

Engineering, Architecture and Manufacturing

Enable advanced engineering designs with professional-grade tools.



Design Engineering, Architecture, and Manufacturing in the Modern Era.

The proliferation of intelligent 3D design is creating competitive advantages for engineering firms of all types by making the integration of complex technology a possibility, including:

- Operational digital twins of real world assets to analyze IoT sensor data in context, and manage more information more intuitively.
- Real-time photorealistic visualization including augmented and virtual reality in order to understand and convey design better for a more satisfied end user.
- Generative design tools that optimize materials and guide early design decisions for the best possible outcomes.
- Reality capture technologies that are leveraging AI to make their complex datasets easier to work with and faster to capture.
- Simulation solvers integrated into design processes create quick, iterative feedback loops, improving project and product outcomes.
- Rapid innovation through AI features needing to be locally run and developed due to security, connectivity, data size, or as part of a broader exploration and implementation of AI.

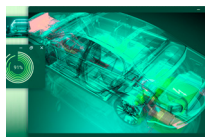
Engineering, architecture and manufacturing use cases



Product Design (2D/3D CAD)

PAGE 5

Take full advantage of your 2D and 3D CAD software features to efficiently develop models and prototypes.



Simulation and Analysis (CAE)

PAGE 6

Drive performance of Computer Aided Engineering (CAE), including finite element analysis (FEA), computational fluid dynamics (CFD), and multibody dynamics (MBD).



Visualization

PAGE 7

Efficiently enable visualization tools for creating real-time photo-realistic images and animations, as well as XR tools to view and collaborate on designs in context, by visualizing in real-world scale.



Architectural Design

PAGE 8

Meet the demand for increased customization and shorter development cycles, even with large data sets representing the most complex building projects.



Mechanical, Electrical and Plumbing

PAGE 9

Proficiently handle mechanical, electrical and plumbing (MEP), as well as HVAC system design and analysis to minimize waste and leverage ecologically-sound designs.



Structural Engineering

PAGE 10

Capitalize on applications for analyzing structural components to meet safety and building code regulations.

Engineering, architecture and manufacturing use cases



Service Providers, Logistics and Operations

PAGE 11

Keep the plant floor, construction sites and deliveries moving with rugged systems that thrive in tough environments.



Reality Capture

PAGE 12

Capture real world conditions as an input for design, to plan for maintenance, track progress, or preserve its current state.



Manufacturing Automation

PAGE 13

Listen to your manufacturing floor to make better, real-time decisions - resulting in increased production and higher quality.



Immersive Technologies

PAGE 14

Expand into immersive technologies such as artificial intelligence and virtual reality to develop smarter designs and simulate your product ideas.



Collaborators On the Go

PAGE 15

Mobilize your project managers and design collaborators to achieve increased productivity.



Powering Manufacturing and Production with AI

PAGE 16

Enhance real-time dashboards, virtual simulations and predictive maintenance with Dell AI PCs.

Product design - 2D & 3D CAD



Dell Pro Max Tower T2 workstation provides scalable performance for CAD applications, such as:

Dassault Systèmes - SolidWorks® and CATIA®, Autodesk Inventor®, AutoCAD® PTC, Creo® Siemens NX™

Combine with a single or dual Dell UltraSharp monitors and a wireless 3D Connexion Space Mouse to take advantage of the CAD software's features and to maximize productivity.

Dell Pro Max and Precision workstations provide the interactive performance to increase productivity, which drives faster time to market and more opportunities for iteration, resulting in better product design.

Recommended products

- A** Dell Pro Max Tower T2
- B** Dell UltraSharp 27 Monitor - U2724D*
- C** Dell Pro Premium Collaboration Keyboard and Mouse - KM900
- D** Dell Pro Webcam – WB5023
- E** Dell Pro Plus Wireless ANC Headset - WL5024
- F** Dell Speakerphone – SP3022

