

# ThinkCentre M90a Platform Specifications

Product Specifications Reference (PSREF)

Processor	Intel® Celeron®, Intel Pentium®, or 10th Gen Intel Core™ i3 / i5 / i7 / i9 Processor						Bluetooth™ Ethernet	Some: Bluetooth 5.0/5.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®																																																																																						
	<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 i5-10400</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 i7-10700</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 i9-10900</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 i5-10400	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 i7-10700	8 / 16	2.9G / 4.8G	16 MB	DDR4-2933	UHD 630	Core i9-10900	10 / 20	2.8G / 5.2G	20 MB	DDR4-2933	UHD 630	Manageability	Intel Active Management Technology 14.0 (Intel AMT 14.0); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection)		
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						Security chip	Discrete TPM 2.0, TCG Certified																																																																																							
						Security features	<ul style="list-style-type: none"> <li>• Security slot (for Kensington® lock)</li> <li>• Optional Chassis intrusion switch</li> <li>• Self-Healing BIOS</li> <li>• Optional PrivacyGuard screen</li> <li>• Power-on, admin, hard disk password</li> </ul> <ul style="list-style-type: none"> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> <li>• Smart USB protection, allows keyboard/mouse only, blocks all storage devices</li> </ul>																																																																																							
						Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black																																																																																							
						Mouse																																																																																								
						Mechanical	<ul style="list-style-type: none"> <li>• Business black color</li> <li>• Toolless back cover, stand removal</li> <li>• Support VESA mount (100mm)</li> </ul>																																																																																							
Memory	64GB max (32GB SO-DIMM only available via special bid models), DDR4-3200*, two 260-pin SO-DIMM sockets, dual-channel capable * System automatically clocks down for the processors with lower memory controller						Privacy Gaurd	ODD	Dimensions (WxDxH)	Approx weight (lb / kg)																																																																																				
Storage	Support up to 2x 2.5" HDD (2nd HDD occupy ODD bay) and 1x M.2.SSD Some: Hard Drive / SATA 6.0Gb/s, 2.5", 5400 rpm or 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 Some: DVD-ROM SATA 1.5Gb/s Drive, slim (9.0mm) Some: DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm) Optional 3-in-1 media card reader								Without stand (with camera):																																																																																					
Optical									21.3" x 1.8" x 13.4" / 541 x 46 x 340.5 (mm)	11.6 / 5.25																																																																																				
Media reader									21.3" x 2.3" x 13.4" / 541 x 57.8 x 340.5 (mm)	12.3 / 5.57																																																																																				
Graphics	Some: Intel HD Graphics 610/630 in processor, uses main memory, DirectX® 12, Some: AMD Radeon™ 625, 2GB GDDR5, DirectX® 12, external monitor support via DisplayPort™(up to 4096x2304@60Hz)								21.3" x 1.9" x 13.4" / 541 x 49.5 x 340.5 (mm)	13.5 / 6.13																																																																																				
Monitor Cable	Optional DP to VGA dongle, DP to DVI-D dongle, DP to 2 DP dongle (MST mode), or DP to HDMI 1.4 dongle								21.3" x 2.4" x 13.4" / 541 x 61.3 x 340.5 (mm)	14.2 / 6.45																																																																																				
Display	23.8" (604.5mm) Full HD 1080p (1920x1080), In-Plane Switching technology (may refer to IPS, PLS, ADS, AHVA, AAS), wide viewing angle (H/V 178°), LED back-light, 250 nits (350 nits for the models with PrivacyGaurd), 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, borderless design (88% Screen to Body Ratio), optional PrivacyGaurd								With Full Function Monitor stand (with camera):																																																																																					
Multi-touch	Optional multi-touch, supports 10-point, AIT (Advanced In-cell Touch) technology								21.3" x 7.9" x 16.3" to 19.5" / 541 x 200 x 414.2 to 494.2 (mm)	16.6 / 7.51																																																																																				
Camera	Some: 1080p camera with dual microphone, ThinkShutter (physical switch on/off) Some: RGBIR camera with dual microphone, support 1080p, ThinkShutter (physical switch on/off), support Windows Hello									17.3 / 7.84																																																																																				
Controls	Microphone mute and power on/off buttons on side, PrivacyGaurd on/off botton on bottom (only for the models with PrivacyGaurd)									18.5 / 8.39																																																																																				
Chipset	Intel Q470 Chipset									19.2 / 8.71																																																																																				
Rear ports*	4x USB 3.2 Gen 1 (one supports Smart Power On), 1x ethernet (RJ-45), 1x DisplayPort, 1x optional serial (9-pin),						Stand		With UltraFlex IV stand (with camera):																																																																																					
Side ports*	2x USB 3.2 Gen 2, 1x USB 3.2 Type-C Gen 1(5V/3A charging), 1x optional card reader, 1x headphone / microphone combo jack (3.5mm)								Lowest in flat mode:																																																																																					
M.2 card slot	Two M.2 Card slots (one for WLAN, one for SSD/Optane) * Depending on many factors, actual data transfer speed may be lower than theoretical speed								21.3" x 12.3" x 9.0" / 541 x 312.8 x 227.4 (mm)	18.2 / 8.26																																																																																				
Audio support	High Definition (HD) Audio, Realtek ALC233 / two internal speakers (3W x 2), Dolby® Atmos® certified								Highest in vertical mode:																																																																																					
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								21.3" x 9.2" x 18.4" / 541 x 232.7 x 467.7 (mm)	18.9 / 8.58																																																																																				
									Lowest in flat mode:																																																																																					
									21.3" x 12.3" x 9.1" / 541 x 312.8 x 230.5 (mm)	20.1 / 9.14																																																																																				
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									21.3" x 9.2" x 18.4" / 541 x 232.7 x 467.7 (mm)	20.9 / 9.46																																																																																				
									Note: Camera adds 14.5mm in height (Vertical mode)																																																																																					
									Some: Full Function Monitor stand, Tilt: 30° back, -5° forward; Lift: 80mm Some: UltraFlex IV stand, Tilt: 70° back, -5° forward; Lift: up to 115mm (vertical mode) / 164mm (flat mode)																																																																																					
							Power supply	Some: 150 watts, autosensing, 89% PSU Some: 170 watts, autosensing, 89% PSU																																																																																						
							Limited warranty <sup>3</sup>	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™ Silver rating*, ErP Lot 3, TCO 8.0, TCO Edge, TUV Eye comfort certified, TUV Low Blue Light certified, TUV Ultra Low Noise certified (on some models), RoHS-compliant * Only available for MT 11CD/11CE																																																																																						
							MIL-SPEC test	MIL-STD-810H military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)																																																																																						
							Accessories	For compatible accessories, please go to <a href="http://smartfind.lenovo.com">http://smartfind.lenovo.com</a>																																																																																						

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

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