

# 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.

## Models

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

Table 1. Ordering part numbers and feature codes

Description	CTO base models		Base feature
	1 year warranty	3 year warranty	
12U 1200mm Deep Micro Datacenter Rack	7D2BCTO1WW	7D2NCTO1WW	B98D
18U 1200mm Deep Micro Datacenter Rack	7D2CCTO1WW	7D2PCTO1WW	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.

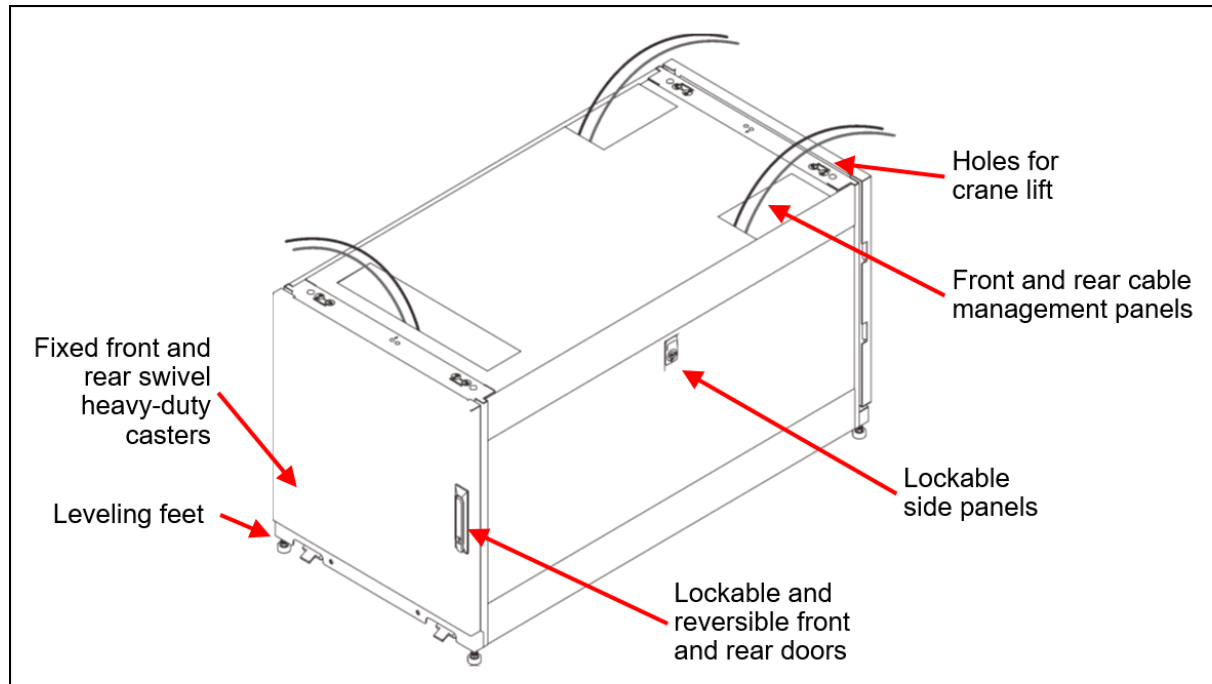


Figure 2. Features of the 12U and 18U rack cabinets

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 can only be used with servers where the server is mounted in the rail kit by sliding the server in horizontally into the rack cabinet. Due to the lack of clearance at the front of the rack cabinet, servers are not supported when their rail kit involves lowering (“dropping in”) the server into the rail kit from above. The top 1U can be used for other components besides servers with drop-in rail kits, if desired.

Table 3. Server support (Part 1 of 4)

Part Number	Description	2S AMD V3				2S Intel V3		4S 8S Intel V3		Multi Node		GPU Rich			1S V3					
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR685a V3 (7DHC)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)
7D2N	12U 1200mm Deep Micro Datacenter Rack	11	5	11	5	2	11	5	5	2	N	N	N	N	N	3	1	1	2	11
7D2P	18U 1200mm Deep Micro Datacenter Rack	17	8	17	8	3	17	8	8	3	N	N	N	N	N	5	2	2	3	17

Table 4. Server support (Part 2 of 4)

Part Number	Description	Edge					Super Computing					1S Intel V2		2S Intel V2			
		SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)	SR650 V2 (7Z72 / 7Z73)
7D2N	12U 1200mm Deep Micro Datacenter Rack	11 <sup>1</sup>	11 <sup>1</sup>	N	N	N	N	N	N	N	N	N	2	11	N	N	N
7D2P	18U 1200mm Deep Micro Datacenter Rack	17 <sup>1</sup>	17 <sup>1</sup>	N	N	N	N	N	N	N	N	N	3	17	N	N	N

- The number represents the quantity of E1 Enclosures (1U) supported. Each E1 Enclosure holds two SE350/SE350 V2 servers. Note: The E2 Enclosure (2U) is not supported.

Table 5. Server support (Part 3 of 4)

Part Number	Description	AMD V1					Dense V2				4S V2	8S	4S V1		1S Intel V1						
		SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR655 Client OS		SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)	SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)
7D2N	12U 1200mm Deep Micro Datacenter Rack	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2	N	11
7D2P	18U 1200mm Deep Micro Datacenter Rack	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3	N	17

Table 6. Server support (Part 4 of 4)

Part Number	Description	2S Intel V1								Dense V1			
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
7D2N	12U 1200mm Deep Micro Datacenter Rack	2	11	5	11	5	11	5	5	5 <sup>1</sup>	N	N	N
7D2P	18U 1200mm Deep Micro Datacenter Rack	3	17	8	17	8	17	8	8	8 <sup>1</sup>	N	N	N

1. The number represents the quantity 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 and ST250 V2:
  - ThinkSystem ST50/ST250 4U Rack Mount Kit, 4M17A12785
- SR250 and SR250 V2:
  - 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 AUVD

## **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) 55943AX, 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](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  
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## Related product families

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- [Rack Cabinets](#)

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