Mobile solution

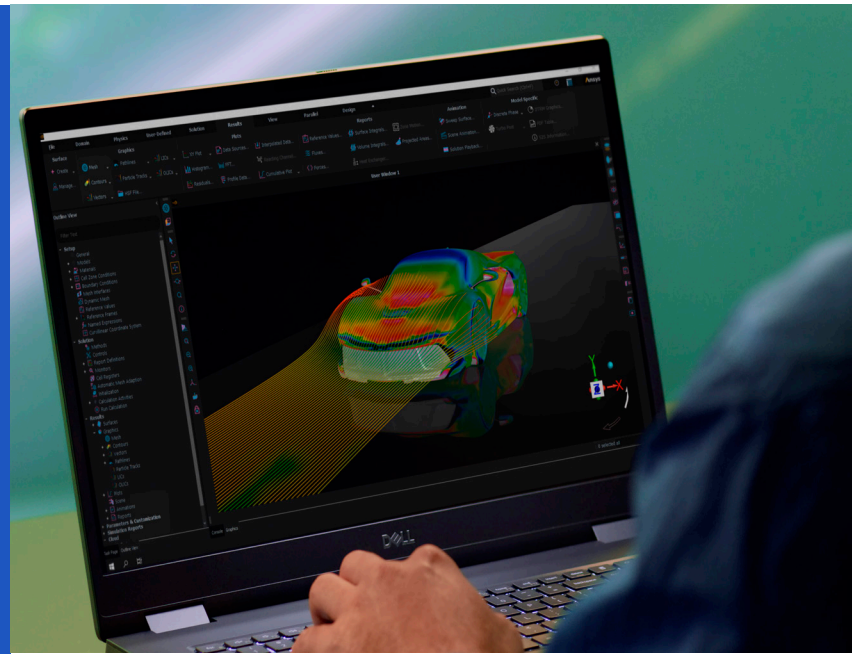
- G** Dell Pro Max 18 Plus*
- H** Dell Pro Thunderbolt™ 5 Smart Dock - SD25TB5*
- I** Dell Pro Plus Wireless ANC Headset WL5024*
- J** Dell Pro 14-16 Plus EcoLoop Briefcase - CC5623*

* Not pictured



Simulation and analysis (CAE)

Power optimization, generative design and digital twin technology to provide better part design and faster time to market.



The Dell Precision 7875 Tower or Dell Pro Max 16 Plus provide scalable performance for CAE applications, such as:

ANSYS® Mechanical™, Fluent®, Discovery™ Live Altair® HyperWorks®, solidThinking® COMSOL Multiphysics®

Combine with a single or dual Dell UltraSharp monitor(s), wireless keyboard and mouse and wireless headset for an exceptional user experience.

Dell Pro Max and Precision workstations provide the extreme performance to enable new paradigms in CAE such as digital twins, multi-physics, optimization and generative design.

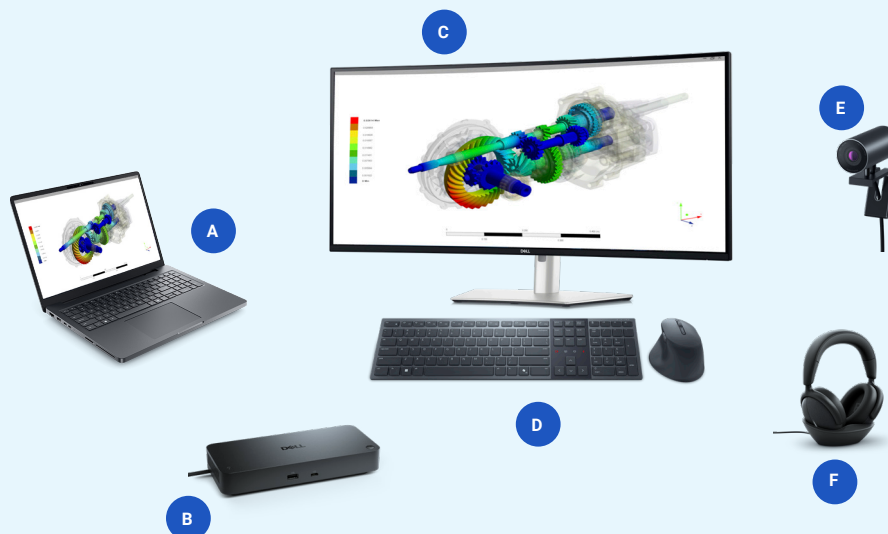
Recommended products

- A** Dell Pro Max 16 Plus
- B** Dell Pro Thunderbolt™ 5 Smart Dock - SD25TB5
- C** Dell UltraSharp 40 Thunderbolt™ Hub Monitor - U4025QW
- D** Dell Pro Premium Collaboration Keyboard and Mouse - KM900
- E** Dell UltraSharp Webcam - WB7022
- F** Dell Premier Wireless ANC Headset - WL7024
- G** Wireless 3DConnexion SpaceMouse Pro*

Desktop solution

- I** Dell Precision 7875 Tower*

* Not pictured



Visualization

Create photo-realistic images in real time, animations and use AR/VR tools to view and collaborate on designs in context, real-world scale.



