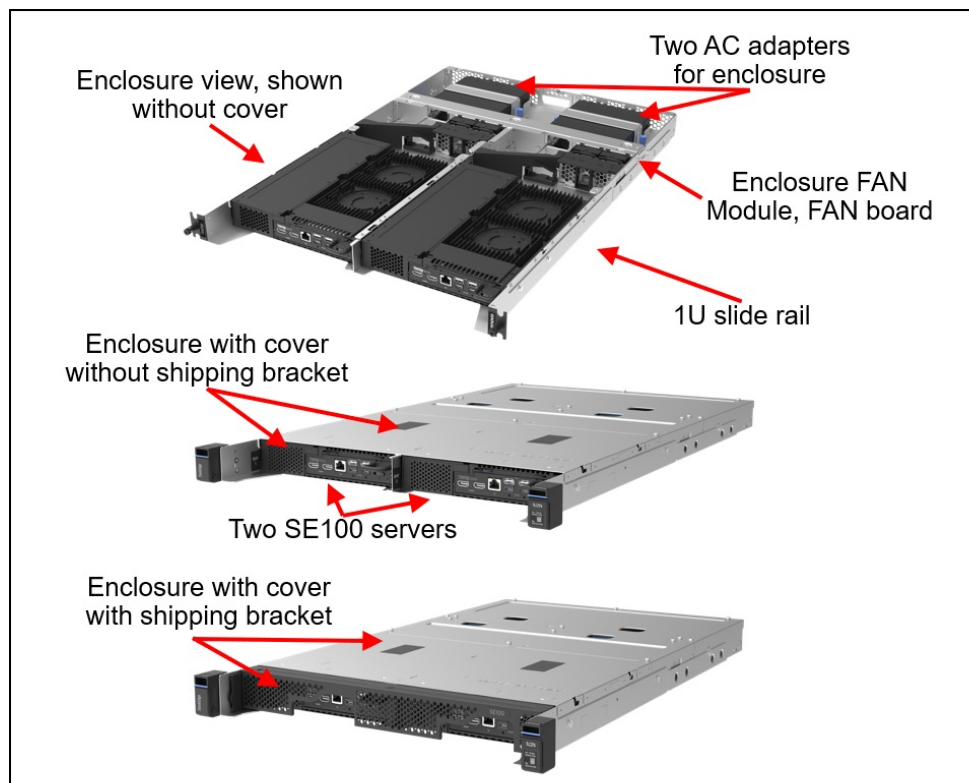


Figure 15. Lenovo ThinkEdge SE100 1U2N Enclosure with external adapter

The following table lists the components used in the 1U rack installation.

**Tip:** The top cover of the SE100 is removed before installing the server in the enclosure.

Table 31. Components for the 1U2N Enclosure

Part number	Feature code	Description	Quantity required
Toolless Slide Rail Kit and CMA			
4XF7A99130	C4TM	ThinkSystem Toolless Stab-in Slide Rail Kit V3 with 1U CMA*	1 per Enclosure
1U2N Enclosure components			
4X27A92701	C3GQ	ThinkEdge 300W 230V/115V External Power Supply	2 per Enclosure
4XF7A96693	C30N	ThinkEdge SE100 Enclosure Fan Module	1 for each node in the Enclosure
4TA7A96912	C30M	ThinkEdge SE100 Enclosure Fan Board	1 for each node in the Enclosure
4X97A99920	C9AA	ThinkEdge SE100 Enclosure Fan Board Cable	1 for each node in the Enclosure
4XF7A96682	C317	ThinkEdge SE100 Node Cosmetic Cover Rack	1 for each node in the Enclosure
4B47A96697	C30Q	ThinkEdge SE100 1U2N Enclosure Shipping Bracket	1 for Enclosure

\* For more information go to user guide: <https://lenovopress.lenovo.com/lp1838-thinksystem-and-thinkedge-rail-kit-reference#term=4XF7A99130&availability=Available>

### 1U3N rack installation

Three SE100 servers and the two companion AC Adapter power supplies can also be mounted in a rack. In such a configuration, the servers occupy 1U of rack space. The components are mounted in the Lenovo ThinkEdge SE100 1U3N Enclosure, machine type 7DGV.

Note: 1U3N enclosure supports SE100 servers and external 300W PSU adapter only.

#### Notes:

- Lenovo ThinkEdge SE100 1U3N Enclosure is available in DCSC using CTO base model 7DGVCTO1WW
- The 1U3N Enclosure comes with two node fillers to ensure correct airflow if a node space is not populated
- 1U3N enclosure supports base node/s system without expansion kit only

The following figure shows three SE100 servers installed in the Lenovo ThinkEdge SE100 1U3N Enclosure.

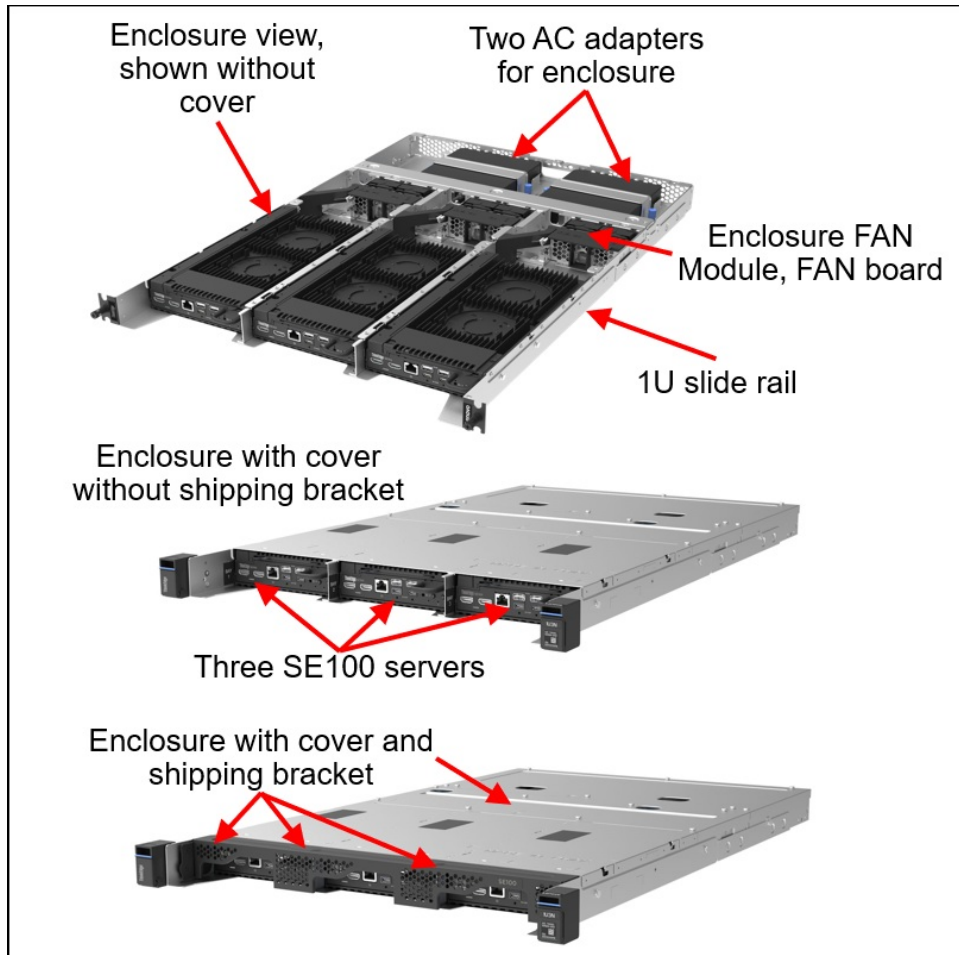


Figure 16. Lenovo ThinkEdge SE100 1U3N Enclosure components (rail in open position)

The following table lists the components used in the 1U rack installation.

