# DELL Precision 7680 Intel® Core™ i7 i7-13850HX Mobile workstation 40.6 cm (16") Full HD+ 32 GB DDR5-SDRAM 1 TB SSD NVIDIA RTX 2000 Ada Wi-Fi 6E (802.11ax) Windows 11 Pro Grey

**Brand :** DELL      **Product family:** Precision      **Product code:** VPXP2

**Product name :** 7680

DELL Precision 7680. Product type: Mobile workstation, Form factor: Clamshell. Processor family: Intel® Core™ i7, Processor model: i7-13850HX. Display diagonal: 40.6 cm (16"), HD type: Full HD+, Display resolution: 1920 x 1200 pixels. Internal memory: 32 GB, Internal memory type: DDR5-SDRAM. Total storage capacity: 1 TB, Storage media: SSD. On-board graphics card model: Intel® UHD Graphics, Discrete graphics card model: NVIDIA RTX 2000 Ada. Operating system installed: Windows 11 Pro. Product colour: Grey
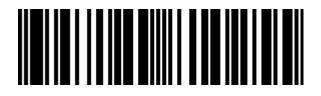
## Design

| | |
|---|---|
| Product type * | Mobile workstation |
| Product colour * | Grey |
| Form factor * | Clamshell |
| Market positioning | Business |
| Introduction year | 2023 |
| Intel® vPro™ Platform Eligibility | ✔ |

## Display

| | |
|---|---|
| Display diagonal * | 40.6 cm (16") |
| Display resolution * | 1920 x 1200 pixels |
| Touchscreen * | ✘ |
| HD type | Full HD+ |
| Panel type | WLED |
| LED backlight | ✔ |
| Native aspect ratio | 16:10 |
| Anti-glare screen | ✔ |
| Display brightness | 500 cd/m² |
| Pixel density | 142 ppi |
| RGB colour space | DCI-P3 |
| Colour gamut | 100% |
| Maximum refresh rate | 60 Hz |
| Contrast ratio (typical) | 1300:1 |

## Processor

| | |
|---|---|
| Processor manufacturer * | Intel |
| Processor family * | Intel® Core™ i7 |
| Processor generation | 13th gen Intel® Core™ i7 |
| Processor model * | i7-13850HX |
| Processor cores | 20 |
| Processor threads | 28 |
| Processor boost frequency | 5.3 GHz |
| Performance cores | 8 |
| Efficient cores | 12 |
| Performance-core Max Turbo Frequency | 5.3 GHz |
| Efficient-core Max Turbo Frequency | 3.8 GHz |
| Processor cache | 30 MB |
| Processor cache type | Smart Cache |

## Network

| | |
|---|---|
| Ethernet LAN data rates | 10,100,1000 Mbit/s |
| Bluetooth | ✔ |

## Ports & interfaces

| | |
|---|---|
| USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity * | 2 |
| USB 3.2 Gen 2 (3.1 Gen 2) Type-C ports quantity | 1 |
| Ethernet LAN (RJ-45) ports | 1 |
| HDMI ports quantity * | 1 |
| Thunderbolt 4 ports quantity | 2 |
| Intel® Thunderbolt 4 | ✔ |
| Combo headphone/mic port | ✔ |
| Charging port type | DC-in jack |
| Power adapter barrel connector | 7.4 mm |

## Performance

| | |
|---|---|
| Ambient light sensor | ✔ |
| Accelerometer | ✔ |
| Hall sensor | ✔ |

## Keyboard

| | |
|---|---|
| Pointing device | Touchpad |
| Keyboard language | Belgian |
| Numeric keypad * | ✔ |
| Keyboard backlit | ✔ |
| Keyboard number of keys | 100 |

## Software

| | |
|---|---|
| Operating system architecture | 64-bit |
| Operating system language | Multilingual |
| Trial software | No Microsoft Office License Included 30 day Trial Offer Only |
| Operating system installed * | Windows 11 Pro |

## Processor special features

| | |
|---|---|
| Intel Flex Memory Access | ✔ |
| Intel VT-x with Extended Page Tables (EPT) | ✔ |
| CPU configuration (max) | 1 |

## Processor

| | |
|---|---|
| Bus type | DMI4 |
| Configurable TDP-down | 45 W |
| Processor base power | 55 W |
| Maximum turbo power | 157 W |

## Memory

| | |
|---|---|
| Internal memory * | 32 GB |
| Internal memory type | DDR5-SDRAM |
| Memory clock speed | 5600 MHz |
| Memory form factor | CAMM module |
| Memory layout (slots x size) | 1 x 32 GB |
| Maximum internal memory * | 128 GB |
| Memory channels | Dual-channel |
| Non-ECC | ✓ |

