ThinkCentre M90s 11D1002HUS

Product
ThinkCentre M90s

Region
NA

Country/Region
USA

Machine Type
11D1

TopSeller
TopSeller

Processor
Intel Core i7-10700 (8C / 16T, 2.9 / 4.8GHz, 16MB)

Chipset
Intel Q470 Chipset

Graphics
Integrated Intel UHD Graphics 630

Memory
1x 16GB UDIMM DDR4-2933

Storage
1x 512GB SSD M.2 2280 PCIe 3.0x4 NVMe Opal

Optane Memory
None

Optional Bay
Optional 2.5" bay

Front Access HDD
None

Optical
DVD±RW

Card Reader
3-in-1 Card Reader

Speakers
1Wx1

Ethernet
Integrated 100/1000M

WLAN + Bluetooth
None

Optional Rear Ports
1x DP

Chassis Intrusion Switch
None

Chassis E-Lock
None

Kensington Cable Lock
None

Smart Cable Clip
None

Dust Filter
None

Carry Handle
None

Case Color
Black

Stand
Stand

Keyboard
USB Traditional Keyboard, Black, English

Mouse
USB Calliope Mouse, Black

Power Supply
380W 92%

Additional Certificates
ENERGY STAR 8.0, EPEAT Silver

Monitor Cable
None

System Management
Intel vPro, DASH

Operating System
Windows 10 Pro 64, English

Bundled Software
None

Base Warranty
3-year, Onsite

Bundled Service
3Y Premier Support Upgrade from 3Y Onsite (5WS0V07841)

EAN / UPC / JAN
195235721995

End of Support
2027-01-02

Announce Date
2020-10-15

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PSREF **https://psref.lenovo.com**
Visit psref website for the latest version of Product specifications Reference.

Processor | Intel® Celeron®, Intel Pentium®, or 10th Gen Intel Core™ i3 / i5 / i7 / i9 Processor

Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics
Celeron G5900	2 / 2	3.4G	2 MB	DDR4-2666	UHD 610
Celeron G5920	2 / 2	3.5G	2 MB	DDR4-2666	UHD 610
Pentium Gold G6400	2 / 4	4.0G	4 MB	DDR4-2666	UHD 610
Pentium Gold G6500	2 / 4	4.1G	4 MB	DDR4-2666	UHD 630
Pentium Gold G6600	2 / 4	4.2G	4 MB	DDR4-2666	UHD 630
Core i3-10100	4 / 8	3.6G / 4.3G	6 MB	DDR4-2666	UHD 630
Core i3-10300	4 / 8	3.7G / 4.4G	8 MB	DDR4-2666	UHD 630
Core i3-10320	4 / 8	3.8G / 4.6G	8 MB	DDR4-2666	UHD 630
Core i5-10400F	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	None
Core i5-10400	6 / 12	2.9G / 4.3G	12 MB	DDR4-2666	UHD 630
Core i5-10500	6 / 12	3.1G / 4.5G	12 MB	DDR4-2666	UHD 630
Core i5-10600	6 / 12	3.3G / 4.8G	12 MB	DDR4-2666	UHD 630
Core i7-10700F	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	None
Core i7-10700	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630
Core i9-10900F	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	None
Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630

* Max freguency may refer to Intel Turbo Boost Technology 2.0 / Intel Turbo Boost Max Technology 3.0 / Intel Thermal Velocity Boost, and adopt the max one of them

Memory | 128GB max, DDR4-2666 / DDR4-2933*, four 288-pin DIMM sockets, dual-channel capable
* Memory module is DDR4-2933, but clocks down for the limitation of processors

Storage | Support up to 3x HDD ([2.5" + dual 3.5"] or [dual 2.5" + 3.5"]) and up to 2x M2.SSD, RAID 0/1 support (RAID preset only available via special bid)
Some: Hard Drive / SATA 6.0Gb/s, 2.5" or 3.5", 7200 rpm
Some: M.2 SSD (2242 / 2280) / PCIe NVMe, PCIe 3.0 x2 or PCIe 3.0 x4
Some: Intel Optane™ Memory M10, M.2 2280, PCIe 3.0 x2

Optical | *Some:* DVD-ROM, SATA 1.5Gb/s Drive, slim (9.0mm)
Some: DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm)

Onboard SATA | Four onboard SATA 6.0Gb/s connectors

Media reader | Optional 3-in-1 media reader (support SD, SDHC, and SDXC)