**Tip:** The top cover of the SE100 is removed before installing the server in the enclosure.

Table 32. Components for the 1U3N Enclosure

Part number	Feature code	Description	Quantity required
<b>Toolless Slide Rail Kit and CMA</b>			
4XF7A99130	C4TM	ThinkSystem Toolless Stab-in Slide Rail Kit V3 with 1U CMA	1 per Enclosure
<b>1U3N Enclosure components</b>			
4X27A92701	C3GQ	ThinkEdge 300W 230V/115V External Power Supply	2 per Enclosure
4XF7A96693	C30N	ThinkEdge SE100 Enclosure Fan Module	1 for each node in the Enclosure
4TA7A96912	C30M	ThinkEdge SE100 Enclosure Fan Board	1 for each node in the Enclosure
4X97A99920	C9AA	ThinkEdge SE100 Enclosure Fan Board Cable	1 for each node in the Enclosure
4B47A96696	C30T	ThinkEdge SE100 1U3N Enclosure Shipping Bracket	1 for Enclosure
4XF7A96682	C317	ThinkEdge SE100 Node Cosmetic Cover (SE100 Node Fan Shroud)	1 for each node in the Enclosure

### Mounting options and power

The following table list supported mounting options and their corresponding supported power type.

Table 33. Mounting options and supported power type

Power type / PSU	Desktop	DIN rail (wall/ceiling)	Rack 1U2N	Rack 1U3N
140W external power adapter	Yes	Yes	No	No
AC & 300W external	No	No	Yes	Yes
<b>System fan</b>				
Node fan module	Yes	Yes	No	No
Ethernet adapter blower fan	Yes	Yes	Yes	No
Enclosure fan module	No	No	Yes	Yes
<b>Expansion</b>				
Expansion kit	Yes	Yes	Yes	No

Configuration notes:

- When in rack mount the operating temperature will be 5~35 °C.
- When one or two 140W external power adapter are installed, keep ambient temperature lower than 45°C.
- When one or two 300W external power adapter are installed, keep ambient temperature lower than 35°C.

## Unmounting node from enclosure

Base node can be unmounted from rack enclosure and be used as a desktop/wall/ceiling/DIN mount model.

The components needed for the SE100 are shown in the following table.

Table 34. Unmount components

Part number	Feature code	Description	Maximum supported
4XF7A96681	N/A	ThinkEdge SE100 Node Fan Shroud	1 per node system
4F17A96680	C31A	ThinkEdge SE100 Node Fan Kit	1 per node system

## Operating system support

The SE100 supports the following operating systems:

- Microsoft Windows 11 Enterprise
- Microsoft Windows 11 IoT Enterprise
- Ubuntu 24.04 LTS 64-bit

**Hypervisor:** the following is the current supported list:

- KVM on Ubuntu 24.04
- No ESXi, no Xen, and no Hyper-V

For a complete list of supported, certified and tested operating systems, plus additional details and links to relevant web sites, see the Operating System Interoperability Guide:

<https://lenovopress.lenovo.com/osig#servers=se100-7dgr&support=all>



## Physical and electrical specifications

The SE100 has the following overall physical dimensions.

Dimensions and weight of the SE100 server:

- Height 53 mm (2.09 inches)
- Width: 142.30 mm (5.6 inches)
- Depth: 278 mm (10.94 inches)
- Maximum weight: 2.36 kg (5.2 lbs)

Node with PCIe expansion kit:

- Height: 53 mm (2.09 inches)
- Width: 214.2 mm (8.43 inches)
- Depth: 278 mm (10.94 inches)
- Maximum weight: 3 kg (6.6 lbs)

Node with node sleeve:

- Height: 111.6 mm (4.39 inches)
- Width: 439.4 mm (17.3 inches)
- Depth: 345.7 mm (13.61 inches)
- Maximum weight: 7.3 kg (16 lbs)

With Enclosure:

- Height: 43 mm (1.7 inches)
- Width: 434.2 mm (17.10 inches)
- Depth: 734.3 mm (28.9 inches)
  - 1U2N Maximum with 2 nodes, two expansion kits, and two power adapters): 13.9 kg (30.6 lbs)
  - 1U3N Maximum with 3 nodes and two power adapters): 15 kg (33 lbs)

The shipping (cardboard packaging) dimensions of the SE100 are as follows:

Node without expansion kit

- Height: 183 mm
- Width: 338 mm
- Depth: 460 mm

Node with expansion kit

- Height: 223 mm
- Width: 494 mm
- Depth: 576 mm

Enclosure

- Height: 225 mm
- Width: 587 mm
- Depth: 998 mm

Electrical specifications:

- Electrical Input
  - 20Vdc ~ 28Vdc, over 100 Watts adapter which meet PD3.0 or PD3.1
- Supported external power adapters:
  - ThinkEdge 140W 230V/115V External Power Supply
    - Input voltage 100-240 V
    - Input AC frequency 50-60 Hz
    - Output voltage 28.0 V
    - Output current 5.0 A
    - Output power 140.0 W
  - ThinkEdge 300W 230V/115V External Power Supply
    - Input voltage 100-240 V
    - Input AC frequency 50-60 Hz
    - Output voltage 28.0 V
    - Output current
      - 3 ports: 3.57 A
      - 2 ports: 5.0 A
    - Output power
      - 3 ports: 300.0 W
      - 2 ports: 280.0 W

## Operating environment

Summary of the environmental specifications of server. Depending on the model, some features might not be available, or some specifications might not apply.

Topics in this section:

- [Acoustical noise emissions](#)
- [Ambient temperature management](#)
- [Acoustic modes](#)
- [Acoustical noise emissions](#)
- [Ambient temperature management](#)
- [Environment](#)
- [Shock and vibration](#)
- [Replacement port dust covers](#)
- [Thermal pad](#)
- [Coin battery](#)

### Acoustical noise emissions

The server has the following acoustic noise emissions declaration:

- Sound power level ( $L_{WAd}$ )
  - Idling:
    - Minimum: 4.2 Bel
    - Typical: 4.1 Bel
    - GPU : 4.1 Bel
  - Operating profile 1:
    - Minimum: 4.2 Bel
    - Typical: 4.1 Bel
    - GPU : 4.1 Bel
  - Operating profile 2:
    - Minimum: 5.0 Bel
    - Typical: 4.9 Bel
    - GPU : 5.0 Bel
- Sound pressure level ( $L_{pAm}$ ):
  - Idling:
    - Minimum: 25.3 dBA
    - Typical: 25.7 dBA
    - GPU: 25.3 dBA
  - Operating profile 1:
    - Minimum: 25.3 dBA
    - Typical: 25.9 dBA
    - GPU : 25.3 dBA
  - Operating profile 2:
    - Minimum: 34.3 dBA
    - Typical: 34.1 dBA
    - GPU : 33.9 dBA

Note:

- These sound levels were measured in controlled acoustical environments according to procedures specified by ISO7779 and are reported in accordance with ISO 9296. Operating profile 1 is represented by 50% CPU TDP. Operating profile 2 is represented by 100% CPU TDP or 70%/30% storage write/read or 100% GPU. Testing was conducted at  $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$  to align with ISO7779.
- The declared acoustic sound levels are based on the specified configurations, which may change depending on configuration/conditions.
  - Minimum configuration: Intel Ultra5 processors, 2x 8GB DDR5 CSODIMMs, 1x SATA M.2 boot drive.

- Typical configuration: Intel Ultra7 processors, 2x 32GB DDR5 CSODIMMs, 1x 480GB NVMe M.2 boot drives, 2x 1.92TB NVMe storage M.2 drives.
  - GPU configuration: Intel Ultra7 processors, 2x 32GB DDR5 CSODIMMs, 1x 480GB NVMe M.2 boot drives, 1x 960GB NVMe storage M.2 drives, 1x Nvidia RTX2000E ada GPU
- Government regulations (such as those prescribed by OSHA or European Community Directives) may govern noise level exposure in the workplace and may apply to you and your server installation. The actual sound pressure levels in your installation depend upon a variety of factors, including the number of racks in the installation; the size, materials, and configuration of the room; the noise levels from other equipment; the room ambient temperature, and employee's location in relation to the equipment. Further, compliance with such government regulations depends on a variety of additional factors, including the duration of employees' exposure and whether employees wear hearing protection. Lenovo recommends that you consult with qualified experts in this field to determine whether you are in compliance with the applicable regulations.

## Ambient temperature management

ThinkEdge SE100 (Type 7DGR) supports most of the configurations operating at temperature of 45°C or lower. Adjust ambient temperature when specific components are installed:

- The following components can operate at temperature of 45°C or lower and require proper ambient temperature and redundant cooling by the fans to prevent performance degradation:
  - When one of the following components is installed, keep ambient temperature lower than 40°C for proper operation. When the ambient temperature is over 40°C, performance degradation might occur.
    - NVMe M.2 storage drives
  - When one of the following components is installed, keep ambient temperature lower than 35°C for proper operation. When the ambient temperature is over 35°C, performance degradation might occur.
    - NVMe M.2 boot drives
- The following components can operate at temperature of 35°C or lower and require proper system cooling with N+1 fan redundancy.
  - GPU adapter

## Acoustic modes

The SE100 supports different acoustic modes, which optimize the operation of system fans to lower the overall noise level of the server. This is supported on configurations without PCIe expansion kit.

