

Surface Laptop Ultra for Business

15-inch (NVIDIA)

Co-engineered with NVIDIA.
Built around NVIDIA RTX Spark™



Access to the CUDA™ ecosystem — one of the industry's most widely used platforms for accelerated computing — alongside the full Windows AI stack to develop and run demanding AI applications.⁸



The ports makers need

USB-C®, including the world's first built-in magnetic USB-C® charging port, USB-A, HDMI, headphone jack, and an SD card reader

Power for professional workloads

- Up to 1 petaflop of AI performance⁵
- Run AI agents up to 120 billion parameters – locally⁶
- Up to 128 GB of unified memory the GPU draws from¹
- Up to 6144-core GPU and 20-core CPU
- Up to 2.5x more thermal power capacity than Surface Laptop (8th Edition)

Sharpest and brightest display for pixel precision

- 15-inch PixelSense™ Ultra touchscreen²
- The brightest, sharpest, most vivid display on a Surface Laptop
- Up to 2,000 nits peak HDR brightness¹⁰
- High pixel density (262 PPI) keeps text, UI elements, and visual assets sharp

Crafted for makers by makers

- Weighs under 4.5 lbs
- 30% larger touchpad with advanced haptics⁷
- User-removeable SSD to upgrade, replace, or secure your storage⁴
- Drive up to three 4k external displays natively⁹
- Up to 15 hours of battery life³

Secure and manageable for critical work

- A memory-safe security architecture combines a Rust-based firmware foundation, Secure Embedded Controller, discrete TPM, and Microsoft Pluton to help protect device integrity from boot through runtime
- Local AI processing gives more control over how and where sensitive data is processed

¹Memory varies by configuration. 128GB total system memory in a unified memory architecture dynamically shared between CPU and GPU. Maximum amount addressable by the GPU depends on system configuration and workload and is less than the total. ²Optimized for touch interaction only. Pen input and compatibility with Surface Pen, Surface Slim Pen, or similar accessories is not supported. ³Based on local video playback test. Testing conducted by Microsoft September 2026 using preproduction software and preproduction Surface Laptop Ultra with NVIDIA RTX Spark™ N1X 6144-core GPU, 64Gb RAM and 1TB storage devices. Testing consisted of full battery discharge during video playback of a .mov file through the Windows Media Player application in 1080p at 24 FPS. All settings were default except screen brightness set to 150 nits with auto-brightness disabled. Wi-Fi was connected to a network. Battery life varies significantly with settings, usage, and other factors. ⁴Drive Retention is only available on Microsoft Surface devices in which the Drive is marketed as removable in the technical specifications. Devices returned without a drive may incur a replacement fee unless covered by a Drive Retention benefit (sold separately). Available plans and options may vary by device and region. See [Surface Warranty, Protection Plans & Support – Microsoft Surface for Business](#) for details. ⁵The NVIDIA RTX Spark™ delivers up to 1 petaflop of peak AI compute (FP4) on select configurations; actual performance varies by model, app, and settings. source [Slim Laptops & Small Desktops | NVIDIA RTX Spark](#) ⁶Based on theoretical FP4 performance of 1 petaflop using the sparsity feature. See: [NVIDIA Corporation - NVIDIA and Microsoft Reinvent Windows PCs for the Age of Personal AI](#) ⁷Compared to Surface Laptop 8th Edition. ⁸CUDA™ is a registered trademark by NVIDIA. ⁹External monitor support requires compatible displays, cables, and accessories. See [Surface tested peripherals page](#) for compatibility information. ¹⁰HDR requires HDR content and enabling HDR in device settings.

