# ThinkPad E540 Platform Specifications

*Product Specifications Reference (PSREF)*

| | |
|---|---|
| Positioning | *Sophisticated design with quality, durability and reliability for SMB customers; two spindles* |
| Processor | **Intel® Pentium® 3550M processor (2 cores, 2.30GHz, 2MB cache)**, **Intel HD Graphics**, DDR3 memory controller (up to 1600MHz)<br>**Intel Pentium 3560M processor (2 cores, 2.40GHz, 2MB cache)**, **Intel HD Graphics**, DDR3 memory controller (up to 1600MHz)<br>**Intel Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache)**, **Intel HD Graphics 4600**, DDR3 memory controller (up to 1600MHz), HT technology<br>**Intel Core i3-4100M processor (2 cores, 2.50GHz, 3MB cache)**, **Intel HD Graphics 4600**, DDR3 memory controller (up to 1600MHz), HT technology<br>**Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache)**, **Intel HD Graphics 4600**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology<br>**Intel Core i5-4210M processor (2 cores, 2.60GHz, 3MB cache)**, **Intel HD Graphics 4600**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology<br>**Intel Core i5-4300M processor (2 cores, 2.60GHz, 3MB cache)**, **Intel HD Graphics 4600**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology<br>**Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache)**, **Intel HD Graphics 4600**, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology<br>**Intel Core i7-4712MQ processor (4 cores, 2.30GHz, 6MB cache)**, **Intel HD Graphics 4600**, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology |
| Memory | 16GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets |
| Optical | DVD burner, 9.5mm high, fixed, not removable, tray-in |
| SATA disk | *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:* **15.6"** (396mm) **HD (1366x768)**, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio<br>*Some:* **15.6"** (396mm) **FHD (1920x1080)**, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio<br>*Some:* **15.6"** (396mm) **HD (1366x768)**, anti-glare, 10-point touch screen LED backlight, 200 nits, 16:9 aspect ratio<br>*Some:* **15.6"** (396mm) **FHD (1920x1080)**, 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 | **Intel HD Graphics 4600** in processor or<br>**NVIDIA® Optimus™ technology**, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and<br>**NVIDIA GeForce® 710M**, PCI Express® x 8, **1GB** memory, DirectX® 11.1, or<br>**NVIDIA GeForce® GT740M**, PCI Express® x 8, **2GB** memory, DirectX® 11.1,<br>NVIDIA PureVideo® HD technology,<br>external analog monitor support via VGA DB-15 connector and<br>digital monitor support via HDMI™ (supporting HDCP to output protected content);<br>supports dual independent display |
| Keyboard | 6-row, spill-resistant, multimedia Fn keys, numeric keypad |
| TrackPoint® | TrackPoint pointing device, Internet Scroll Bar[13] |
| Touchpad | UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch |
| ThinkLight™ | None |
| Dimensions[3] | 15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17";<br>377 x 250mm x 26.6-29.6mm |
| Weight[2] | *6-cell:* 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[37] | Lithium Ion 6-cell |
| Battery - life[10] | *6-cell (48Whr):* up to 6.2 hr *6-cell (62Whr):* up to 7.4 hr |
| Chipset | **Mobile Intel HM87 Express Chipset** |
| 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[4] | *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 |
| Security | Power-on password, hard disk password, supervisor password, security keyhole |
| Security chip | Trusted Platform Module, TCG 1.2-compliant |
| Fingerprint reader | *Some:* Fingerprint reader on palm rest, swipe sensor |
| Limited warranty[12] | **1-year** - depot repair service / service upgrades[22] available |

**Preloaded operating system**[20]
- *Some:* No operating system
- *Some:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
- *Some:* Windows 8 Pro 64-bit
- *Some:* Windows 8.1 64-bit
- *Some:* Windows 8.1 Pro 64-bit

**Preloaded applications** (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

Supports ThinkVantage® technologies

65-watt/90-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 6.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12]

See footnotes for more detailed information

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| Model | 20C600LL++ |
| --- | --- |
| 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 | Black |
| 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 DG Windows 7 Pro 64 |
| Base Warranty | 1-year depot |
| Global | No |
| Ann Date (mm/yy) | 09/14 |



