### Base node:

The server supports three acoustic modes with different acoustic performance.

- **Disabled:** The server operates at default fan speeds.
- **Mode 1:** The operation of system fans is optimized to lower the overall noise level of the server.
  - Mode 1 supports ambient temperature lower than 35°C, otherwise system will operate at default fan speed.
  - Performance degradation may occur at heavy workloads.
- **Mode 2:** The operation of system fans is optimized to lower the overall noise level of the server further than Mode 1.
  - Mode 2 supports ambient temperature lower than 35°C, otherwise system will operate at default fan speed.
  - Performance degradation may occur at heavy workloads.

To change the acoustic mode, enter the Setup Utility and go to **System settings > Operating Modes > Custom Mode > Acoustic mode**.

### When mounted onto 1U3N enclosure:

The server supports three acoustic modes with different acoustic performance.

- **Disabled:** The server operates at default fan speeds.
- **Mode 1:** The operation of system fans is optimized to lower the overall noise level of the server.
  - Mode 1 supports ambient temperature lower than 35°C, otherwise system will operate at default fan speed.
  - Performance degradation may occur at heavy workloads.
- **Mode 2:** The operation of system fans is optimized to lower the overall noise level of the server further than Mode 1.
  - Mode 2 supports ambient temperature lower than 35°C, otherwise system will operate at default fan speed.
  - Performance degradation may occur at heavy workloads.

To change the acoustic mode, enter the Setup Utility and go to **System settings > Operating Modes > Custom Mode > Acoustic mode**.

### Acoustical noise emissions

When server is in the enclosure has the following acoustic noise emissions declaration:

- Sound power level ( $L_{WAd}$ )
  - Idling:
    - 1U3N: 5.6 Bel
    - 1U2N: 4.5 Bel
  - Operating profile 1:
    - 1U3N: 5.6 Bel
    - 1U2N: 5.6 Bel
  - Operating profile 2:
    - 1U3N: 6.3 Bel
    - 1U2N: 6.3 Bel
- Sound pressure level ( $L_{pAm}$ ):
  - Idling:
    - 1U3N: 39.7 dBA
    - 1U2N: 28.4 dBA
  - Operating profile 1:
    - 1U3N: 39.8 dBA
    - 1U2N: 39.4 dBA
  - Operating profile 2:
    - 1U3N: 46.1 dBA
    - 1U2N: 46.6 dBA

Note:

- These sound levels were measured in controlled acoustical environments according to procedures specified by ISO7779 and are reported in accordance with ISO 9296. Operating profile 1 is represented by 50% CPU TDP. Operating profile 2 is represented by 100% CPU TDP or 70%/30% storage write/read or 100% GPU. Testing was conducted at 23°C ± 2°C to align with ISO7779.
- The declared acoustic sound levels are based on the specified configurations, which may change depending on configuration/conditions.
  - 1U3N configuration (3 nodes installed in enclosure with same configuration as following) :
    - Intel Ultra7 processors, 2x 32GB DDR5 CSODIMMs, 1x 480GB NVMe M.2 boot drive, 2X 1.92TB NVMe M.2 storage drive.
  - 1U2N configuration (1 node installed in enclosure with configuration as following) :
    - Intel Ultra7 processors, 2x 32GB DDR5 CSODIMMs, 1x 480GB NVMe M.2 boot drives, 1x 960GB NVMe storage M.2 drives, 1x Nvidia RTX2000E ada GPU.
- Government regulations (such as those prescribed by OSHA or European Community Directives) may govern noise level exposure in the workplace and may apply to you and your server installation. The

actual sound pressure levels in your installation depend upon a variety of factors, including the number of racks in the installation; the size, materials, and configuration of the room; the noise levels from other equipment; the room ambient temperature, and employee's location in relation to the equipment. Further, compliance with such government regulations depends on a variety of additional factors, including the duration of employees' exposure and whether employees wear hearing protection. Lenovo recommends that you consult with qualified experts in this field to determine whether you are in compliance with the applicable regulations.

## **Ambient temperature management**

ThinkEdge SE1001U2N and 1U3N Enclosure (Type 7DGV) supports most of the configurations operating at temperature of 35°C or lower. Adjust ambient temperature when specific components are installed:

- The following components can operate at temperature of 35°C or lower and require proper ambient temperature and redundant cooling by the fans to prevent performance degradation:
  - When one of the following components is installed, keep ambient temperature lower than 30°C for proper operation. When the ambient temperature is over 30°C, performance degradation might occur.
    - NVMe M.2 boot drives
- The following components can operate at temperature of 35°C or lower and require proper system cooling with N+1 fan redundancy.
  - GPU adapter

The following table indicates what environmental conditions (ambient temperature) are supported with supported options, such as: memory, the M.2 drives and GPUs.

Table 35. Drive and GPU support based on environmental selections (ambient temperature)

Part number	Description	5°C to 35°C	36°C to 40°C	41°C to 45°C
<b>Memory</b>				
4X77A93600	ThinkEdge 32GB TruDDR5 5600MHz (2Rx8) SODIMM	Yes	Yes	Yes
4X77A96509	ThinkEdge 32GB TruDDR5 6400MHz (2Rx8) CSODIMM	Yes	Yes	Yes
4X77A93599	ThinkEdge 16GB TruDDR5 5600MHz (1Rx8) SODIM	Yes	Yes	Yes
4X77A96508	ThinkEdge 16GB TruDDR5 6400MHz (1Rx8) CSODIMM	Yes	Yes	Yes
4X77A96507	ThinkEdge 8GB TruDDR5 6400MHz (1Rx16) CSODIMM	Yes	Yes	Yes
<b>SATA Boot drive 2280</b>				
4XB7A89422	ThinkSystem M.2 ER3 240GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes	Yes
4XB7A90049	ThinkSystem M.2 ER3 480GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes	Yes
4XB7A90230	ThinkSystem M.2 ER3 960GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes	Yes
<b>NVMe Boot drive 2280</b>				
4XB7A82636	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†	Yes†
4XB7A13999	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†	Yes†
<b>NVMe Data drive 2280</b>				
4XB7A82636	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†	Yes†
4XB7A13999	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†	Yes†
<b>NVMe Data drive 2280</b>				
4XB7A14000	ThinkSystem M.2 7450 PRO 1.92TB Read Intensive Entry NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes	Yes†
4XB7A90102	ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes	Yes†
4XB7A90103	ThinkSystem M.2 PM9A3 1.92TB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes	Yes†
<b>GPU with active cooling card</b>				
4X67A96431	ThinkSystem NVIDIA Quadro RTX A1000 next PCIe Active GPU	Yes	No	No
4X67A96430	ThinkSystem NVIDIA Quadro RTX 2000E PCIe Active GPU	Yes	No	No
<b>Network with passive cooling card</b>				
7ZT7A00484	Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	Yes	Yes	Yes
7ZT7A00496	Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter	Yes	Yes	Yes

† Performance might slightly decrease with this temperature region

The following table indicates what environmental conditions (ambient temperature) are supported by enclosure 1U2N with supported options, such as: memory, the M.2 drives and GPUs.

