

# ThinkPad E540 Platform Specifications

Product Specifications Reference (PSREF)

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|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Positioning Processor                     | <i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i><br><b>Intel® Pentium® 3550M processor (2 cores, 2.30GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1600MHz)<br><b>Intel Pentium 3560M processor (2 cores, 2.40GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1600MHz)<br><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<br><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<br><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<br><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<br><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<br><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<br><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><br>- Some: No operating system<br>- Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit<br>- Some: Windows 8 Pro 64-bit<br>- Some: Windows 8.1 64-bit<br>- Some: Windows 8.1 Pro 64-bit<br><br><b>Preloaded applications</b> (only some listed)<br>• Lenovo Support<br>• Lenovo Companion<br>• Lenovo Cloud Storage<br>• ThinkVantage System Update<br>• Norton™ Internet Security (30 days of virus definitions)<br>• 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<br>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high<br>Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| M.2 SSD                                   | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Widescreen display                        | Some: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio<br>Some: <b>15.6"</b> (396mm) <b>FHD (1920x1080)</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio<br>Some: <b>15.6"</b> (396mm) <b>HD (1366x768)</b> , anti-glare, 10-point touch screen LED backlight, 200 nits, 16:9 aspect ratio<br>Some: <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<br>TrackPoint pointing device, Internet Scroll Bar <sup>13</sup><br>UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch<br>None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Dimensions <sup>3</sup>                   | 15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17";<br>377 x 250mm x 26.6-29.6mm<br>6-cell: from 5.4 lb (2.46kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Weight <sup>2</sup>                       | Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom<br>Acrylonitrile-Butadiene-Styrene (ABS) plastic<br>Lithium Ion 6-cell<br>6-cell (48Whr): up to 6.2 hr<br>6-cell (62Whr): up to 7.4 hr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Case color                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Case material                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Battery - type <sup>37</sup>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Battery - life <sup>10</sup>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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<br>external monitor (VGA DB-15, HDMI), ethernet (RJ-45)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| PCIe Mini Card                            | One PCI Express Half Mini Card slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| PCIe WLAN <sup>4</sup>                    | Some: 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth, 2x2<br>Some: 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                                  | Some: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 Card                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| SIM card                                  | Some: 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<br>Power-on password, hard disk password, supervisor password, security keyhole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security                                  | Trusted Platform Module, TCG 1.2-compliant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Security chip                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Fingerprint reader                        | Some: 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

| Model                | 20C600LF++                                   |
|----------------------|----------------------------------------------|
| Product              | E540                                         |
| Region               | WE                                           |
| Machine Type         | 20C6                                         |
| TopSeller            | TopSeller                                    |
| Processor            | i7-4712MQ (4C, 2.30 / 3.30GHz, 6MB, 1600MHz) |
| vPro                 | No                                           |
| Graphics             | NVIDIA GeForce GT740, 2GB Memory             |
| Chipset              | Intel HM87                                   |
| Memory               | 8GBx1                                        |
| Display              | 15.6" FHD (1920x1080)                        |
| Multi-touch          | No                                           |
| Color                | Red                                          |
| Storage              | 1TB 5400 rpm                                 |
| Optical              | DVD±RW                                       |
| WLAN &Bluetooth      | Intel 7260 b/g/n + BT4.0                     |
| WWAN / M.2 SSD       | 16GB                                         |
| SIM Card             | No                                           |
| Camera               | 720p                                         |
| Keyboard             | Numeric Keypad                               |
| Fingerprint Reader   | Fingerprint Reader                           |
| NFC                  | No                                           |
| Battery Cells        | 6-cell (62wh)                                |
| Power Adapter (watt) | 90W                                          |
| Preload              | Windows 8.1 64-bit                           |
| Base Warranty        | 1-year depot                                 |
| Global               | No                                           |
| Ann Date (mm/yy)     | 09/14                                        |



