

Lenovo ThinkSystem Micro Datacenter 18U and 12U Rack Cabinets

Product Guide

Lenovo 18U and 12U 1200mm Micro Datacenter (MDC) rack offerings are industry-standard 19-inch server cabinets that are designed for rack servers that are to be deployed outside of traditional data centers. They allow IT managers to create turn-key solutions for branch offices and retail environments where a standardized, repeatable configuration is needed to be rolled out.

They are optimized to expedite installation and rollout, simplify cable management, and increase accessibility for improved serviceability. With a depth of 1200 mm (approximately 47 inches), these racks support deep servers with cable management arms.



Figure 1. 12U and 18U Micro Datacenter rack cabinets

Did you know?

The 12U and 18U racks are standard 19-inch rack cabinet offerings that enable faster deployment and scalability for Edge computing. They are suitable when you need data center-quality standards in your edge infrastructure and provide you with better compliance and security.

Part number information

The following table lists the ordering information for the 18U and 12U Micro Datacenter racks.

Table 1. Ordering part numbers and feature codes

Description	Model 1 year warranty	Model 3 year warranty	Base feature code
12U 1200mm Deep Micro Datacenter Rack	7D2B0001WW	7D2N0001WW	B98D
18U 1200mm Deep Micro Datacenter Rack	7D2C0001WW	7D2P0001WW	B98E

The racks contain the following items:

- One rack cabinet
- Removable and reversible lockable front and rear doors
- Left and right removable lockable side panels
- Key for locks
- Two bolt-down brackets (front & rear)
- Hardware kit containing screws, cage & flange nuts, installation wrenches, and cable ties
- Shipping pallet

Features and specifications

The features of the 12U and 18U racks include:

- 1200mm deep design to support a wide range of rack-mount servers
- Servers and other rack devices are mounted horizontally
- Can be shipped fully loaded
- Casters to easily roll the rack cabinet for ease of installation
- Supports the ability for the cabinet to be crane lifted if needed
- Lockable, removable and reversible front and rear doors
- Lockable side panels
- Adjustable leveling pads to ensure stability and prevent rolling on casters
- Supports ThinkSystem tool-less slide rails, screw-in slide rails, and friction rails
- Rear cable flanges
- Side vertical mounting flanges
- Cable access holes on the top of the rack, both front and rear, for cable management
- Compliance with the EIA-310-D industry standard for 19-inch, type A rack cabinets

The following figure shows the external features of the rack cabinets.

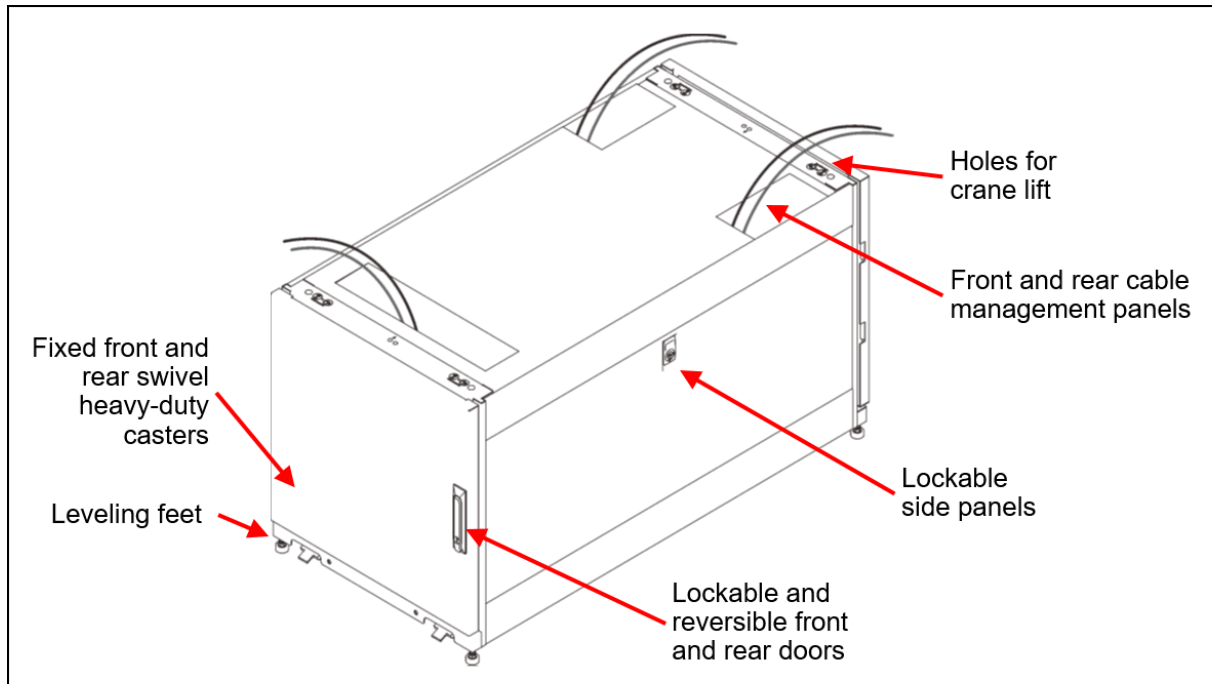


Figure 2. Features of the 12U and 18U rack cabinets

The following table compares the power specifications of the racks.