## Storage

| | |
|---|---|
| Total storage capacity * | 1 TB |
| Storage media * | SSD |
| Total SSDs capacity | 1 TB |
| Number of SSDs installed | 1 |
| SSD capacity | 1 TB |
| SSD interface | PCI Express 4.0 |
| NVMe | ✓ |
| SSD form factor | M.2 |
| Optical drive type * | ✘ |
| Card reader integrated | ✓ |
| Compatible memory cards | SD, SDHC, SDXC |

## Graphics

| | |
|---|---|
| Discrete graphics card model * | NVIDIA RTX 2000 Ada |
| Discrete graphics card memory | 8 GB |
| Discrete graphics memory type | GDDR6 |
| On-board graphics card * | ✓ |
| On-board GPU manufacturer | Intel |
| Discrete graphics card * | ✓ |
| On-board graphics card family | Intel® UHD Graphics |
| On-board graphics card model * | Intel® UHD Graphics |

## Audio

| | |
|---|---|
| Audio chip | Realtek ALC3281 |
| Number of built-in speakers | 2 |
| Speaker power | 2 W |
| Built-in microphone | ✓ |
| Number of microphones | 2 |

## Camera

| | |
|---|---|
| Front camera | ✓ |
| Front camera resolution (numeric) | 0.92 MP |
| Front camera resolution | 1920 x 1080 pixels |
| Front camera HD type | Full HD |
| Video capturing speed | 30 fps |
| Infrared (IR) camera | ✓ |

## Network

| | |
|---|---|
| Top Wi-Fi standard * | Wi-Fi 6E (802.11ax) |
| Wi-Fi standards | 802.11a, 802.11b, 802.11g, Wi-Fi 4 (802.11n), Wi-Fi 5 (802.11ac), Wi-Fi 6E (802.11ax) |
| Mobile network connection * | ✘ |
| Wi-Fi data rate (max) | 2400 Mbit/s |
| Antenna type | 2x2 |
| WLAN controller model | Intel Wi-Fi 6E AX211 |
| WLAN controller manufacturer | Intel |
| Ethernet LAN | ✓ |

## Processor special features

| | |
|---|---|
| Embedded options available | ✘ |
| Intel Virtualization Technology for Directed I/O (VT-d) | ✓ |
| Intel Virtualization Technology (VT-x) | ✓ |

## Battery

| | |
|---|---|
| Battery technology | Lithium-Ion (Li-Ion) |
| Number of battery cells | 6 |
| Battery capacity * | 83 Wh |
| Battery voltage | 11.55 V |
| Battery recharge time | 3 h |
| Fast charging | ✓ |
| Battery weight | 383 g |

## Power

| | |
|---|---|
| AC adapter power | 180 W |
| AC adapter frequency | 50 - 60 Hz |
| AC adapter input voltage | 100 - 240 V |
| AC adapter output current | 9.23 A |
| AC adapter output voltage | 19.5 V |

## Security

| | |
|---|---|
| Cable lock slot | ✓ |
| Cable lock slot type | Wedge |
| Smart card reader | ✓ |
| Trusted Platform Module (TPM) | ✓ |
| Trusted Platform Module (TPM) version | 2.0 |
| Password protection | ✓ |

## Operational conditions

| | |
|---|---|
| Operating temperature (T-T) | 0 - 35 °C |
| Storage temperature (T-T) | -40 - 65 °C |
| Operating relative humidity (H-H) | 10 - 90% |
| Storage relative humidity (H-H) | 0 - 95% |
| Operating altitude | -15.2 - 3048 m |
| Non-operating altitude | -15.2 - 10668 m |
| Operating shock | 110 G |
| Non-operating shock | 160 G |
| Operating vibration | 0.66 G |
| Non-operating vibration | 1.3 G |

## Weight & dimensions

| | |
|---|---|
| Width | 356 mm |
| Depth | 258.3 mm |
| Height (front) | 2.23 cm |
| Height (rear) | 2.32 cm |
| Weight * | 2.6 kg |

## Carbon footprint

| | |
|---|---|
| Total carbon footprint | 471 kg of CO2e |
| Total carbon emissions (Standard deviation) | 93 kg of CO2e |
| Carbon emissions (Manufacturing) | 386 kg of CO2e |
| Carbon emissions (Logistics) | 16 kg of CO2e |
| Carbon emissions (Energy Usage) | 66 kg of CO2e |
| Carbon emissions (End-of-Life) | 2 kg of CO2e |
| Total carbon emissions (w/o Use phase) | 405 kg of CO2e |
| PAIA version | 1.3.2 |

## Packaging content

| | |
|---|---|
| Cables included | AC |

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