

ThinkPad E431 Platform Specifications

Product Specifications Reference (PSREF)

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3130M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications¹⁴ (only some listed for Windows 8) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update
Memory	16GB max ⁷ / 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, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, 10-point touch screen LED backlight, 180 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA GeForce® 710M , PCI Express® x 8, 1GB 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; <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None	
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.54" x 9.41" x 1.17-1.29"; 344mm x 239mm x 29.7-32.7mm <i>6-cell:</i> from 5.36 lb (2.43kg) Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell <i>6-cell (48Whr):</i> up to 6.0 hr <i>6-cell (62Whr):</i> up to 7.6 hr	
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM77 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴	One PCI Express Half Mini Card slot <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	
M.2 Card M.2 WWAN Bluetooth™ Ethernet Audio support	One M.2 Card slot for support of SSD None Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card Realtek® RTL8111F Gigabit Network Connection High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	Supports ThinkVantage® technologies
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole None <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	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
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

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