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PROCESSOR - NVIDIA RTX Spark™ N1X with 5120-core GPU and 18-core CPU - NVIDIA RTX Spark™ N1X with 6144-core GPU and 20-core CPU	DISPLAY - Touchscreen: 15-inch⁶ PixelSense™ Ultra display⁸ - Resolution: 3270 x 2180 (262 PPI) - Aspect ratio: 3:2 - Contrast ratio: 100,000:1 - Dynamic refresh rate up to 120Hz - Color profile: - SDR mode: sRGB and Vivid - HDR mode: HDR¹³ - Color accuracy: DCI-P3 100%, D65 white point - Individually color-calibrated display - Adaptive color - Auto color management - Touch: 10-point multi-touch - Dolby Vision IQ™ support⁹ - Strengthened glass display - Anti-reflective, ISO 9241-307 certified¹¹ - Brightness: - SDR: 1000 nits maximum (typical) - HDR: 2000 nits peak luminance¹³	SIZE AND WEIGHT¹⁴ - Length: 12.95 inch (328.8 mm) - Width: 9.40 inch (238.7 mm) - Height: - Without feet: 0.71 Inch (17.99 mm) - With feet: 0.75 inch (19.16 mm) - Weight: 4.41 lbs (2.0 kg)	SECURITY - Windows 11 Secured-core PC - Enterprise grade security with TPM 2.0 chip and BitLocker support - Windows Hello facial recognition with Enhanced Sign-In Security - Memory safe Secured Embedded Controller built with open source ODP code	AUDIO - Dual Studio Mics - Quad Omnisonic® speakers with Dolby Atmos®²⁰ - Support for Bluetooth® LE Audio
NPU NVIDIA NPU		BATTERY LIFE - Up to 15 hours of local video playback⁷⁴ - Up to 12 hours of active web usage⁷⁵	Firmware - Surface UEFI built with Patina and Project Mu open-source components available through the Open Device Partnership (ODP) - Firmware built with Secured Embedded Controller project open-source components available through ODP - Updated through Windows Update	PORTS AND CHARGING 2 x USB-C® / USB4® 1 x USB-C® / USB4® with Magnetic Connect - All USB-C® ports support: 140W Charging 40 Gbps Data transfer - DisplayPort 2.1 supporting up to three 4K monitors at 60 Hz²¹ - Supports fast charging with minimum 115W charger via USB-C®²² - HDMI 2.1b - USB-A 3.1 - SD card reader 3.5 mm headphone jack
GRAPHICS - NVIDIA Blackwell RTX 5120-core GPU - NVIDIA Blackwell RTX 6144-core GPU			CAMERA - Full HD front-facing Surface Studio Camera 1080p Full HD camera - Windows Hello face authentication camera with Enhanced Sign-in Security	NETWORK AND CONNECTIVITY - Wi-Fi 7²⁶ - Bluetooth® Core 5.4 technology
MEMORY AND STORAGE¹ Memory options: 24GB, 32GB, 48GB, 64GB, 128GB LPDDR5x unified memory Storage options: - Removable² solid-state drive (Gen 4 SSD): 512GB - Removable² solid-state drive (Gen 5 SSD): 1TB, 2TB				