Table 2. Specifications

Description	12U 1200mm Deep Micro Datacenter Rack	18U 1200mm Deep Micro Datacenter Rack
Machine type	7D2B (1 year) 7D2N (3 year)	7D2C (1 year) 7D2P (3 year)
Height in rack units	12U	18U
Can be shipped with servers installed	Yes	Yes
Removable lockable side panels	Yes	Yes
0U PDU tool-less mounting points	None	None
1U side-wall compartments (pockets)	None	None
External height	658 mm (25.9 in)	966 mm (38.0 in)
External depth	1200 mm (47.2 in)	1200 mm (47.2 in)
External width	600 mm (23.6 in)	603 mm (23.7 in)
Internal depth	1027 mm (40.4 in)	1023 mm (40.3 in)
Rack weight (empty)	61 kg (135 lb)	107 kg (236 lb)
Static load capacity	340 kg (750 lb)	510 kg (1125 lb)
Dynamic load capacity	340 kg (750 lb)	510 kg (1125 lb)

Server support

The following table summarizes the ThinkSystem server support for the 12U and 18U rack cabinets. The numbers listed in the server columns represent the number of servers that can be installed in each rack cabinet.

Note: The top 1U of the rack cabinets cannot be used for servers due to limitations of the supported rail kits. The top 1U can be used for other components besides servers, if desired.

Table 3. ThinkSystem server support (number of servers supported)

	E	1S Intel				2S Intel						AMD			4S Intel			Dense/ Blade							
	SE350 (7Z46/7D1X)	ST50 (7Y48/7Y50)	ST250 (7Y45/7Y46)	SR150 (7Y54)	SR250 (7Y51/7Y52)	ST550 (7X09/7X10)	SR530 (7X07/7X08)	SR550 (7X03/7X04)	SR570 (7Y02/7Y03)	SR590 (7X98/7X99)	SR630 (7X01/7X02)	SR650 (7X05/7X06)	SR670 (7Y36/37/38)	SR635 (7Y98/7Y99)	SR655 (7Y00/7Z01)	SR645 (7D2Y/7D2X)	SR665 (7D2W/7D2V)	SR850 (7X18/7X19)	SR850P (7D2F/2D2G)	SR860 (7X69/7X70)	SR950 (7X11/12/13)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
Micro Datacenter rack																									
12U MDC Rack	11*	N	2	N	11	2	11	5	11	5	11	5	5	N	N	N	N	N	N	N	N	5†	N	N	N
18U MDC Rack	17*	N	3	N	17	3	17	8	17	8	17	8	8	N	N	N	N	N	N	N	N	8†	N	N	N

* The number represents the number of E1 Enclosures (1U) supported. Each E1 Enclosure holds two SE350 servers. Note: The E2 Enclosure (2U) is not supported.

† The number represents the number of D2 Enclosures (2U) supported. Each D2 Enclosure holds four SD530 servers.

Rail kit support is as follows:

- SE350:
 - E1 Enclosure with 1U and 2U Slide Rail, 4M17A11683
- ST250:
 - ThinkSystem ST50/ST250 4U Rack Mount Kit, 4M17A12785
- SR250:
 - ThinkSystem Tool-less Friction Rail v2, 4M17A13564
- ST550:
 - ThinkSystem ST550 4U Tower to Rack Conversion Kit, 7XH7A05901
- SR530, SR570, SR630:
 - ThinkSystem Tool-less Friction Rail, 4M17A07273
 - ThinkSystem Tool-less Slide Rail (without CMA), 7M27A05702
 - ThinkSystem Screw-in Slide Rail (without CMA), 4M17A07274
 - ThinkSystem Tool-less Slide Rail Kit with 1U CMA, 7M27A05701
 - ThinkSystem Screw-in Slide Rail Kit with 1U CMA, 4M17A07281
 - ThinkSystem 1U CMA Upgrade Kit for Tool-less Slide Rail, 7M27A05699
 - ThinkSystem 1U CMA Upgrade Kit for Screw-in Slide Rail, 4M17A07276

- SR550, SR590, SR650:
 - ThinkSystem Tool-less Friction Rail, 4M17A07273
 - ThinkSystem Tool-less Slide Rail (without CMA), 7M27A05702
 - ThinkSystem Screw-in Slide Rail (without CMA), 4M17A07274
 - ThinkSystem Tool-less Slide Rail Kit with 2U CMA, 7M27A05700
 - ThinkSystem Screw-in Slide Rail Kit with 2U CMA, 4M17A07280
 - ThinkSystem 2U CMA Upgrade Kit for Tool-less Slide Rail, 7M27A05698
 - ThinkSystem 2U CMA Upgrade Kit for Screw-in Slide Rail, 4M17A07275
- SR670:
 - ThinkSystem SR670 Slide Rail, feature B47V
- SD530:
 - ThinkSystem D2 Slide Rail, feature AUYC
 - ThinkSystem D2 CMA, feature AUJD