Graphics | **Intel UHD Graphics 610/630** in some processors, uses main memory, DirectX® 12, two DisplayPort™, one optional video port (choose one from HDMI / DP / Type-C), supports up to 3 independent displays, more displays support via discrete graphics
Max resolution: 4096×2304 (DP / Type-C)@60Hz; 4096x2160 (HDMI)@24Hz
Some: **AMD Radeon™ 520**, DirectX 12, 2GB GDDR5, PCIe 3.0 x8, 30 watts, two DisplayPort (up to 4096x2160@60Hz)

Monitor cable | Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle (for Collage Display with intel integrated graphics), or DP to HDMI 1.4 dongle

Chipset | **Intel Q470 Chipset**

Front ports* (Std.) | 2x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, 1x USB 3.2 Type-C Gen 1 (15W charging), 1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm)

Front ports* (Opt.) | *Optional:* 3-iin-1 media reader

Rear ports* (Std.) | 4x USB 3.2 Gen 1, 1x serial (9-pin), 1x ethernet (RJ-45), 2x DisplayPort**, 1x line-out (3.5mm)

Rear ports* (Opt.) | *Optional:* 1x optional video port** (choose one from HDMI / DP / USB 3.2 Type-C Gen 1 with DP function), 2x USB 2.0, 2x USB 3.2 Gen 1 via PCIe x1, 2x USB 3.2 Type-C Gen 2 via PCIe x4, 1x 2nd serial (9-pin), 4x serial (9-pin) via PCIe x1, 1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), additional RJ-45 and video ports available on optional graphics or ethernet card
* Depending on many factors, actual data transfer speed may be lower than theoretical speed
** Only available for the models with integrated graphics

Audio support | High Definition (HD) Audio, Realtek ALC623-CG / internal speaker (1 watt)

WLAN | *Some:* 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
Some: 11ax wireless, M.2 Card, Intel Wi-Fi 6 AX201 (dual band), Wi-Fi + Bluetooth 5.1 combo adapter, Intel vPro technology support, 2x2

Bluetooth | *Some:* Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter

Ethernet
Ethernet (Opt.) | Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®
Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1

Manageability | Intel Active Management Technology 14 (Intel AMT 14); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection)

Security chip | Discrete TPM 2.0, TCG Certified

Security features | ● Security slot (for Kensington® lock)
● Padlock loop
● Optional Smart Cable Clip to physically lock keyboard and mouse
● Optional chassis intrusion switch
● Optional chassis E-Lock
● Power-on password
● Administrator password
● Hard disk password
● Boot sequence control
● Boot without keyboard and mouse
● Individual USB port disablement
● Smart USB protection, allows keyboard/ mouse only, blocks all storage devices
● Self-Healing BIOS

Keyboard | *Some:* Lenovo Calliope Keyboard (USB connector), black
Some: Lenovo Traditional Keyboard (USB connector), black
Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black

Mouse | *Some:* Lenovo Calliope Mouse (USB connector), black
Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black

Mechanical | ● SFF (8.2L), black color, metal case
● Dimensins with bezel & PCI holder & rubber foot:
  (WxDxH) 3.6" X 11.7" X 13.4"; 93mm X 298mm X 340mm
● Weight (approx.): 11.7 lb (5.3 kg), weight may vary by configuration
Bay 1: Slim ODD bay
Bay 2: 3.5" HDD bay
Bay 3: 2.5" HDD bay (optional bay, or bay comes with disk)
Slot 1: low-profile (length < 155mm, height < 68mm), PCIe 3.0 x16
Slot 2: low-profile (length < 155mm, height < 68mm), PCIe 3.0 x1
Slot 3: low-profile (length < 155mm, height < 68mm), PCIe 3.0 x4
Slot 4: no slot, only bracket for optional port extension
M.2 card slots: three (one for WLAN, two for SSD/Optane)

Floor Stand | Optional system floor stand for vertical orientation

EOU design | Toolless cover, disk, optical, extension card removal

Power supply | *Some:* 180 watts, autosensing, 85% PSU
Some: 260 watts, autosensing, 85% PSU
Some: 310 watts, autosensing, 92% PSU
Some: 380 watts, autosensing, 92% PSU
* Discrete graphics card / 10-core processors need > 180w power supply

Limited warranty | **1-year** or **3-year**, **limited onsite service** / service upgrades available

Preload | *Some:* Windows® 10 Pro 64-bit
Some: Windows 10 Home 64-bit
Some: Windows 10 IoT Enterprise (only available via special bid model)

Environment | ENERGY STAR® 8.0*, EPEAT™ Gold / Silver rating (on some models), ErP Lot 3, TCO 8.0, TUV low noise / ultra low noise verified (on some models), RoHS
* Only available for MT 11D1/11D2

Accessories | For compatible accessories, please go to **http://smartfind.lenovo.com**

Note: The specifications above may not be available in all regions.

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