¹System software uses significant storage space. Available storage is subject to change based on system software updates and apps usage. 1GB = 1 billion bytes. 1TB = 1,000 GB. [Surface.com/Storage](#) more details. ²Drive Retention is only available on Microsoft Surface devices in which the Drive is marketed as removable in the technical specifications. Devices returned without a drive may incur a replacement fee unless covered by a Drive Retention benefit (sold separately). Available plans and options may vary by device and region. See [Surface Warranty, Protection Plans & Support – Microsoft Surface for Business](#) for details. ³Surface display has rounded corners within a standard rectangle. When measured as a standard rectangular shape the screen is 15" diagonally (actual viewable area is less). ⁴Optimized for touch interaction only. Pen input and compatibility with Surface Pen, Surface Slim Pen, or similar accessories is not supported. ⁵Requires Dolby Vision® encoded content and video. ⁶The Surface Laptop Ultra display has been designed to minimize unwanted reflections and has been certified by TUV SUD to meet the requirements of ISO 9241-307. ⁷HDR requires HDR content and enabling HDR in device settings. ⁸Might vary depending on manufacturing processes. ⁹Requires Dolby Atmos® encoded content/audio. ¹⁰External monitor support requires compatible displays, cables, and accessories. See [Surface tested peripherals page](#) for compatibility information. ¹¹In select markets, only specific configurations come with 140W Surface Power Supply. Fast charging is supported with minimum 115W Surface Power Supply or minimum 115W USB Type-C® PD charger or higher, sold separately. Testing conducted by Microsoft in December 2024. For details on fast charging see [USB-C® and fast charging for Surface - Microsoft Support](#). ¹²6GHz band not available in all regions. ¹³Based on local video playback test. Testing conducted by Microsoft September 2026 using preproduction software and preproduction Surface Laptop Ultra with NVIDIA RTX Spark™ N1X 6144-core GPU, 64Gb RAM and 1TB storage devices. Testing consisted of full battery discharge during video playback of a .mov file through the Windows Media Player application in 1080p at 24 FPS. All settings were default except screen brightness set to 150 nits with auto-brightness disabled. Wi-Fi was connected to a network. Battery life varies significantly with settings, usage, and other factors. ¹⁴Based on active web browsing test. Testing conducted by Microsoft September 2026 using preproduction software and preproduction Surface Laptop Ultra with NVIDIA RTX Spark™ N1X 6144-core GPU, 64Gb RAM and 1TB storage devices. Testing consisted of full battery discharge while accessing twelve popular websites over multiple open tabs through the browser. All settings were default except screen brightness set to 150 nits with auto-brightness disabled. Wi-Fi was connected to a network. Battery life varies significantly with settings, usage, and other factors.

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SOFTWARE

- Windows 11 Pro
- Preloaded Microsoft 365 Apps³³
- Microsoft 365 Business Standard, Microsoft 365 Business Premium, or Microsoft 365 Apps 30-day trial³⁴

ACCESSIBILITY

- Surface precision haptic touchpad with adaptive touch mode
- Compatible with Surface Adaptive Kit and Microsoft adaptive accessories³⁶
- Includes Windows Accessibility Features – [Learn more](#)
- [Discover more Microsoft Accessible Devices & Products](#)

SUSTAINABILITY

Designed with sustainability in mind
More recycled materials

- 66% recycled content in the enclosure, including 100% recycled aluminum alloy and 100% recycled rare earth metals³⁷
- 100% recycled cobalt in battery³⁸
- 100% recycled tin in solder³⁹
- 100% recycled gold in the motherboard³⁹
- 100% recycled copper in the motherboard³⁹

Thoughtful packaging

- 87% recycled content in wood-based fiber packaging⁴⁶
- 50% of our virgin paper sourced comes from responsibly managed forests⁴⁷

Energy efficient

ENERGY STAR® certified

Repairability

Clear visual icons and built-in access to repair instructions⁴¹

Surface Trade-in

We make trade-in convenient and secure for our commercial customers in the USA at [Microsoft Trade In Program](#).

Microsoft is committed to be carbon negative, water positive, and achieve zero waste by 2030. Learn more about how we design with sustainability in mind at [Microsoft Surface Sustainability](#).

SERVICEABILITY

Replacement components include:⁴¹

- Display assembly (including camera)
- Keyboard assembly
- Touchpad
- Removable solid-state drive
- Battery
- Motherboard (including main processor and main memory)
- Fan
- Speakers
- Enclosure (bucket)
- Audio jack
- USB Mag-C port
- USB-C ports
- USB-A port
- Feet
- Screw kit
- Device Entry Kit

EXTERIOR

- Casing: Anodized aluminum
- Colors: Platinum and Nightfall⁴²

SENSORS

- Ambient color sensor
- Accelerometer
- Gyroscope

WHAT'S IN THE BOX

- Surface Laptop Ultra
- Surface 140W USB-C® Power Adaptor (in select markets)
- Surface USB-C® Magnetic Connect Cable
- Quick Start Guide
- Safety and warranty documents