KVM switch support

The following KVM console switch is supported:

- Global Console Manager GCM16, 1754D1X

The following KVM console is supported:

- 1U 18.5" Standard Console, 17238BX
 - Supported in the 18U rack cabinet only below the 9U position in the rack (that is, positions U1-U9)
 - Not supported in the 12U rack

PDU support

The following power distribution units (PDUs) are supported in the 12U and 18U racks for North America, Mexico, Saudi Arabia, Japan, Philippines, and Brazil markets

- Basic PDUs:
 - DPI Universal, 00YE443
 - DPI NEMA, 39Y8905
 - DPI Front End, 39Y8938, 39Y8939
 - DPI Enterprise C13, 39Y8941
 - DPI Enterprise C19, 39Y8948, 39Y8923
- Monitored PDUs:
 - DPI Enterprise PDU+ C13, 39M2816, 44X3193

The following PDUs are supported in the 12U and 18U racks for all other markets:

- Basic PDUs:
 - DPI Universal, 00YE443
 - DPI Front End, 39Y8934, 39Y8935, 39Y8936, 39Y8937
 - DPI Enterprise C13, 39Y8941
 - DPI Enterprise C19, 39Y8948, 39Y8923
- Monitored PDUs:
 - DPI Enterprise PDU+ C13, 39M2816

UPS support

The following UPS units are supported in the 12U and 18U rack cabinets:

- Lenovo UPS units
 - Lenovo RT1.5kVA (2U) 55941AX, 55941KX
 - Lenovo RT2.2kVA (2U) 55942AX, 55942KX
 - Lenovo RT3kVA (2U) 5943AX, 55943KX
 - Lenovo RT5kVA (3U) 55945KX
 - Lenovo RT6kVA (3U) 55946KX
 - Lenovo RT8kVA (6U) 55948KX (Not supported in the 18U rack)
- Lenovo Extended Battery Modules:
 - 1.5kVA/2.2kVA (2U) 55942BX
 - 3kVA (2U) 55943BX
 - 5kVA/6kVA (3U) 55946BX
- Eaton branded UPS unit:
 - Eaton UPS 1.5kVA (1U) 5P1550GR-L

Door Monitoring System

The NetBotz Rack Monitor 250 environmental monitoring and control system is supported in the Micro Datacenter racks as a door monitoring solution. Lenovo resells this offering.



Figure 3. APC NetBotz Rack Monitor 250 appliance

The APC by Schneider Electric NetBotz Rack Monitor 250 is a rack-mountable central hardware appliance for an environmental monitoring and control system. With the NetBotz 250, you can monitor and control your system using the Web User Interface (Web UI) or Command Line Interface (CLI).

The Rack Monitor 250 includes six ports for connecting temperature and humidity sensors, and other sensors including fluid detection sensors and third-party dry contact sensors. Using other ports on the Rack Monitor 250, you can connect two door switch sensors, two rack door handles, a beacon, and temperature and humidity sensors with digital display.

The offerings being sold through Lenovo include:

- NetBotz 250 Appliance (NBRK0250)
- Door Switch Sensors (NBES0303) – Universal sensor that can help detect access to the rack by unauthorized personnel
- Lock Sensors (NBHN125) – Door-mountable card reader access device that enables remote and local access control to your rack

Details about the appliance can be found at this web page:

<https://www.apc.com/shop/us/en/products/NetBotz-Rack-Monitor-250/P-NBRK0250>

Warranty

The 12U and 18U 1200mm Deep Micro Datacenter Racks have a 1-year or 3-year warranty depending on the machine type:

- 12U 1200mm Deep Micro Datacenter Rack:
 - 7D2B: 1 year
 - 7D2N: 3 year
- 18U 1200mm Deep Micro Datacenter Rack:
 - 7D2C: 1 year
 - 7D2P: 3 year

Agency approvals

The Micro Datacenter rack cabinets comply with the following:

- IEC 60950-1
- UL 2416/UL 60950-1
- CAN/CSA-C22.2 NO. 60950-1
- EIA-310D 19" rack

Related publications

For more information, refer to the following documents:

- Lenovo Press Rack Cabinet Reference:
<https://lenovopress.com/lp1287-lenovo-rack-cabinet-reference>
- Product publications for the 12U and 18U Micro Datacenter racks:
https://thinksystem.lenovofiles.com/help/topic/mdc_rackcabinet/ic_introduction.html?cp=6_0
 - Unpacking Instructions
 - User Guide
- Lenovo Press publications on PDUs
<https://lenovopress.com/servers/options/pdu>
- Lenovo Press publications on UPS units
<https://lenovopress.com/servers/options/ups>

Related product families

Product families related to this document are the following:

- [Rack Cabinets](#)

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