

# ThinkPad E540 Platform Specifications

Product Specifications Reference (PSREF)

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> <b>Intel® Pentium® 3550M processor (2 cores, 2.30GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1600MHz) <b>Intel Pentium 3560M processor (2 cores, 2.40GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1600MHz) <b>Intel Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600,</b> DDR3 memory controller (up to 1600MHz), HT technology <b>Intel Core i3-4100M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600,</b> DDR3 memory controller (up to 1600MHz), HT technology <b>Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-4210M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4600,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-4300M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4600,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600,</b> DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i7-4712MQ processor (4 cores, 2.30GHz, 6MB cache), Intel HD Graphics 4600,</b> DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> - <i>Some:</i> No operating system - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit - <i>Some:</i> Windows 8.1 64-bit - <i>Some:</i> Windows 8.1 Pro 64-bit  <b>Preloaded applications</b> (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	<i>Some:</i> <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , anti-glare, 10-point touch screen LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , anti-glare, 10-point touch screen LED backlight, 300 nits, 16:9 aspect ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	<b>Intel HD Graphics 4600</b> in processor or <b>NVIDIA® Optimus™ technology</b> , auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and <b>NVIDIA GeForce® 710M</b> , PCI Express® x 8, <b>1GB</b> memory, DirectX® 11.1, or <b>NVIDIA GeForce® GT740M</b> , PCI Express® x 8, <b>2GB</b> memory, DirectX® 11.1, NVIDIA PureVideo® HD technology, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint pointing device, Internet Scroll Bar <sup>13</sup> UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None	
Dimensions <sup>3</sup>	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm	
Weight <sup>2</sup>	<i>6-cell:</i> from 5.4 lb (2.46kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type <sup>37</sup>	Lithium Ion 6-cell	
Battery - life <sup>10</sup>	<i>6-cell (48Whr):</i> up to 6.2 hr <i>6-cell (62Whr):</i> up to 7.4 hr	
Chipset	<b>Mobile Intel HM87 Express Chipset</b>	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN <sup>4</sup>	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth, 2x2 <i>Some:</i> 11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth, 2x2	
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	<i>Some:</i> Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 Card	
SIM card	<i>Some:</i> User selectable, contract required with service provider	
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	Supports ThinkVantage® technologies
Security	Trusted Platform Module, TCG 1.2-compliant	65-watt/90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant RoHS-compliant
Security chip	Trusted Platform Module, TCG 1.2-compliant	International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Fingerprint reader	<i>Some:</i> Fingerprint reader on palm rest, swipe sensor	
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information