KEYBOARD LAYOUT

- Activation: Moving (mechanical) keys
- Layout: QWERTY, full row of function keys (F1 – F12)
- Windows key and dedicated buttons for media controls, screen brightness
- Automatic keyboard backlight
- Copilot key⁴³
- Precision haptic touchpad

WARRANTY⁴⁴

- 1-year limited hardware warranty

ENERGY USAGE [JAPAN]

Surface Laptop Ultra 構成 : 12 区分 24.31 kWh/年(AAA)

RADIO FREQUENCY [FRANCE]ⁱ

Le débit d'absorption spécifique (DAS) local quantifie l'exposition de l'utilisateur aux ondes électromagnétiques de l'équipement concerné. Le DAS maximal autorisé est de 0.129W/kg pour le tronc et de 0.129W/kg pour les membres.

ENERGY EFFICIENCY [KOREA]

제품은 에너지소비효율등급 중 최저소비효율 기준을 만족합니다.

³³Sold separately. Software license required for some features. ³⁴Activation required. If your device is managed by your organization's IT department, contact your IT administrator for activation. After 30 days, you will be charged the applicable monthly or annual subscription fee. Credit card required. Cancel any time to stop future charges. See <https://aka.ms/m365businesstrialinfo>. ³⁵Sold separately. ³⁷Enclosure includes A Cover, C bucket, D Cover. 100% recycled aluminum alloy in bucket. 100% recycled rare earth metals in magnets. Based on validation performed by Underwriter Laboratories, Inc. using Environmental Claim Validation Procedure (ECVP) for Recycled Content, UL ECVP 2809-2, Second Edition, dated June 20, 2024. ³⁸Device (excluding power supply unit) contains 4.2% recycled cobalt, consisting of 100% recycled cobalt in battery cell. Based on validation performed by Underwriter Laboratories, Inc. using Environmental Claim Validation Procedure (ECVP) for Recycled Content, UL ECVP 2809-2, Second Edition, dated June 20, 2024. ³⁹Device (excluding power supply) contains 3.4% recycled content, consisting of 90% recycled stainless in Keyboard Bracket, 100% recycled rare earth metals in magnets, 100% recycled tin in solder, 100% recycled copper and 100% recycled gold in the motherboard. Based on validation performed by Underwriter Laboratories, Inc. using Environmental Claim Validation Procedure (ECVP) for Recycled Content, UL ECVP 2809-2, Second Edition, dated June 20, 2024. ⁴¹Replacement components available through Surface Commercial authorized device resellers. Components can be replaced on-site by a skilled technician following Microsoft's Service Guide. Microsoft tools (sold separately) may also be required. Availability of replacement components and service options may vary by product, market and over time. See [Surface service options - Surface | Microsoft Learn](#). Opening and/or repairing your device can present electric shock, fire and personal injury risks and other hazards. Use caution if undertaking do-it-yourself repairs. Unless required by law, device damage caused during repair will not be covered under Microsoft's Hardware Warranty or protection plans. ⁴²Colors available on selected models only. Available colors, sizes, finishes, and processors may vary by store, market, and configuration. ⁴³Copilot key feature availability varies by market, see [key support](#). ⁴⁴Microsoft's Limited Warranty is in addition to your consumer law rights. ⁴⁶Recycled content calculation based on IEEE Std 1680.1-2018. IEEE Standard for Environmental and Social Responsibility Assessment of Computers and Displays. 4.7.3.1 Required—Recycled content in wood-based fiber packaging. ⁴⁷Based on FSC Certification. ⁱLe débit d'absorption spécifique (DAS) local quantifie l'exposition de l'utilisateur aux ondes électromagnétiques de l'équipement concerné. Le DAS maximal autorisé est de 2 W/kg pour la tête et le tronc et de 4 W/kg pour les membres. Consultez [cette page](#) pour en savoir plus.