

# ThinkPad P53 20QN0065GE

**Product**

ThinkPad P53

**Region**

WE

**Country/Region**

Germany

**Machine Type**

20QN

**TopSeller**

TopSeller

**Processor**

Intel Core i7-9850H (6C / 12T, 2.6 / 4.6GHz, 12MB)

**Graphics**

NVIDIA Quadro RTX 3000 6GB GDDR6

**Chipset**

Intel CM246

**Memory**

2x 16GB SO-DIMM DDR4-2666 non-ECC

**Storage**

1TB SSD M.2 2280 PCIe NVMe Opal2

**Optane Memory**

None

**RAID**

No

**Display**

15.6" UHD (3840x2160) IPS 500nits Anti-glare, 100% Gamut, Dolby Vision HDR

**Touchscreen**

None

**Pen**

None

**Media Reader**

4-in-1 Card Reader

**Ethernet**

100/1000M

**Optical**

None

**WLAN + Bluetooth**

Intel AX200 11ax, 2x2 + BT5.1

**WWAN**

None

**SIM Card**

None

**Smart Card Reader**

Smart Card Reader

**Monitor Cable**

None

**Case Material**

GFRP (Top), Magnesium / Aluminum (Bottom)

**Bundled Accessories**

None

**Camera**

720p + IR with ThinkShutter

**Microphone**

2x, Array

**Color**

Black

**Keyboard**

Backlit, German

**Fingerprint Reader**

Touch Style, Match-on-Chip

**NFC**

None

**Color Calibrator**

None

**TPM**

Discrete TPM 2.0

**Battery**

Integrated 90Wh

**Power Adapter**

230W Slim Tip

**System Management**

Intel vPro

**Operating System**

Windows 10 Pro 64, German

**Bundled Software**

None

**Base Warranty**

3-year, Depot

**Bundled Service**

None

**End of Support**

2026-02-23

**Announce Date**

2020-02-18

**Recommended Services****Best**

5Y Premier Support Upgrade from 3Y Depot/CCI (5WS0V07061)

**Better**

4Y Premier Support Upgrade from 3Y Depot/CCI (5WS0V07067)

**Good**

3Y Premier Support Upgrade from 3Y Depot/CCI (5WS0V07092)

**Notes:**

**Battery life** is an estimated maximum. Actual battery life may vary based on many factors, including screen brightness, active applications, features, power management settings, battery age and conditioning, and other customer preferences.

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# ThinkPad P53 Platform Specifications

Product Specifications Reference (PSREF)