Table 36. Drive and GPU support based on environmental selections (ambient temperature) for Rack Enclosure 1U2N

Part number	Description	5°C to 30°C	31°C to 35°C
<b>Memory</b>			
4X77A93600	ThinkEdge 32GB TruDDR5 5600MHz (2Rx8) SODIMM	Yes	Yes
4X77A96509	ThinkEdge 32GB TruDDR5 6400MHz (2Rx8) CSODIMM	Yes	Yes
4X77A93599	ThinkEdge 16GB TruDDR5 5600MHz (1Rx8) SODIM	Yes	Yes
4X77A96508	ThinkEdge 16GB TruDDR5 6400MHz (1Rx8) CSODIMM	Yes	Yes
4X77A96507	ThinkEdge 8GB TruDDR5 6400MHz (1Rx16) CSODIMM	Yes	Yes
<b>SATA Boot drive 2280</b>			
4XB7A89422	ThinkSystem M.2 ER3 240GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes
4XB7A90049	ThinkSystem M.2 ER3 480GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes
4XB7A90230	ThinkSystem M.2 ER3 960GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes
<b>NVMe Boot drive 2280</b>			
4XB7A82636	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†
4XB7A13999	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†
<b>NVMe Data drive 2280</b>			
4XB7A82636	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
4XB7A13999	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
<b>NVMe Data drive 2280</b>			
4XB7A14000	ThinkSystem M.2 7450 PRO 1.92TB Read Intensive Entry NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
4XB7A90102	ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
4XB7A90103	ThinkSystem M.2 PM9A3 1.92TB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
<b>GPU with active cooling card</b>			
4X67A96431	ThinkSystem NVIDIA Quadro RTX A1000 next PCIe Active GPU	Yes	No
4X67A96430	ThinkSystem NVIDIA Quadro RTX 2000E PCIe Active GPU	Yes	No
<b>Network with passive cooling card</b>			
7ZT7A00484	Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	Yes	Yes
7ZT7A00496	Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter	Yes	Yes

† Performance might slightly decrease with this temperature region

The following table indicates what environmental conditions (ambient temperature) are supported by enclosure 1U3N with supported options, such as: memory, the M.2 drives and GPUs.



Table 37. Drive and GPU support based on environmental selections (ambient temperature) for Rack Enclosure 1U3N

Part number	Description	5°C to 30°C	31°C to 35°C
<b>Memory</b>			
4X77A93600	ThinkEdge 32GB TruDDR5 5600MHz (2Rx8) SODIMM	Yes	Yes
4X77A96509	ThinkEdge 32GB TruDDR5 6400MHz (2Rx8) CSODIMM	Yes	Yes
4X77A93599	ThinkEdge 16GB TruDDR5 5600MHz (1Rx8) SODIM	Yes	Yes
4X77A96508	ThinkEdge 16GB TruDDR5 6400MHz (1Rx8) CSODIMM	Yes	Yes
4X77A96507	ThinkEdge 8GB TruDDR5 6400MHz (1Rx16) CSODIMM	Yes	Yes
<b>SATA Boot drive 2280</b>			
4XB7A89422	ThinkSystem M.2 ER3 240GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes
4XB7A90049	ThinkSystem M.2 ER3 480GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes
4XB7A90230	ThinkSystem M.2 ER3 960GB Read Intensive SATA 6Gb NHS SSD	Yes	Yes
<b>NVMe Boot drive 2280</b>			
4XB7A82636	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†
4XB7A13999	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes†
<b>NVMe Data drive 2280</b>			
4XB7A82636	ThinkSystem M.2 7450 PRO 480GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
4XB7A13999	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
<b>NVMe Data drive 2280</b>			
4XB7A14000	ThinkSystem M.2 7450 PRO 1.92TB Read Intensive Entry NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
4XB7A90102	ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes
4XB7A90103	ThinkSystem M.2 PM9A3 1.92TB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	Yes	Yes

† Performance might slightly decrease with this temperature region

## Environment

ThinkEdge SE100 complies with ASHRAE Class A4 specifications. System performance may be impacted when operating temperature is outside AHSARE A4 specification or fan failed condition outside A2 Specification. ThinkEdge SE100 is supported in the following environment:

- Air temperature:
  - Operating
    - ASHARE Class A2: 10°C to 35°C (50°F to 95°F); the maximum ambient temperature decreases by 1°C for every 300 m (984 ft) increase in altitude above 900 m (2,953 ft).
    - ASHARE Class A3: 5°C to 40°C (41°F to 104°F); the maximum ambient temperature decreases by 1°C for every 175m (574 ft) increase in altitude above 900 m (2,953 ft).
    - ASHARE Class A4: 5°C to 45°C (41°F to 113°F); the maximum ambient temperature decreases by 1°C for every 125m (410 ft) increase in altitude above 900 m (2,953 ft).
  - Server off: 5°C to 45°C (41°F to 113°F)
- Maximum altitude: 3,050 m (10,000 ft)

- Relative Humidity (non-condensing):
  - Operating: Operating: 8% to 90%, maximum dew point: 24°C (75.2°F)
  - Shipment/storage: 8% to 90%, maximum dew point: 27°C (80.6°F)
  - Non-operating (unpacked) storage can pass the following condition: 5% to 95% at 38.7°C (101.7°F) maximum dry-bulb temperature for 48 hrs.
- Particulate contamination
  - ThinkEdge SE100 complies with IP50 Ingress Protection per ANSI/IEC60529-2020 Degrees of Protection Provided by Enclosures (IP Code).

**Note:** PCIe expansion kit installed with your server does not comply with IP50 standard.

## Shock and vibration

The following information is a summary of the shock and vibration specifications of the server. Depending on the model, some features might not be available, or some specifications might not apply.

Table 38. Shock and vibration specifications

Mounting type of ThinkEdge SE100	Shock (when the server is in operation)	Shock (when the server is not in operation, such as in shipping)	Vibration (when the server is in operation)	Vibration (when the server is not in operation, such as in shipping)
Desktop mount (standing alone)	Half-sine wave, 15G 11ms	Trapezoidal wave, 50G 152 inch/sec	5-100 Hz, 0.15 Grms, 30 mins	2-200 Hz, 1.04 Grms, 15 mins
DIN-rail mount				
Wall mount				
Ceiling mount				

## Replacement port dust covers

ThinkEdge SE100 complies with IP50 Ingress Protection.

To reduce the impact of dust in your environment the optional dust covers for all front I/O ports are available. If needed, you can order replacement covers. Ordering information is listed in the following table.

Table 39. Replacement port dust covers

Part number	Description	Contents
4XF7A96677	ThinkEdge SE100 Port Dust Cover Kit	<ul style="list-style-type: none"><li>• Four RJ45 port covers</li><li>• Four USB port covers</li><li>• Two HDMI port covers</li><li>• Four USB Type-C port covers</li></ul>
4XF7A96688	ThinkEdge SE100 Expansion Dust Filter (C31H)	1 per Expansion kit

## Thermal pad

The CPU / DIMM / M.2 SSD need contact with thermal pad for thermal conductivity cooling purpose.

- If thermal pads get damage or detached, the recommendation is to replace with new pads to avoid impact to the cooling behavior.
- If a replacement or addition with different brand or different form factor of components such as DDR or M.2 SSD, the recommendation is to replace with new pads to avoid impact to the cooling behavior.

Ordering information is listed in the following table.

Table 40. Replacement port dust covers

Part number	Description
4XF7A96677	ThinkEdge SE100 Port Dust Cover Kit
4XF7B02089	ThinkEdge SE100 Top-Cover Thermal Pad Kit
4XF7B02090	ThinkEdge SE100 Bottom-Cover Thermal Pad Kit
4XF7B02088	ThinkEdge SE100 Planar Thermal Pad Kit

## Coin battery

Ordering information for coin battery field upgrades are listed in the following table.

**Tip:** The server ships with the necessary coin batteries.

Table 41. Field upgrade options

Part number	Description
4X57A87776*	ThinkEdge CR2032 3V High Temperature (-40C to 125C) Coin Battery

\* This option allows customers to stock additional batteries as spare parts should they be needed

## Warranty upgrades and post-warranty support

The ThinkEdge SE100 has 3-year warranty based on the machine type of the system:

- 7DGR - 3 year warranty

ThinkEdge SE100 1U2N Enclosure Lenovo and ThinkEdge SE100 1U3N Enclosure have the following warranty:

- 7DGV - 3 year warranty

Our global network of regional support centers offers consistent, local-language support enabling you to vary response times and level of service to match the criticality of your support needs:

- **Standard Next Business Day** – Best choice for non-essential systems requiring simple maintenance.
- **Premier Next Business Day** – Best choice for essential systems requiring technical expertise from senior-level Lenovo engineers.
- **Premier 24x7 4-Hour Response** – Best choice for systems where maximum uptime is critical.
- **Premier Enhanced Storage Support 24x7 4-Hour Response** – Best choice for storage systems where maximum uptime is critical.

For more information, consult the brochure [Lenovo Operational Support Services for Data Centers Services](#).

## Services

Lenovo Data Center Services empower you at every stage of your IT lifecycle. From expert advisory and strategic planning to seamless deployment and ongoing support, we ensure your infrastructure is built for success. Our comprehensive services accelerate time to value, minimize downtime, and free your IT staff to focus on driving innovation and business growth.