The Dell Precision 5860 Tower or Dell Pro Max 18 Plus laptop provides scalable performance for visualization applications, such as:

Dassault Systèmes® SOLIDWORKS Visualize, 3DEXCITE, Autodesk® 3ds Max®, VRED, Siemens PLM Teamcenter® Visualization

Dell Pro Max and Precision workstations provide the CPU and GPU performance to make visualization an extension of the design process.

Include 4K displays and a VR solution to amp up your work space.

Recommended products

- A** Dell Pro Max 18 Plus
- B** Dell Pro Thunderbolt™ 5 Smart Dock - SD25TB5
- C** Dell UltraSharp 40 Thunderbolt™ Hub Monitor - U4025QW
- D** Dell Pro Premium Collaboration Keyboard and Mouse - KM900
- E** Dell UltraSharp Webcam - WB7022
- F** HTC VIVE Pro 2 - Virtual Reality Headset*

Desktop solution

- G** Dell Precision 5860 Tower*

* Not pictured



Architectural design

Meet competitive demands and delight your clients utilizing design reviews in a rich mixed reality environment.



The Dell Pro Max Tower T2 workstation provides space-savings and powers architectural applications, such as:

Autodesk Revit®, AutoCAD® GRAPHISOFT®
ARCHICAD Bentley Software MICROSTATION
Robert McNeel & Associates Rhino®

Dell Pro Max and Precision workstations provide the interactive performance to increase productivity, drive faster time to market and open more opportunities for iteration, resulting in better building and site planning, design and more collaborative workflows. With Dell Pro Max and Precision you can also show your work in VR/AR applications.

Dual monitors, wireless keyboard and mouse and wireless headset provide a more comprehensive work space.

Recommended products

- A** Dell Pro Max Tower T2
- B** Dell UltraSharp 27 4K Thunderbolt™ Hub Monitor (x2) - U2725QE
- C** Dell Pro Dual Monitor Stand - MDS19
- D** Dell Pro Plus Keyboard and Mouse - KM7321W
- E** Dell UltraSharp Webcam - WB7022
- F** Dell Pro Wireless ANC Headset - WL5024
- G** 3DConnexion SpaceMouse Wireless*
- H** HTC Vive Pro*
- I** Dell Pro Max 16 Plus*

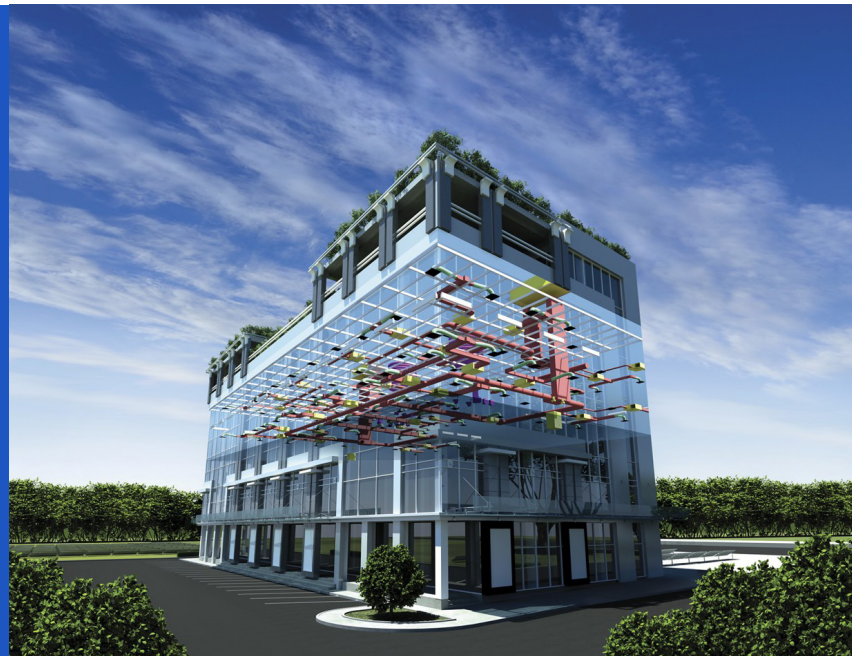
Mobile solution

* Not pictured



Mechanical, electrical and plumbing

Create detailed 3D design for documentation or model for fabrication and construction. Also perform clash coordination including 3D scan data.