|                          |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------------------|--------------|----------------|-------------------------|
| Processor                | 9th Generation Intel® Core™ i5 / i7 / i9 Processor or Intel Xeon® E Processor                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | Processor Number                                                                                                                                                                                                                                                                                                                                                                                       | # of Cores                                                                                                                                                                                                                                                                                                                                                                       | # of Threads | Base Frequency                | Max Turbo Frequency           | Cache        | Memory Types   | Processor Graphics      |
|                          | i5-9400H                                                                                                                                                                                                                                                                                                                                                                                               | 4                                                                                                                                                                                                                                                                                                                                                                                | 8            | 2.5 GHz                       | 4.3 GHz                       | 8MB          | DDR4-2666      | Intel UHD Graphics 630  |
|                          | i7-9750H                                                                                                                                                                                                                                                                                                                                                                                               | 6                                                                                                                                                                                                                                                                                                                                                                                | 12           | 2.6 GHz                       | 4.5 GHz                       | 12MB         |                |                         |
|                          | i7-9850H                                                                                                                                                                                                                                                                                                                                                                                               | 6                                                                                                                                                                                                                                                                                                                                                                                | 12           | 2.6 GHz                       | 4.6 GHz                       | 12MB         |                |                         |
|                          | i9-9880H                                                                                                                                                                                                                                                                                                                                                                                               | 8                                                                                                                                                                                                                                                                                                                                                                                | 16           | 2.3 GHz                       | 4.8 GHz                       | 16MB         |                |                         |
| Graphics                 | E-2276M                                                                                                                                                                                                                                                                                                                                                                                                | 6                                                                                                                                                                                                                                                                                                                                                                                | 12           | 2.8 GHz                       | 4.7 GHz                       | 12MB         |                | Intel UHD Graphics P630 |
|                          | Intel UHD Graphics 630 or P630 in processor and NVIDIA® Quadro® T1000 (4GB GDDR5), T2000 (4GB GDDR5), RTX 3000 (6GB GDDR6, VR ready), RTX 4000 (8GB GDDR6, VR ready), or RTX 5000 (16GB GDDR6, VR ready); supports external digital monitor via HDMI or Thunderbolt™; Up to 5 displays with 4 external monitors plus system LCD screen. Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (USB-C or HDMI) |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | Mobile Intel CM246 Chipset                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | 128GB max / 2666MHz DDR4 (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Display                  | Size                                                                                                                                                                                                                                                                                                                                                                                                   | Resolution                                                                                                                                                                                                                                                                                                                                                                       | Type         | Surface                       | Brightness                    | Aspect Ratio | Contrast Ratio | Color Gamut             |
|                          | 15.6"                                                                                                                                                                                                                                                                                                                                                                                                  | FHD (1920x1080)                                                                                                                                                                                                                                                                                                                                                                  | IPS          | Anti-glare                    | 300 nits                      | 16:9         | 700:1          | 72%                     |
|                          | 15.6"                                                                                                                                                                                                                                                                                                                                                                                                  | FHD (1920x1080) Dolby Vision™ HDR                                                                                                                                                                                                                                                                                                                                                | IPS          | Anti-glare                    | 500 nits                      | 16:9         | 1200:1         | 72%                     |
|                          | 15.6"                                                                                                                                                                                                                                                                                                                                                                                                  | UHD (3840x2160) Dolby Vision HDR                                                                                                                                                                                                                                                                                                                                                 | IPS          | Anti-glare                    | 500 nits                      | 16:9         | 1200:1         | 100%                    |
|                          | 15.6"                                                                                                                                                                                                                                                                                                                                                                                                  | UHD (3840x2160) Dolby Vision HDR, Multi-touch                                                                                                                                                                                                                                                                                                                                    | OLED         | Anti-reflection / Anti-smudge | SDR 400nit, HDR 500nit (peak) | 16:9         | 100000:1       | 100% DCI-P3             |
| Multi-touch (opt)        | Capacitive-type multi-touch, supports 10-finger gesture (UHD only), anti-reflection (AR), anti-smudge (AS) coating                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Pen (optional)           | Lenovo Pen Pro (special bid only)                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Storage                  | Up to 3 drives (3x M.2 SSD or 1x HDD + 2x M.2 SSD), supports single sided M.2 2280 drives only                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Optane™ memory           | • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | * HDD is only available for T1000 and T2000 graphics model                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | RAID 0/1/5 support                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Optical                  | None                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Ethernet                 | Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | vPro model: Intel Ethernet Connection I219-LM (Jacksonville)                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| WLAN (optional)          | Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.1                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Bluetooth™ (opt)         | Bluetooth 5.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| WWAN (optional)          | One of the following, configurable by model:                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| SIM card (opt)           | • Wireless WAN upgradable (special bid only in EMEA)                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | * For non-WWAN model, it means the model is NOT WWAN upgradable                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          | Nano-SIM card slot, optional Verizon LTE (US) SIM card                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
| Dimensions               |                                                                                                                                                                                                                                                                                                                                                                                                        | WxDxH (non-touch): 14.86" x 9.93" x 0.96-1.16";<br>377.4mm x 252.3mm x 24.5-29.4mm                                                                                                                                                                                                                                                                                               |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | WxDxH (multi-touch): 14.86" x 9.93" x 1.02-1.21";<br>377.4mm x 252.3mm x 25.8-30.7mm                                                                                                                                                                                                                                                                                             |              |                               |                               |              |                |                         |
| Weight                   |                                                                                                                                                                                                                                                                                                                                                                                                        | Non-touch model: starting at 5.51 lb / 2.5 kg;<br>Multi-touch model: starting at 6.4 lb / 2.9 kg                                                                                                                                                                                                                                                                                 |              |                               |                               |              |                |                         |
| Case color               |                                                                                                                                                                                                                                                                                                                                                                                                        | Black                                                                                                                                                                                                                                                                                                                                                                            |              |                               |                               |              |                |                         |
| Case material            |                                                                                                                                                                                                                                                                                                                                                                                                        | Display cover: Glass-Fiber Reinforced Plastic;<br>Bottom: Magnesium/Aluminum                                                                                                                                                                                                                                                                                                     |              |                               |                               |              |                |                         |
| Smart card reader        |                                                                                                                                                                                                                                                                                                                                                                                                        | Optional: Smart card reader                                                                                                                                                                                                                                                                                                                                                      |              |                               |                               |              |                |                         |
| ExpressCard              |                                                                                                                                                                                                                                                                                                                                                                                                        | None                                                                                                                                                                                                                                                                                                                                                                             |              |                               |                               |              |                |                         |
| Media reader             |                                                                                                                                                                                                                                                                                                                                                                                                        | 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card                                                                                                                                                                                                                                                                                                                     |              |                               |                               |              |                |                         |