**Note:** Some service options may not be available in all markets or regions. For more information, go to <https://lenovocator.com/>. For information about Lenovo service upgrade offerings that are available in your region, contact your local Lenovo sales representative or business partner.

In this section:

- [Lenovo Advisory Services](#)
- [Lenovo Plan & Design Services](#)
- [Lenovo Deployment, Migration, and Configuration Services](#)
- [Lenovo Support Services](#)
- [Lenovo Managed Services](#)
- [Lenovo Sustainability Services](#)

## Lenovo Advisory Services

Lenovo Advisory Services simplify the planning process, enabling customers to build future-proofed strategies in as little as six weeks. Consultants provide guidance on projects including VM migration, storage, backup and recovery, and cost management to accelerate time to value, improve cost efficiency, and build a flexibly scalable foundation.

- **Assessment Services**

An Assessment helps solve your IT challenges through an onsite, multi-day session with a Lenovo technology expert. We perform a tools-based assessment which provides a comprehensive and thorough review of a company's environment and technology systems. In addition to the technology based functional requirements, the consultant also discusses and records the non-functional business requirements, challenges, and constraints. Assessments help organizations like yours, no matter how large or small, get a better return on your IT investment and overcome challenges in the ever-changing technology landscape.

- **Design Services**

Professional Services consultants perform infrastructure design and implementation planning to support your strategy. The high-level architectures provided by the assessment service are turned into low level designs and wiring diagrams, which are reviewed and approved prior to implementation. The implementation plan will demonstrate an outcome-based proposal to provide business capabilities through infrastructure with a risk-mitigated project plan.

## Lenovo Plan & Design Services

Unlock faster time to market with our tailored, strategic design workshops to align solution approaches with your business goals and technical requirements. Leverage our deep solution expertise and end-to-end delivery partnership to meet your goals efficiently and effectively.

## Lenovo Deployment, Migration, and Configuration Services

Optimize your IT operations by shifting labor-intensive functions to Lenovo's skilled technicians for seamless on-site or remote deployment, configuration, and migration. Enjoy peace of mind, faster time to value, and comprehensive knowledge sharing with your IT staff, backed by our best-practice methodology.

- **Deployment Services for Storage and ThinkAgile**

A comprehensive range of remote and onsite options tailored specifically for your business needs to ensure your storage and ThinkAgile hardware are fully operational from the start.

- **Hardware Installation Services**

A full-range, comprehensive setup for your hardware, including unpacking, inspecting, and positioning components to ensure your equipment is operational and error-free for the most seamless and efficient installation experience, so you can quickly benefit from your investments.

- **DM/DG File Migration Services**

Take the burden of file migration from your IT's shoulders. Our experts will align your requirements and business objectives to the migration plans while coordinating with your team to plan and safely execute the data migration to your storage platforms.

- **DM/DG/DE Health Check Services**

Our experts perform proactive checks of your Firmware and system health to ensure your machines are operating at peak and optimal efficiency to maximize up-time, avoid system failures, ensure the security of IT solutions and simplify maintenance.

- **Factory Integrated Services**

A suite of value-added offerings provided during the manufacturing phase of a server or storage system that reduces time to value. These services aim at improving your hardware deployment experience and enhance the quality of a standard configuration before it arrives at your facility.

## Lenovo Support Services

In addition to response time options for hardware parts, repairs, and labor, Lenovo offers a wide array of additional support services to ensure your business is positioned for success and longevity. Our goal is to reduce your capital outlays, mitigate your IT risks, and accelerate your time to productivity.

- **Premier Support for Data Centers**

Your direct line to the solution that promises the best, most comprehensive level of support to help you fully unlock the potential of your data center.

- **Premier Enhanced Storage Support (PESS)**

Gain all the benefits of Premier Support for Data Centers, adding dedicated storage specialists and resources to elevate your storage support experience to the next level.

- **Committed Service Repair (CSR)**

Our commitment to ensuring the fastest, most seamless resolution times for mission-critical systems that require immediate attention to ensure minimal downtime and risk for your business. This service is only available for machines under the Premier 4-Hour Response SLA.

- **Multivendor Support Services (MVS)**

Your single point of accountability for resolution support across vast range of leading Server, Storage, and Networking OEMs, allowing you to manage all your supported infrastructure devices seamlessly from a single source.

- **Keep Your Drive (KYD)**

Protect sensitive data and maintain compliance with corporate retention and disposal policies to ensure your data is always under your control, regardless of the number of drives that are installed in your Lenovo server.

- **Technical Account Manager (TAM)**

Your single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time, ensuring smooth operations and optimized performance as your business grows.

- **Enterprise Software Support (ESS)**

Gain comprehensive, single-source, and global support for a wide range of server operating systems and Microsoft server applications.

For more information, consult the brochure [Lenovo Operational Support Services for Data Centers](#).

## Lenovo Managed Services

Achieve peak efficiency, high security, and minimal disruption with Lenovo's always-on Managed Services. Our real-time monitoring, 24x7 incident response, and problem resolution ensure your infrastructure operates seamlessly. With quarterly health checks for ongoing optimization and innovation, Lenovo's remote active monitoring boosts end-user experience and productivity by keeping your data center's hardware performing at its best.

Lenovo Managed Services provides continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of your data center using state-of-the-art tools, systems, and practices by a team of highly skilled and experienced Lenovo services professionals.

Quarterly reviews check error logs, verify firmware & OS device driver levels, and software as needed. We'll also maintain records of latest patches, critical updates, and firmware levels, to ensure you systems are providing business value through optimized performance.

## Lenovo Sustainability Services

- **Asset Recovery Services**

Lenovo Asset Recovery Services (ARS) provides a secure, seamless solution for managing end-of-life IT assets, ensuring data is safely sanitized while contributing to a more circular IT lifecycle. By maximizing the reuse or responsible recycling of devices, ARS helps businesses meet sustainability goals while recovering potential value from their retired equipment. For more information, see the [Asset Recovery Services offering page](#).

- **CO2 Offset Services**

Lenovo's CO2 Offset Services offer a simple and transparent way for businesses to take tangible action on their IT footprint. By integrating CO2 offsets directly into device purchases, customers can easily support verified climate projects and track their contributions, making meaningful progress toward their sustainability goals without added complexity.

- **Lenovo Certified Refurbished**

Lenovo Certified Refurbished offers a cost-effective way to support IT circularity without compromising on quality and performance. Each device undergoes rigorous testing and certification, ensuring reliable performance and extending its lifecycle. With Lenovo's trusted certification, you gain peace of mind while making a more sustainable IT choice.

## **Lenovo TruScale**

Lenovo TruScale XaaS is your set of flexible IT services that makes everything easier. Streamline IT procurement, simplify infrastructure and device management, and pay only for what you use – so your business is free to grow and go anywhere.

Lenovo TruScale is the unified solution that gives you simplified access to:

- The industry's broadest portfolio – from pocket to cloud – all delivered as a service
- A single-contract framework for full visibility and accountability
- The global scale to rapidly and securely build teams from anywhere
- Flexible fixed and metered pay-as-you-go models with minimal upfront cost
- The growth-driving combination of hardware, software, infrastructure, and solutions – all from one single provider with one point of accountability.

For information about Lenovo TruScale offerings that are available in your region, contact your local Lenovo sales representative or business partner.

## Regulatory compliance

The SE100 conforms to the following standards:

- ANSI/UL62368-1
- IEC 62368-1 (CB Certificate and CB Test Report)
- FCC - Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, issue 7, Class A
- CSA C22.2 No. 62368-1
- CISPR 32, Class A, CISPR 35
- Argentina IEC 62368-1: 2018
- Japan VCCI, Class A
- Taiwan BSMI CNS15936, Class A; CNS15598-1; Section 5 of CNS15663
- CE, UKCA Mark (EN55032 Class A, EN62368-1, EN55035, EN61000-3-2, EN61000-3-3, (EU) 2019/424, and EN IEC 63000 (RoHS))
- Korea KN32, Class A, KN35
- Russia, Belorussia and Kazakhstan, TP EAC 037/2016 (for RoHS)
- Russia, Belorussia and Kazakhstan, EAC: TP TC 004/2011 (for Safety); TP TC 020/2011 (for EMC)
- EAC Russia, Belorussia and Kazakhstan, TR CU 020/2011 and TR CU 004/2011
- Australia/New Zealand AS/NZS CISPR 32, Class A; AS/NZS 62368.1
- UL Green Guard, UL2819
- China CCC certificate, GB17625.1; GB4943.1; GB/T9254.1
- China CECF certificate, CQC3135
- China CELP certificate, HJ 2507-2011
- Japanese Energy-Saving Act
- Mexico NOM-019
- TUV-GS (EN62368-1, and EK1-ITB2000)
- India BIS 13252 (Part 1)
- Germany GS
- Brazil INMETRO
- South Africa NRCS LOA
- Ukraine UkrCEPRO
- Morocco CMIM Certification (CM)
- EU2019/424 Energy Related Product (ErP Lot9)

## Uninterruptible power supply units

The following table lists the uninterruptible power supply (UPS) units that are offered by Lenovo.

