

ThinkCentre M90t Platform Specifications

Product Specifications Reference (PSREF)

Processor	Intel® Celeron®, Intel Pentium®, or 10th Gen Intel Core™ i3 / i5 / i7 / i9 Processor	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																																																																																																						
	<table border="1"> <thead> <tr> <th>Processor</th> <th>Cores / Threads</th> <th>Frequency Base/Max(GHz)</th> <th>Cache</th> <th>Memory Support (Up to)</th> <th>Integrated Graphics</th> </tr> </thead> <tbody> <tr> <td>Celeron G5900</td> <td>2 / 2</td> <td>3.4G</td> <td>2 MB</td> <td>DDR4-2666</td> <td>UHD 610</td> </tr> <tr> <td>Celeron G5920</td> <td>2 / 2</td> <td>3.5G</td> <td>2 MB</td> <td>DDR4-2666</td> <td>UHD 610</td> </tr> <tr> <td>Pentium Gold G6400</td> <td>2 / 4</td> <td>4.0G</td> <td>4 MB</td> <td>DDR4-2666</td> <td>UHD 610</td> </tr> <tr> <td>Pentium Gold G6500</td> <td>2 / 4</td> <td>4.1G</td> <td>4 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Pentium Gold G6600</td> <td>2 / 4</td> <td>4.2G</td> <td>4 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i3-10100</td> <td>4 / 8</td> <td>3.6G / 4.3G</td> <td>6 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i3-10300</td> <td>4 / 8</td> <td>3.7G / 4.4G</td> <td>8 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i3-10320</td> <td>4 / 8</td> <td>3.8G / 4.6G</td> <td>8 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i5-10400F</td> <td>6 / 12</td> <td>2.9G / 4.3G</td> <td>12 MB</td> <td>DDR4-2666</td> <td>None</td> </tr> <tr> <td>Core i5-10400</td> <td>6 / 12</td> <td>2.9G / 4.3G</td> <td>12 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i5-10500</td> <td>6 / 12</td> <td>3.1G / 4.5G</td> <td>12 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i5-10600</td> <td>6 / 12</td> <td>3.3G / 4.8G</td> <td>12 MB</td> <td>DDR4-2666</td> <td>UHD 630</td> </tr> <tr> <td>Core i7-10700F</td> <td>8 / 16</td> <td>2.9G / 4.8G</td> <td>16 MB</td> <td>DDR4-2933</td> <td>None</td> </tr> <tr> <td>Core i7-10700</td> <td>8 / 16</td> <td>2.9G / 4.8G</td> <td>16 MB</td> <td>DDR4-2933</td> <td>UHD 630</td> </tr> <tr> <td>Core i9-10900F</td> <td>10 / 20</td> <td>2.8G / 5.2G</td> <td>20 MB</td> <td>DDR4-2933</td> <td>None</td> </tr> <tr> <td>Core i9-10900</td> <td>10 / 20</td> <td>2.8G / 5.2G</td> <td>20 MB</td> <td>DDR4-2933</td> <td>UHD 630</td> </tr> </tbody> </table>	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	
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Memory	128GB max, DDR4-3200*, four 288-pin DIMM sockets, dual-channel capable * System automatically clocks down for the processors with lower memory controller																																																																																																							
Storage	Support up to 3x HDD ([2.5" + dual 3.5"] or [dual 2.5" + 3.5"]) and up to 2x M.2.SSD, RAID 0/1 support (RAID preset only available via special bid) <i>Some:</i> Hard Drive / SATA 6.0Gb/s, 2.5" or 3.5", 7200 rpm <i>Some:</i> M.2 SSD (2242 / 2280) / PCIe NVMe, PCIe 3.0 x2 or PCIe 3.0 x4 <i>Some:</i> Intel Optane™ Memory M10, M.2 2280, PCIe 3.0 x2 <i>Some:</i> DVD-ROM, SATA 1.5Gb/s Drive, slim (9.0mm) <i>Some:</i> DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm)																																																																																																							
Optical	Four onboard SATA 6.0Gb/s connectors Optional 3-in-1 media reader (support SD, SDHC, and SDXC)																																																																																																							