| Ports                    |                                                                                                                                                                                                                                                                                                                                                                                                        | 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), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | * Power Delivery only supports power-out for charging peripherals                                                                                                                                                                                                                                                                                                                |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | * USB-C Dock is not supported in right-side USB-C port                                                                                                                                                                                                                                                                                                                           |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | * Depending on many factors, actual data transfer speed may be lower than theoretical speed                                                                                                                                                                                                                                                                                      |              |                               |                               |              |                |                         |
| Monitor cable (optional) |                                                                                                                                                                                                                                                                                                                                                                                                        | HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | USB-C to VGA: Lenovo USB-C to VGA Adapter                                                                                                                                                                                                                                                                                                                                        |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | USB-C to DP: Lenovo USB-C to DisplayPort Adapter                                                                                                                                                                                                                                                                                                                                 |              |                               |                               |              |                |                         |
| Bundled Accy             |                                                                                                                                                                                                                                                                                                                                                                                                        | None                                                                                                                                                                                                                                                                                                                                                                             |              |                               |                               |              |                |                         |
| Camera (optional)        |                                                                                                                                                                                                                                                                                                                                                                                                        | One of the following, configurable by model:                                                                                                                                                                                                                                                                                                                                     |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • HD720p camera with ThinkShutter camera privacy, fixed focus                                                                                                                                                                                                                                                                                                                    |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus                                                                                                                                                                                                                                                                                                      |              |                               |                               |              |                |                         |
| Audio support            |                                                                                                                                                                                                                                                                                                                                                                                                        | HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 / optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system                                                                                                                                                                                                             |              |                               |                               |              |                |                         |
| Keyboard                 |                                                                                                                                                                                                                                                                                                                                                                                                        | 6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight                                                                                                                                                                                                                                                                                                        |              |                               |                               |              |                |                         |
| UltraNav™                |                                                                                                                                                                                                                                                                                                                                                                                                        | 3-button TrackPoint® pointing device and 3-button 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       |                                                                                                                                                                                                                                                                                                                                                                                                        | Touch style match on chip fingerprint reader on the palm rest                                                                                                                                                                                                                                                                                                                    |              |                               |                               |              |                |                         |
| Color calibration        |                                                                                                                                                                                                                                                                                                                                                                                                        | Optional: X-Rite Pantone factory color calibration (UHD model only)                                                                                                                                                                                                                                                                                                              |              |                               |                               |              |                |                         |
| NFC (optional)           |                                                                                                                                                                                                                                                                                                                                                                                                        | Near Field Communication                                                                                                                                                                                                                                                                                                                                                         |              |                               |                               |              |                |                         |
| Battery                  |                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated Li- Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)                                                                                                                                                                                                                                                                                             |              |                               |                               |              |                |                         |
| Max battery life         |                                                                                                                                                                                                                                                                                                                                                                                                        | (MobileMark® 2014) Discrete mode: 8 hr; Hybrid mode: 13 hr                                                                                                                                                                                                                                                                                                                       |              |                               |                               |              |                |                         |
| AC adapter               |                                                                                                                                                                                                                                                                                                                                                                                                        | * Battery life varies significantly with hardware configurations, settings, usage, & other factors                                                                                                                                                                                                                                                                               |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | 170W or 230W slim tip AC adapter                                                                                                                                                                                                                                                                                                                                                 |              |                               |                               |              |                |                         |
| Operating system         |                                                                                                                                                                                                                                                                                                                                                                                                        | One of the following, configurable by model:                                                                                                                                                                                                                                                                                                                                     |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • Windows® 10 Home 64                                                                                                                                                                                                                                                                                                                                                            |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • Windows 10 Pro 64                                                                                                                                                                                                                                                                                                                                                              |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • Windows 10 Pro 64 for Workstations                                                                                                                                                                                                                                                                                                                                             |              |                               |                               |              |                |                         |
| Limited warranty         |                                                                                                                                                                                                                                                                                                                                                                                                        | One of the following, configurable by model:                                                                                                                                                                                                                                                                                                                                     |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • 1-year depot repair service                                                                                                                                                                                                                                                                                                                                                    |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • 3-year/1-yr battery depot repair service                                                                                                                                                                                                                                                                                                                                       |              |                               |                               |              |                |                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                        | • 3-year/1-yr battery limited onsite service                                                                                                                                                                                                                                                                                                                                     |              |                               |                               |              |                |                         |
| Mil-Spec test            |                                                                                                                                                                                                                                                                                                                                                                                                        | MIL-STD-810G military testing                                                                                                                                                                                                                                                                                                                                                    |              |                               |                               |              |                |                         |
| Environment              |                                                                                                                                                                                                                                                                                                                                                                                                        | EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant                                                                                                                                                                                                                                                                                                                                  |              |                               |                               |              |                |                         |

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

Lenovo  
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# ThinkPad P53