Table 42. Uninterruptible power supply units

Part number	Description
Rack-mounted or tower UPS units - 100-125VAC	
7DD5A001WW	RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC)
7DD5A003WW	RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC)
Rack-mounted or tower UPS units - 200-240VAC	
7DD5A002WW	RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC)
7DD5A005WW	RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC)
7DD5A007WW	RT5kVA 3U Rack or Tower UPS-G2 (200-240VAC)
7DD5A008WW	RT6kVA 3U Rack or Tower UPS-G2 (200-240VAC)
7DD5A00AWW	RT11kVA 6U Rack or Tower UPS-G2 (200-240VAC)

† Only available in China and the Asia Pacific market.

For more information, see the list of Product Guides in the UPS category:

<https://lenovopress.com/servers/options/ups>



## Power distribution units

The following table lists the power distribution units (PDUs) that are offered by Lenovo.

Table 43. Power distribution units

Part number	Feature code	Description	ANZ	ASEAN	Brazil	EET	MEA	RUCIS	WE	HTK	INDIA	JAPAN	LA	NA	PRC
<b>0U Basic PDUs</b>															
4PU7A93176	C0QH	0U 36 C13 and 6 C19 Basic 32A 1 Phase PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93169	C0DA	0U 36 C13 and 6 C19 Basic 32A 1 Phase PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93177	C0QJ	0U 24 C13/C15 and 24 C13/C15/C19 Basic 32A 3 Phase WYE PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A93170	C0D9	0U 24 C13/C15 and 24 C13/C15/C19 Basic 32A 3 Phase WYE PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
<b>0U Switched and Monitored PDUs</b>															
4PU7A93181	C0QN	0U 21 C13/C15 and 21 C13/C15/C19 Switched and Monitored 48A 3 Phase Delta PDU v2 (60A derated)	N	Y	N	N	N	N	N	Y	N	Y	N	Y	N
4PU7A93174	C0D5	0U 21 C13/C15 and 21 C13/C15/C19 Switched and Monitored 48A 3 Phase Delta PDU (60A derated)	N	Y	N	N	N	N	N	Y	N	N	N	Y	N
4PU7A93178	C0QK	0U 20 C13 and 4 C19 Switched and Monitored 32A 1 Phase PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93171	C0D8	0U 20 C13 and 4 C19 Switched and Monitored 32A 1 Phase PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93182	C0QP	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 63A 3 Phase WYE PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A93175	C0CS	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 63A 3 Phase WYE PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93180	C0QM	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 32A 3 Phase WYE PDU v2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A93173	C0D6	0U 18 C13/C15 and 18 C13/C15/C19 Switched and Monitored 32A 3 Phase WYE PDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
4PU7A93179	C0QL	0U 16 C13/C15 and 16 C13/C15/C19 Switched and Monitored 24A 1 Phase PDU v2 (30A derated)	N	Y	N	N	N	N	N	Y	N	Y	N	Y	N
4PU7A93172	C0D7	0U 16 C13/C15 and 16 C13/C15/C19 Switched and Monitored 24A 1 Phase PDU(30A derated)	N	Y	N	N	N	N	N	Y	N	N	N	Y	N
<b>1U Switched and Monitored PDUs</b>															
4PU7A90808	C0D4	1U 18 C19/C13 Switched and monitored 48A 3P WYE PDU V2 ETL	N	N	N	N	N	N	N	Y	N	Y	Y	Y	N
4PU7A81117	BNDV	1U 18 C19/C13 switched and monitored 48A 3P WYE PDU - ETL	N	N	N	N	N	N	N	N	N	N	N	Y	N
4PU7A90809	C0DE	1U 18 C19/C13 Switched and monitored 48A 3P WYE PDU V2 CE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
4PU7A90810	C0DD	1U 18 C19/C13 Switched and monitored 80A 3P Delta PDU V2	N	N	N	N	N	N	N	Y	N	Y	Y	Y	N

Part number	Feature code	Description	ANZ	ASEAN	Brazil	EET	MEA	RUCIS	WE	HTK	INDIA	JAPAN	LA	NA	PRC
4PU7A90811	C0DC	1U 12 C19/C13 Switched and monitored 32A 3P WYE PDU V2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4PU7A90812	C0DB	1U 12 C19/C13 Switched and monitored 60A 3P Delta PDU V2	N	N	N	N	N	N	N	Y	N	Y	Y	Y	N
71763NU	6051	Ultra Density Enterprise C19/C13 PDU 60A/208V/3PH	N	N	Y	N	N	N	N	N	N	Y	Y	Y	N
71762NX	6091	Ultra Density Enterprise C19/C13 PDU Module	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>Line cords for 1U PDUs that ship without a line cord</b>															
40K9611	6504	DPI 32a Cord (IEC 309 3P+N+G)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9612	6502	DPI 32a Cord (IEC 309 P+N+G)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9613	6503	DPI 63a Cord (IEC 309 P+N+G)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9614	6500	DPI 30a Cord (NEMA L6-30P)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
40K9615	6501	DPI 60a Cord (IEC 309 2P+G)	N	N	Y	N	N	N	Y	N	N	Y	Y	Y	N

For more information, see the Lenovo Press documents in the PDU category:

<https://lenovopress.com/servers/options/pdu>

## Rack cabinets

The SE100 supports installation in a rack when mounted in either the 1U2N Enclosure or the 1U3N Enclosure. See [Mounting options](#) for details.

The following table lists the supported rack cabinets.

Table 44. Rack cabinets (D)

Model	Description
7D6DA007WW	ThinkSystem 42U Onyx Primary Heavy Duty Rack Cabinet (1200mm)
7D6DA008WW	ThinkSystem 42U Pearl Primary Heavy Duty Rack Cabinet (1200mm)
7D6EA009WW	ThinkSystem 48U Onyx Primary Heavy Duty Rack Cabinet (1200mm)
7D6EA00AWW	ThinkSystem 48U Pearl Primary Heavy Duty Rack Cabinet (1200mm)
93604PX	42U 1200mm Deep Dynamic Rack
93614PX	42U 1200mm Deep Static Rack
93634PX	42U 1100mm Dynamic Rack
93634EX	42U 1100mm Dynamic Expansion Rack
93074RX	42U Standard Rack (1000mm)

For specifications about these racks, see the Lenovo Rack Cabinet Reference, available from:

<https://lenovopress.com/lp1287-lenovo-rack-cabinet-reference>

For more information, see the list of Product Guides in the Rack cabinets category:

<https://lenovopress.com/servers/options/racks>

Notes:

- The following racks do not support the use of the cable management arm (CMA):
  - 25U racks, type 9307
  - 42U racks, type 9307

## KVM console options

The following table lists the supported KVM consoles.

Table 45. KVM console

Part number	Description
4XF7A84188	ThinkSystem 18.5" LCD console (with US English keyboard)

The following table lists the available KVM switches and the options that are supported with them.

Table 47. KVM switches and options

Part number	Description
KVM Console switches	
1754D1X	Global 2x2x16 Console Manager (GCM16)
1754A2X	Local 2x16 Console Manager (LCM16)
1754A1X	Local 1x8 Console Manager (LCM8)
Cables for GCM and LCM Console switches	
46M5383	Virtual Media Conversion Option Gen2 (VCO2)
46M5382	Serial Conversion Option (SCO)

For more information, see the list of Product Guides in the KVM Switches and Consoles category:  
<http://lenovopress.com/servers/options/kvm>

## Lenovo Financial Services

Why wait to obtain the technology you need now? No payments for 90 days and predictable, low monthly payments make it easy to budget for your Lenovo solution.