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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: 4096x2304 (DP / Type-C)@60Hz; 4096x2160 (HDMI)@24Hz <i>Some:</i> AMD Radeon™ 520 , DirectX 12, 2GB GDDR5, PCIe 3.0 x8, 30 watts, two DisplayPort (up to 4096x2160@60Hz) <i>Some:</i> AMD Radeon RX 550X , DirectX 12, 4GB GDDR5, PCIe 3.0 x8, 50 watts, one DisplayPort (up to 3840x2160@60Hz), one HDMI (up to 4096x2160@60Hz), one VGA (up to 2048*1536@85Hz), occupies two slots <i>Some:</i> NVIDIA Geforce GTX 1660 SUPER , DirectX 12, 6GB GDDR6, PCIe 3.0 x16, 125 watts, 1x DVI-D (up to 2560x1600@60Hz), 1x HDMI (up to 4096x2160@60Hz), 1x DP (up to 7680x4320@60Hz with DSC), occupies two slots <i>Some:</i> NVIDIA Geforce RTX 2060 , DirectX 12, 6GB GDDR6, PCIe 3.0 x16, 170 watts, three DisplayPort (up to 7680x4320@60Hz with DSC), one HDMI (up to 4096x2160@60Hz), occupies two slots																																																																																																							
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.)	<i>Optional:</i> 3-in-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.)	<i>Optional:</i> 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,																																																																																																							
Audio support	High Definition (HD) Audio, Realtek ALC623-CG / internal speaker (2 watt)																																																																																																							
WLAN	<i>Some:</i> 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 <i>Some:</i> 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 <i>Some:</i> 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™ Ethernet (Opt.)	<i>Some:</i> Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter <i>Some:</i> Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4 <i>Some:</i> 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	<ul style="list-style-type: none"> 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 Self-Healing BIOS <ul style="list-style-type: none"> 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 																																																																																																							
Keyboard	<i>Some:</i> Lenovo Calliope Keyboard (USB connector), black <i>Some:</i> Lenovo Traditional Keyboard (USB connector), black <i>Some:</i> Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black																																																																																																							
Mouse	<i>Some:</i> Lenovo Calliope Mouse (USB connector), black <i>Some:</i> Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black <i>Some:</i> Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black																																																																																																							
Mechanical	<ul style="list-style-type: none"> Tower (17L), black color, metal case Dimensions with bezel & PCI holder & rubber foot: (WxDxH) 6.7" X 11.7" X 14.8"; 170mm X 298mm X 376mm Weight (approx.): 14.33 lb (6.5 kg), weight may vary by configuration 																																																																																																							
Bays	Bay 1: Slim ODD bay Bay 2: 3.5" HDD bay Bay 3: 3.5" HDD bay (optional bay, or bay comes with disk)																																																																																																							
Slots	Bay 4: 2.5" HDD (bay comes with 2.5" disk) Slot 1: full-height (length < 245mm), PCIe 3.0 x16 Slot 2: full-height (length < 245mm), PCIe 3.0 x1 Slot 3: full-height (length < 245mm), 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)																																																																																																							
EOU design	Toolless cover, disk, optical, extension card removal																																																																																																							
Power supply	<i>Some:</i> 180 watts, autosensing, 85% PSU <i>Some:</i> 300 watts, autosensing, 85% PSU <i>Some:</i> 300 watts, autosensing, 90% PSU <i>Some:</i> 500 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	<i>Some:</i> Windows® 10 Pro 64-bit <i>Some:</i> Windows 10 Home 64-bit <i>Some:</i> 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 verified (on some models), RoHS * Only available for MT 11D0/11CY																																																																																																							
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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