

# ThinkPad P51s 20HB000V++

Region  
EMEA

Machine Type  
20HB

TopSeller  
TopSeller

Processor  
Core i7-7500U (2C, 2.7 / 3.5GHz, 4MB)

vPro  
No

Graphics  
NVIDIA Quadro M520 2GB

Memory  
8GBx1

Display  
15.6" FHD (1920x1080) IPS

Multi-touch  
None

Storage  
256GB SSD M.2 PCIe NVMe Opal2

Optical  
None

WLAN + Bluetooth  
Intel 8265 ac, 2x2 + BT4.1

WWAN  
WWAN Upgradable

SIM Card  
None

Smart Card Reader  
Smart Card Reader

Dock  
None

Monitor Cable  
None

Camera  
720p

Keyboard  
Backlit

Fingerprint Reader  
Fingerprint Reader

NFC  
None

TPM  
dTPM 2.0

Battery  
4-cell (32Wh) + 6-cell (72Wh)

Power Adapter  
65W Slim Tip

Operating System  
Windows 10 Pro 64

Warranty  
3-year, Onsite

End of Support  
Mar 7, 2022

Ann Date (mm/yy)  
03/17

## Note:

Country Code "US" is for United States, "++" is for EMEA countries (e.g. AD - Saudi, Arabia, AT - Austria, BM - Bulgaria, etc.), "xx" is for EAST countries (e.g. BM - Bulgaria, CX - Hungary, CY - Cyprus, etc.), and "\*\*\*" is for MEA countries (e.g. AD - Saudi, Arabia, ED - Egypt, EQ - Sweden, etc.). Please be aware that the EMEA/ EAST/MEA models listed above might not be available in all countries



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# ThinkPad P51s Platform Specifications

Product Specifications Reference (PSREF)

