

# ThinkPad X280 Platform Specifications

Product Specifications Reference (PSREF)

|                                                     |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------|---------------------|---------------------|--------------|------------------------|-----------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor                                           | 7th Generation Intel® Core™ i3 / i5 Processor<br><i>* i3-7130U is NOT available in US and EMEA; i5-7200U is NOT available in US</i>                                                                                                                                                                                   |              |                |                     |                     |              |                        |                       | Dimensions<br>Weight<br><br>Case color<br>Case material | WxDxH: 12.11" x 8.26" x 0.69-0.70"; 307.7mm x 209.8mm x 17.4-17.8mm<br><i>FHD non-touch model:</i> 2.49 lb / 1.13 kg;<br><i>HD non-touch model:</i> 2.78 lb / 1.26 kg;<br><i>FHD multi-touch model:</i> 2.79 lb / 1.27 kg<br>Black<br><i>Display cover:</i> Carbon Fiber (FHD non-touch model) or Glass Fiber (HD & FHD multi-touch model);<br><i>Bottom:</i> Magnesium/Aluminum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                     | Processor Number                                                                                                                                                                                                                                                                                                      | # of Cores   | # of Threads   | Base Frequency      | Max Turbo Frequency | Cache        | Memory Types           | Processor Graphics    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                     | i3-7130U                                                                                                                                                                                                                                                                                                              | 2            | 4              | 2.7 GHz             | -                   | 3MB          | DDR4-2133              | Intel HD Graphics 620 |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                     | i5-7200U                                                                                                                                                                                                                                                                                                              |              |                | 2.5 GHz             | 3.1 GHz             | 3MB          |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i5-7300U                                            | 2.6 GHz                                                                                                                                                                                                                                                                                                               |              |                | 3.5 GHz             | 3MB                 |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| or 8th Generation Intel Core i3 / i5 / i7 Processor |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       | Smart card reader<br>Media reader<br>Ports              | <i>Optional:</i> Smart card reader<br>MicroSD card reader, in the combo slot with nano-SIM card<br>Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole<br><i>* Depending on many factors, actual data transfer speed may be lower than theoretical speed</i><br><i>HDMI to VGA:</i> Lenovo HDMI to VGA Monitor Adapter<br><i>USB-C to VGA:</i> Lenovo USB-C to VGA Adapter<br><i>USB-C to DP:</i> Lenovo USB-C to DisplayPort Adapter<br><i>Optional:</i> ThinkPad Ethernet Extension Adapter Gen 2 |
| Processor Number                                    | # of Cores                                                                                                                                                                                                                                                                                                            | # of Threads | Base Frequency | Max Turbo Frequency | Cache               | Memory Types | Processor Graphics     |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i3-8130U                                            | 4                                                                                                                                                                                                                                                                                                                     | 8            | 2.2 GHz        | 3.4 GHz             | 4MB                 | DDR4-2400    | Intel UHD Graphics 620 |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i5-8250U                                            |                                                                                                                                                                                                                                                                                                                       |              | 1.6 GHz        | 3.4 GHz             | 6MB                 |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i5-8350U                                            |                                                                                                                                                                                                                                                                                                                       |              | 1.7 GHz        | 3.6 GHz             | 6MB                 |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i7-8550U                                            |                                                                                                                                                                                                                                                                                                                       |              | 1.8 GHz        | 4.0 GHz             | 8MB                 |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| i7-8650U                                            | 1.9 GHz                                                                                                                                                                                                                                                                                                               | 4.2 GHz      | 8MB            |                     |                     |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Graphics                                            | Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)                                                                                       |              |                |                     |                     |              |                        |                       | Monitor cable<br><i>(optional)</i>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Chipset                                             | Intel SoC (System on Chip) platform                                                                                                                                                                                                                                                                                   |              |                |                     |                     |              |                        |                       | Bundled Accy                                            | <i>Optional:</i> ThinkPad Ethernet Extension Adapter Gen 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Memory                                              | 4GB, 8GB, or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets<br><i>* 4GB memory is NOT available in US and EMEA</i><br><i>* System clocks down for processors with lower memory controller</i>                                                                                                              |              |                |                     |                     |              |                        |                       |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Display                                             | <i>Some:</i> 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio<br><i>Some:</i> 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle                                       |              |                |                     |                     |              |                        |                       | Camera <i>(optional)</i>                                | <i>One of the following, configurable by model:</i><br>• HD720p camera with ThinkShutter camera privacy, fixed focus<br>• IR camera and HD720p camera, fixed focus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Multi-touch <i>(opt)</i>                            | On-cell touch, supports 10-finger gesture (FHD only)<br><i>* FHD non-touch model is NOT available in US</i>                                                                                                                                                                                                           |              |                |                     |                     |              |                        |                       | Audio support                                           | HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Storage                                             | <i>One of the following, configurable by model:</i><br>• M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2)<br>• M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe)                                                                                                                                    |              |                |                     |                     |              |                        |                       | Keyboard<br>UltraNav™                                   | 6-row, spill-resistant, multimedia Fn keys, optional LED backlight<br>TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Optane™ memory                                      | None                                                                                                                                                                                                                                                                                                                  |              |                |                     |                     |              |                        |                       | Security                                                | Power-on password, hard disk password, supervisor password, security keyhole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Optical                                             | None                                                                                                                                                                                                                                                                                                                  |              |                |                     |                     |              |                        |                       | Security chip<br>vPro <i>(optional)</i>                 | Discrete TPM 2.0, TCG Certified<br>Intel vPro Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Ethernet                                            | Native Intel Ethernet Connection I219-V <i>(Non-vPro)</i> or I219-LM <i>(vPro)</i> via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2                                                                                                                                                                  |              |                |                     |                     |              |                        |                       | Fingerprint reader                                      | <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| WLAN + Bluetooth™                                   | Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card<br><i>* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS</i>                                                                                                                                                     |              |                |                     |                     |              |                        |                       | NFC <i>(optional)</i>                                   | Near Field Communication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| WWAN <i>(optional)</i>                              | <i>One of the following, configurable by model:</i><br>• Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)<br>• Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card<br><i>* For non-WWAN model, it means the model is NOT WWAN upgradable</i> |              |                |                     |                     |              |                        |                       | Battery                                                 | Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter<br><i>MobileMark® 2014:</i> 16.6 hr<br><i>* Battery life varies significantly with settings, usage, &amp; other factors</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| SIM card <i>(opt)</i>                               | Nano-SIM card slot, in the combo slot with microSD card reader, optional Verizon LTE (US) SIM card                                                                                                                                                                                                                    |              |                |                     |                     |              |                        |                       | Max battery life                                        | 65W or 65W USB Type-C AC adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                     |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       | AC adapter                                              | 45W or 65W USB Type-C AC adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                     |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       | Preload                                                 | Windows® 10 Home 64 or Windows 10 Pro 64                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                     |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       | Limited warranty                                        | <i>One of the following, configurable by model:</i><br>• 1-year depot repair service<br>• 3-year/1-yr battery depot repair service<br>• 3-year/1-yr battery limited onsite service                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                     |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       | Mil-Spec test                                           | MIL-STD-810G military testing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                     |                                                                                                                                                                                                                                                                                                                       |              |                |                     |                     |              |                        |                       | Environment                                             | EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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

Lenovo  
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