The Dell Precision 7875 Tower provides outstanding performance and reliability for MEP and HVAC applications, such as:

Autodesk® Revit® MEP, AutoCAD® MEP, Navisworks® Trimble® PipeDesigner™, DuctDesigner™

Dell Pro Max and Precision workstations provide the GPU and CPU power to view and analyze complex data sets.

Include 4K monitor(s) and a Wireless 3DConnexion SpaceMouse to enhance the workspace and productivity.

Recommended products

- A** Dell Precision 7875 Tower
- B** Dell UltraSharp 27 4K Thunderbolt™ Hub Monitor (x2) - U2725QE
- C** Dell Pro Dual Monitor Arm - MDA20
- D** Dell UltraSharp Webcam - WB7022
- E** Dell Pro Plus Keyboard and Mouse - KM7321W
- F** Wireless 3DConnexion SpaceMouse*
- G** Dell Pro Premium Wireless ANC Headset - WL7024

* Not pictured



Structural engineering

Simulate and analyze alternate solutions to deliver optimized designs more efficiently and at a reduced cost.



The Dell Pro Max Tower T2 performance PC provides scalable performance and reliability for structural engineering applications, such as:

AutoCAD® Revit® Structure, Advance Steel, Tekla® Structural Designer, Bentley Software MICROSTATION, STAAD.Pro, RAM® Steel

With a single or dual Dell UltraSharp 4K display, experience incredible image quality and color accuracy.

Recommended products

- A** Dell Pro Max Tower T2
- B** Dell Pro 27 Plus Monitor (x2) - P2725H
- C** Dell Pro Premium Collaboration Keyboard and Mouse - KM900
- D** Dell Pro Desktop Speakerphone - SP3022
- E** Dell Pro Webcam - WB5023
- F** Dell Pro Plus Wireless ANC Headset - WL5024
- G** Dell Pro Max 16 Plus*

* Not pictured



Service Providers, Logistics and Operations

Keep the plant floor and construction sites and deliveries moving with rugged systems that thrive in tough environments.



Dell Rugged solutions are built for world-class reliability in harsh environments where dust, water, extreme temperatures and vibrations are present. Get the toughest jobs done with stunning performance, reliable connectivity and outdoor-readable displays.



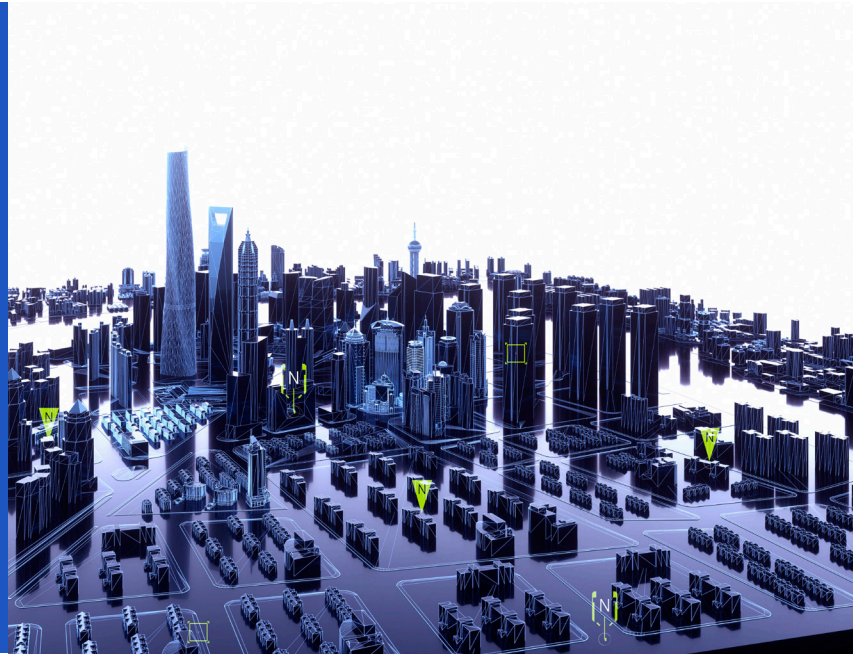
Recommended products and accessories

- | | |
|--|--|
| A Latitude 7030 Rugged Extreme Tablet | F Kickstand |
| B Detachable Keyboard | G Dell Mobile 2-Bay Battery Charger and Batteries |
| C Rotating Hand Strap | H Rugged Active Pen |
| D Magnetic Mount | I Dell Pro 24 Plus USB-C Hub Monitor - P2425HE* |
| E Rigid Handle with passive pen | |



* Not pictured

Reality Capture



Leverage LiDAR, SLAM, or photogrammetry to digitally capture real world conditions, improving design accuracy and project planning.