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                |                     |                     |                   |              |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------|---------------------|---------------------|-------------------|--------------|
| Processor                           | 6th Generation Intel® Core™ i7 Processor                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                |                     |                     |                   |              |
|                                     | Processor Number                                                                                                                                                                                                                                                                                                                                                                                                                                  | # of Cores        | # of Threads   | Base Frequency      | Max Turbo Frequency | Cache             | Memory Types |
|                                     | i7-6500U                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2                 | 4              | 2.5 GHz             | 3.1 GHz             | 4MB               | DDR4-2133    |
|                                     | i7-6600U                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                | 2.6 GHz             | 3.4 GHz             | 4MB               |              |
|                                     | or 7th Generation Intel Core i5 / i7 Processor                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                |                     |                     |                   |              |
| Processor Number                    | # of Cores                                                                                                                                                                                                                                                                                                                                                                                                                                        | # of Threads      | Base Frequency | Max Turbo Frequency | Cache               | Memory Types      |              |
| i5-7300U                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4                 | 2.6 GHz        | 3.5 GHz             | 3MB                 | DDR4-2133         |              |
| i7-7500U                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   | 2.7 GHz        | 3.5 GHz             | 4MB                 |                   |              |
| i7-7600U                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   | 2.8 GHz        | 3.9 GHz             | 4MB                 |                   |              |
| Graphics                            | Intel HD Graphics 520 or 620 in processor and NVIDIA Quadro® M520, 2GB 2.5GHz GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 3840x2160@30Hz (HDMI)                                                                                                                                                                                     |                   |                |                     |                     |                   |              |
| Chipset                             | Intel SoC (System on Chip) platform                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                |                     |                     |                   |              |
| Memory                              | 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets<br>* System clocks down for processors with lower memory controller                                                                                                                                                                                                                                                                                                       |                   |                |                     |                     |                   |              |
| Display                             | Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle<br>Some: 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 72% gamut, 170° viewing angle                                                                                                                                               |                   |                |                     |                     |                   |              |
| Multi-touch (opt)                   | On-cell touch, supports 10-finger gesture (FHD only)                                                                                                                                                                                                                                                                                                                                                                                              |                   |                |                     |                     |                   |              |
| Storage                             | System has one HDD slot or one M.2 2280 slot exclusively for storage<br>Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™<br>Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD)<br>Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s<br>Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig                                                                  |                   |                |                     |                     |                   |              |
| Optical                             | None                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                |                     |                     |                   |              |
| Ethernet                            | Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)<br>vPro model: Intel Ethernet Connection I219-LM (Jacksonville)                                                                                                                                                                                                                                                                                                                   |                   |                |                     |                     |                   |              |
| WLAN                                | One of the following, configurable by model (WiGig can coexist with WWAN): <ul style="list-style-type: none"><li>Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card</li><li>Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card</li><li>Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card</li><li>Intel Tri-Band Wireless-AC 18265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1, M.2 card</li></ul> |                   |                |                     |                     |                   |              |
| Bluetooth™                          | Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter<br>* Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS                                                                                                                                                                                                                                                                                        |                   |                |                     |                     |                   |              |
| WWAN (optional)                     | One of the following, configurable by model (WWAN can coexist with WiGig): <ul style="list-style-type: none"><li>Wireless WAN upgradeable</li><li>Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card</li><li>Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU), M.2 card (EMEA only)</li></ul>                                                                          |                   |                |                     |                     |                   |              |
| SIM card (opt)                      | Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card                                                                                                                                                                                                                                                                                                                                                                      |                   |                |                     |                     |                   |              |
| Dimensions Weight                   | WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm                                                                                                                                                                                                                                                                                                                                                                              |                   |                |                     |                     |                   |              |
|                                     | Models                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4 + 3-cell        |                | 6-cell              |                     | 4 + 6-cell        |              |
|                                     | Non-touch model                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4.39 lb / 1.99 kg |                | 4.80 lb / 2.18 kg   |                     | 4.80 lb / 2.18 kg |              |
|                                     | Multi-touch model                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4.44 lb / 2.01 kg |                | 4.85 lb / 2.20 kg   |                     | 4.85 lb / 2.20 kg |              |
| Case color                          | Black                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                |                     |                     |                   |              |
| Case material                       | Display cover: Glass-Fiber Reinforced Plastic (PPS);<br>Bottom: Glass-Fiber Reinforced Plastic                                                                                                                                                                                                                                                                                                                                                    |                   |                |                     |                     |                   |              |
| Smart card reader                   | Optional: Smart card reader                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                |                     |                     |                   |              |
| Media reader                        | 4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I                                                                                                                                                                                                                                                                                                                                                                                       |                   |                |                     |                     |                   |              |
| Ports                               | Three USB 3.1 Gen 1 (USB 3.0, one Always On),<br>USB 3.1 Type-C Gen 2 / Thunderbolt 3, HDMI 1.4b, Ethernet (RJ-45),<br>Dock connector                                                                                                                                                                                                                                                                                                             |                   |                |                     |                     |                   |              |
| WiGig dock (opt)                    | ThinkPad WiGig dock                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                |                     |                     |                   |              |
| Monitor cable (optional)            | HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter<br>USB-C to VGA: Lenovo USB-C to VGA Adapter                                                                                                                                                                                                                                                                                                                                                      |                   |                |                     |                     |                   |              |
| Camera (optional)                   | 720p: HD720p resolution, fixed focus<br>IR & 720p: IR camera and HD720p camera (mutually exclusive with WiGig)                                                                                                                                                                                                                                                                                                                                    |                   |                |                     |                     |                   |              |
| Audio support                       | HD Audio, Realtek® ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack                                                                                                                                                                                                                                                                                                                                   |                   |                |                     |                     |                   |              |
| Keyboard                            | 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight                                                                                                                                                                                                                                                                                                                                                                |                   |                |                     |                     |                   |              |
| UltraNav™                           | TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad                                                                                                                                                                                                                                                                                                                                                                     |                   |                |                     |                     |                   |              |
| Security                            | Power-on password, hard disk password, supervisor password, security keyhole                                                                                                                                                                                                                                                                                                                                                                      |                   |                |                     |                     |                   |              |
| Security chip                       | Discrete TPM 2.0, TCG Certified                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                |                     |                     |                   |              |
| vPro (optional)                     | Intel vPro Technology                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                |                     |                     |                   |              |
| Fingerprint reader                  | Optional: Touch style match on chip fingerprint reader on the palm rest                                                                                                                                                                                                                                                                                                                                                                           |                   |                |                     |                     |                   |              |
| NFC (optional)                      | Near Field Communication                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                |                     |                     |                   |              |
| Internal battery                    | Optional: Integrated Li-Polymer 4-cell (32Wh)                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                |                     |                     |                   |              |
| External battery                    | Li-Polymer 3-cell (24Wh) or Li-Ion 6-cell (48Wh or 72Wh)                                                                                                                                                                                                                                                                                                                                                                                          |                   |                |                     |                     |                   |              |
| Max battery life (MobileMark® 2014) | Models                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4 + 3-cell        |                | 6-cell 48Wh         |                     | 6-cell 72Wh       |              |
|                                     | Max battery life                                                                                                                                                                                                                                                                                                                                                                                                                                  | 13.8 hr           |                | 12.5 hr             |                     | 18.5 hr           |              |
| AC adapter                          | 65W slim tip AC adapter or 65W USB Type-C AC adapter                                                                                                                                                                                                                                                                                                                                                                                              |                   |                |                     |                     |                   |              |
| Preload                             | Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64<br>Some: Windows 10 Home 64<br>Some: Windows 10 Pro 64 <ul style="list-style-type: none"><li>Lenovo Companion</li><li>Lenovo Setting</li><li>Microsoft Office preloaded; purchase a product key to activate</li></ul>                                                                                                                                       |                   |                |                     |                     |                   |              |
| Limited warranty                    | One of the following, configurable by model: <ul style="list-style-type: none"><li>1-year depot repair service</li><li>3-year/1-yr battery depot repair service</li><li>3-year/1-yr battery limited onsite service</li></ul>                                                                                                                                                                                                                      |                   |                |                     |                     |                   |              |
| Mil-Spec test                       | MIL-STD-810G military certification                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                |                     |                     |                   |              |
| Environment                         | EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant                                                                                                                                                                                                                                                                                                                                                                                           |                   |                |                     |                     |                   |              |

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