- **Flexible**

Our in-depth knowledge of the products, services and various market segments allows us to offer greater flexibility in structures, documentation and end of lease options.

- **100% Solution Financing**

Financing your entire solution including hardware, software, and services, ensures more predictability in your project planning with fixed, manageable payments and low monthly payments.

- **Device as a Service (DaaS)**

Leverage latest technology to advance your business. Customized solutions aligned to your needs. Flexibility to add equipment to support growth. Protect your technology with Lenovo's Premier Support service.

- **24/7 Asset management**

Manage your financed solutions with electronic access to your lease documents, payment histories, invoices and asset information.

- **Fair Market Value (FMV) and \$1 Purchase Option Leases**

Maximize your purchasing power with our lowest cost option. An FMV lease offers lower monthly payments than loans or lease-to-own financing. Think of an FMV lease as a rental. You have the flexibility at the end of the lease term to return the equipment, continue leasing it, or purchase it for the fair market value. In a \$1 Out Purchase Option lease, you own the equipment. It is a good option when you are confident you will use the equipment for an extended period beyond the finance term. Both lease types have merits depending on your needs. We can help you determine which option will best meet your technological and budgetary goals.

Ask your Lenovo Financial Services representative about this promotion and how to submit a credit application. For the majority of credit applicants, we have enough information to deliver an instant decision and send a notification within minutes.

## Seller training courses

The following sales training courses are offered for employees and partners (login required). Courses are listed in date order.

### 1. **Family Introduction: Edge Servers**

2025-05-16 | 18 minutes | Employees and Partners

This course introduces the concept of edge servers. Edge servers are used at the edge of an IoT environment, where they perform pre-processing of data, and data forwarding to core environments.

Course Objectives:

- Describe the Internet of Things (IoT)
- Define an edge server
- Discuss edge server features

Tags: Server, ThinkEdge

Published: 2025-05-16

Length: 18 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: SXXW1105

### 2. **Think AI Weekly: ThinkEdge SE100 - AI Anywhere, Affordable Everywhere**

2025-04-30 | 60 minutes | Employees Only

Join Chris Laffey, Global Product Line Manager for ThinkEdge, as he discusses the versatile design and use case applications of the Lenovo ThinkEdge SE100.

- First to market AI integrated chip
- Lightweight Low Power Server
- Delivering AI TOPs both on chip and additional GPU

Tags: Artificial Intelligence (AI), ThinkEdge

Published: 2025-04-30

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Course code: DTAIW138

### 3. **VTT Edge: ThinkEdge SE100 - Efficiency Redefined for Edge AI - April 2025**

2025-04-23 | 60 minutes | Employees Only

In this session Sophia Li, ThinkEdge Product Manager, presents the key highlights and value proposition of the AI-ready ThinkEdge SE100. The ThinkEdge SE100 delivers robust performance in space constrained environments and can evolve from a base device to a flexible, GPU-optimized edge computing solution.

Tags: Artificial Intelligence (AI), ThinkEdge

Published: 2025-04-23

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Course code: DVEDG219

#### 4. **Partner Technical Webinar - ThinkEdge Update**

2025-03-31 | 60 minutes | Employees and Partners

In this 60-minute replay, Chris Laffey and Don Fisher from Lenovo ThinkEdge presented an update on the ThinkEdge portfolio. Chris went through the portfolio highlighting the new SE100 and the transition from SE350 to SE350 v2 and SE360 v2. Don closed describing the use case with IMSA sports car racing.

Tags: Server

Published: 2025-03-31

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: 032825

#### 5. **Lenovo Edge Sales Certification Assessment**

2025-03-31 | 45 minutes | Employees and Partners

This test will assess your understanding of the content in this learning path. Completing the courses and the assessment are required to earn the Lenovo Edge Sales Certification.

Tags: Server

Published: 2025-03-31

Length: 45 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: LENA-EDG-125A

#### 6. **Family Portfolio Edge Servers Powered by Intel**

2025-02-28 | 25 minutes | Employees and Partners

This course describes the Edge servers, such as the Lenovo ThinkEdge SE350 V2, SE360 V2, SE100 and ThinkEdge SE450, that are used at the edge of an IoT environment and may be part of an edge solution. Solutions such as those using software from Scale Computing typically use more traditional Lenovo servers.

After completing this course, you will be able to list the edge solutions in the Lenovo portfolio, describe the features of each solution and determine which solution is best suited to a specific environment.

Tags: Server, ThinkEdge

Published: 2025-02-28

Length: 25 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: SXXW2510r3

7. **Q4 Solutions Launch ThinkEdge SE100 Edge Server Update Quick Hit**

2025-02-27 | 4 minutes | Employees and Partners

This Quick Hit covers the Lenovo announcement of the ThinkEdge SE100 edge server. The Lenovo ThinkEdge SE100 was designed to be a powerful and efficient server for use at the edge. It features the Intel® Core Ultra processor, and is available with or without an expansion module. The expansion module accommodates an NVIDIA GPU, making this compact server ideal for AI at the edge.

Tags: Artificial Intelligence (AI), Server, Storage, ThinkEdge, XClarity

Published: 2025-02-27

Length: 4 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: SXXW2510r3a

8. **VTT AI & Edge: Workload Consolidation and Converging Technologies**

2025-02-13 | 72 minutes | Partners Only

Please join Trent Richardson, Edge Solution Specialist and Alexander "Doc" Docherty, Senior Sales Engineer as they speak to us.

Topics in this session will include:

- Digital transformation across verticals
- Consolidating and future proofing for AI

Tags: Artificial Intelligence (AI), Business solutions, Technical Sales, ThinkEdge

Published: 2025-02-13

Length: 72 minutes

**Start the training:**

Partner link: [Lenovo Partner Learning](#)

Course code: DVAI213

9. **VTT AI & Edge: Workload Consolidation and Converging Technologies**

2025-02-13 | 80 minutes | Employees Only

Please join Trent Richardson, Edge Solution Specialist and Alexander "Doc" Docherty, Senior Sales Engineer as they speak to us.

Topics in this session will include:

- Digital transformation across verticals
- Consolidating and future proofing for AI
- Lenovo Resources

Tags: Artificial Intelligence (AI), Business solutions, Technical Sales, ThinkEdge

Published: 2025-02-13

Length: 80 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Course code: DVAI212

10. **Lenovo Data Center Technical Sales Certification Exam Study Guide**

2025-02-12 | 10 minutes | Employees and Partners

This guide includes information to help candidates prepare and register for the Data Center Technical Sales practice and certification exams.

Tags: DataCenter Products

Published: 2025-02-12

Length: 10 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: LENU-322C-SG

11. **Lenovo Data Center Sales Certification Exam Study Guide**

2025-02-12 | 10 minutes | Employees and Partners

This guide includes information to help candidates prepare and register for the Data Center Sales practice and certification exams.

Tags: DataCenter Products

Published: 2025-02-12

Length: 10 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: LENU-122C-SG



12. **Partner Technical Webinar - SE350 Migration Strategy**

2024-11-04 | 60 minutes | Employees and Partners

In this 60-minute webinar Chris Laffy, our Senior Product Line Manager, shares his extensive insights and ideas on migration strategies from the original SE350 to its successors.

Tags: DataCenter Products, ThinkEdge

Published: 2024-11-04

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: 102524

13. **VTT: Edge - The SE350 EOL is Coming, Prepare Yourself and Your Customer September 2024**

2024-09-10 | 60 minutes | Employees Only

As of March 2025, the Lenovo ThinkEdge SE350 will be EOL. Join Geoff Hunt and Chris Laffey as they discuss how to help your ThinkEdge SE350 customers transition to other offerings, with a special focus on ThinkEdge SE350 V2 and SE360 V2. Topics will include:

- Positioning the SE350 V2 and SE360 V2 as alternates for the EOL SE350
- A technical view of the generational differences

Tags: Technical Sales, ThinkEdge

Published: 2024-09-10

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Course code: DVEDG215

14. **Think AI Weekly: Lenovo Validated Design for Public Safety and Security Edge AI**

2024-09-05 | 60 minutes | Employees Only

In this session a panel from the Lenovo ISG/IDG ThinkEdge Team discuss vertical solutions enabled by edge computing. Alejandro Perez, Trent Richardson, and Chris Arenas focus on the Lenovo Validated Design for Public Safety and Security while reviewing the process and importance of Lenovo Validated Designs for the Edge

Tags: Artificial Intelligence (AI), ThinkEdge

Published: 2024-09-05

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Course code: DTAIW117

15. **VTT Edge: Lenovo Validated Design for Public Safety and Security Edge & AI July 2024**  
2024-08-05 | 60 minutes | Employees Only

The Lenovo ThinkEdge Team is collaborating with eco-system partners to design and validate Edge AI solutions across verticals. Join this session to learn about these efforts and the architecture of the first Lenovo Validated Design for Public Sector Safety and Security. The session will cover the following topics:

- Overview of the Lenovo Validated Designs (LVD) for Vertical Edge
- Public Sector Safety and Security LVD
- Business Key drivers and solution benefits
- Architecture and Technology Overview
- Relevant use cases
- Components and sizing details
- Validation results and pricing model

Tags: Artificial Intelligence (AI), Technical Sales, ThinkEdge

Published: 2024-08-05

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Course code: DVEDG214

16. **Partner Technical Webinar - ThinkEdge Portfolio**  
2024-08-02 | 60 minutes | Employees and Partners

July 26, 2024 - Lenovo SA's (Alex Docherty, Marcus White, and Eugene Grandberry) discuss strategy around the Thinkedge Portfolio.

Tags: ThinkEdge

Published: 2024-08-02

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: 072624

17. **VTT Edge: Lenovo Customer Solution for ENOC Filling Stations and Retail June 2024**  
2024-06-10 | 45 minutes | Employees Only

Join Massimo (Max) Angelucci, Lenovo Solution Architect, and Abdlkareem (AK) Alhawajreh, Lenovo Client Account Manager, as they discuss the journey of the sale, the customer business, and their challenges. They cover the considerations and decision points when architecting the solution and why the customer chose Lenovo Edge.

Tags: Oil and Gas, Retail, ThinkEdge

Published: 2024-06-10

Length: 45 minutes

**Start the training:**

Employee link: [Grow@Lenovo](#)

Course code: DVEDG213

18. **Lenovo Data Center Product Portfolio**  
2024-05-29 | 20 minutes | Employees and Partners

This course introduces the Lenovo data center portfolio, and covers servers, storage, storage networking, and software-defined infrastructure products. After completing this course about Lenovo data center products, you will be able to identify product types within each data center family, describe Lenovo innovations that this product family or category uses, and recognize when a specific product should be selected.

Tags: Advanced DataCenter, DataCenter Products, ThinkAgile, ThinkEdge, ThinkSystem

Published: 2024-05-29

Length: 20 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: SXXW1110r7

19. **Think AI Weekly: School Safety at the Edge**  
2024-05-13 | 60 minutes | Employees Only

Join Alejandro Perez, ISG/IDG Edge Business Development, Allen Holmes with ISG AI Business Development, and Lauren Allen ISG/IDG Go To Market Strategist as they discuss school security, AI computer vision and Lenovo ThinkEdge School solutions.

- AI solution capabilities for campus safety
- Safety solutions with ThinkEdge SE70 and SE450
- Walkthrough of La Jolla and other use cases

Tags: Artificial Intelligence (AI), ThinkEdge

Published: 2024-05-13

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Course code: DTAIW103

20. **VTT: HCI at the Edge and Dick's Sporting Goods\_May 2024**

2024-05-08 | 60 minutes | Employees Only

Join Adam Mandlebloom, ISG SDI Technical Product Manager, and Bryan Maskrey, ISG Technical Sales, as they explore Lenovo HCI solutions at the Edge and how one such solution is being positioned to resolve business challenges at a national retail company, Dick's Sporting Goods. Topics covered will include

- Hyperconverged Edge to Cloud today, and looking forward
- ThinkAgile for AI/ML - Cost effective GPU utilization
- Local Cluster Management integration
- Decision points and architecting the solution for Dick's Sporting Goods

Tags: Retail, Software Defined Infrastructure (SDI), Technical Sales, ThinkEdge

Published: 2024-05-08

Length: 60 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Course code: DVEDG212

21. **Business Problems Addressed with Lenovo Data & Analytics Solutions**

2024-01-31 | 20 minutes | Employees and Partners

Data is the quantities, characters, or symbols on which operations are performed by a computer, which is then stored and transmitted in the form of electrical signals and recorded on magnetic, optical, solid state, or mechanical recording media. All different types of organizations rely more and more on their data to gain valuable insights and improve their business. As expected, they will have challenges with gaining this insight. In this course we will discuss those challenges and problems our customers face and describe how Lenovo Data and Analytics Solutions can help customers solve each problem.

After completing this training, you will be able to define the following common problems for databases and big data and describe how Lenovo can help customers solve each problem: scalability, management, performance, protection, security, knowledge/skill, and technology evolution.

After completing this training, you will be able to define the following common problems for databases and big data and describe how Lenovo can help customers solve each problem: scalability, management, performance, protection, security, knowledge/skill, and technology evolution.

Tags: Data & Analytics, SAP, ThinkAgile, ThinkSystem

Published: 2024-01-31

Length: 20 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: DSOLP200

22. **Basics of the Edge Ecosystem for Sellers**  
2023-12-15 | 20 minutes | Employees and Partners

The purpose of this learning module is to familiarize Lenovo field sales, inside sales and partners with the Edge ecosystem and how Lenovo fits into the Edge space.

- Explain the basics of an Edge Ecosystem
- Articulate the inherent challenges of Edge Computing
- Present how Lenovo fits in the Edge Ecosystem

Tags: Artificial Intelligence (AI), Cross-Industry, Sales, ThinkEdge

Published: 2023-12-15

Length: 20 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: DTEF101

23. **The 10-minute Edge conversation for Lenovo Sellers**  
2023-12-14 | 20 minutes | Employees and Partners

The purpose of this course is to enable sellers to have a 10 to 15-minute customer conversation addressing the relevancy of Edge solutions to the customer business.

Learning Objectives:

- Prepare for the initial customer conversation
- Hold a 10-minute Edge Operational Technology (OT) conversation
- Take the appropriate steps to progress the sale

Tags: ThinkEdge

Published: 2023-12-14

Length: 20 minutes

**Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: DTEF103

#### 24. **Intro to Edge: 3Ws of Edge Computing for Lenovo Sellers**

2023-09-14 | 13 minutes | Employees and Partners

This course provides fundamental concepts and a learning foundation for those who are new to the data center and to computing at the Edge. It defines where is the Edge, identifies what are the business drivers for edge computing, and discusses why is edge computing important to Lenovo. September 2023

Tags: DataCenter Products, ThinkEdge

Published: 2023-09-14

Length: 13 minutes

##### **Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: DTEF100

#### 25. **Lenovo Solutions for the Edge - Who Are the Customers?**

2023-09-14 | 25 minutes | Employees and Partners

This course is focused on enabling sellers to identify opportunities for Lenovo Edge and Edge AI Solutions. Topics include a general overview of the Lenovo Edge portfolio and recognizing how edge computing can benefit customers.

Course Objectives:

- Identify Lenovo Edge Opportunities
- Recognize how an Edge solution would benefit your customer
- Provide a general overview of Lenovo solutions at the Edge
- Identify key points for your customer Edge conversation

Tags: Artificial Intelligence (AI), Sales, ThinkEdge

Published: 2023-09-14

Length: 25 minutes

##### **Start the training:**

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo Partner Learning](#)

Course code: DTEF102

### **Related publications and links**

For more information, see these resources:

- ThinkEdge SE100 drivers and support  
<https://datacentersupport.lenovo.com/us/en/>
- Lenovo ThinkEdge SE100 server product page:  
<https://www.lenovo.com/us/en/p/servers-storage/servers/edge/thinkedge-se100/len21te0020>
- Interactive 3D Tour of the ThinkEdge SE100:  
[https://lenovopress.lenovo.com/#resource\\_type=interactive-3d-tour&sort=relevance](https://lenovopress.lenovo.com/#resource_type=interactive-3d-tour&sort=relevance)
- ServerProven hardware compatibility:  
<https://serverproven.lenovo.com/>
- Lenovo Server Options:  
<https://serveroption.lenovo.com/>

## Related product families

Product families related to this document are the following:

- [Edge Computing and Internet of Things \(IoT\)](#)
- [Edge Servers](#)
- [ThinkEdge SE100 Server](#)

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