The Dell Pro Max Plus series provides the performance, reliability, and scalability for reality capture workflows including:

Leica Cyclone, FARO Scene, Autodesk ReCap, Pix4D, and 3D Repo.

Dell Pro Max and Precision workstations help you handle the intensely large datasets of reality capture. Speed up the time it takes to get from the capture device to actionable, sharable data.

Recommended products:

- A** Dell Pro Max 16 Plus
- B** Dell UltraSharp 27 Thunderbolt™ Hub Monitor - U2724DE (x2)
- C** HTC VIVE Pro 2 VR Headset & StarTech USB-C to DP adapter*
- D** Dell Pro Thunderbolt™ 5 Smart Dock - SD25TB5
- E** Dell Pro Premium Collaboration Keyboard and Mouse - KM900
- F** Dell Pro 14-16 Plus EcoLoop Backpack - CP5723

Desktop recommendation:

- G** Precision 7960 Tower*

* Not pictured



Manufacturing automation

Connect scanners, programmable logic controllers (PLCs) and motors, to integrate relevant data with intelligent upstream applications.



Integrated and automated

Dell Edge IoT products* are fanless, designed and engineered to withstand harsh industrial conditions and operate reliably 24x7. Multiple deployment options such as inside control cabinets, on a DIN rail, or outside a cabinet without a mount provide customizable IoT solutions for the manufacturing floor.

Also consider embedding a rack workstation inside manufacturing equipment or as standalone units on the floor because they can withstand extended temperatures and provide outstanding performance.

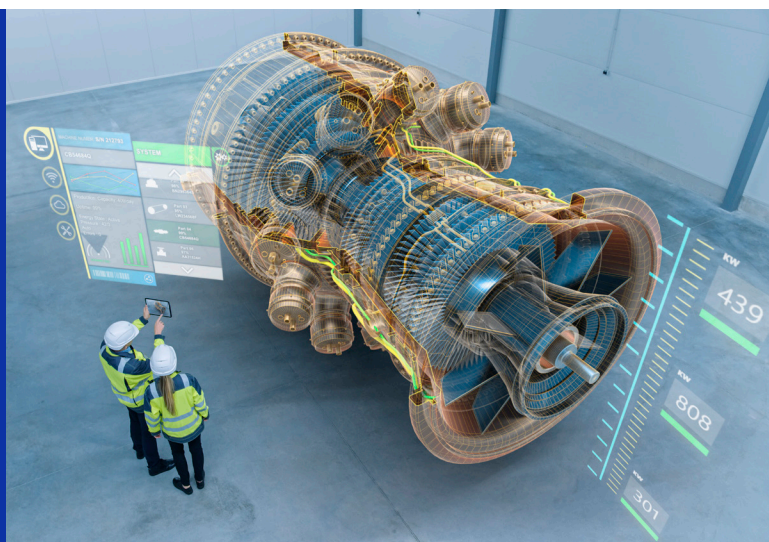
* Not pictured

Make informed decisions based on available data and continuously identify overall volume of products in production and apply set criteria, such as historical performance, to identify ideal products for auditing.



Immersive productivity

Take your designs to new levels with artificial intelligence and Xreality.



Dell has AI and VR-ready solutions that are optimized for the intensive graphic and processing power that they require. Our solutions are verified and certified by our Dell Technology Partner Program to ensure reliable performance.

Apply immersive technologies to existing business processes or develop new ones to creative or enhance your competitive advantage and drive the future of design and factory.

Recommended products



Additional setups

- A** Dell Precision 5860 Tower
- B** HTC Vive Pro or Vive Pro 2†
- C** Dell UltraSharp 32 HDR Monitor UP3221Q

Mobile solution

- D** Dell Pro Max 18 Plus
- E** Dell Pro Thunderbolt™ 5 Smart Dock - SD25TB5
- F** Dell Pro 14-16 Plus EcoLoop Backpack - CP5723

Employess on the go

Run to Meetings. Collaborate. Present.
Rock it. Repeat.



Stay connected and get more done with Dell Pro laptops.

Lightweight and slim, the Dell Pro 13 Plus features an aluminum top cover and palmrest for an elegant look and feel, as well as a durable design. With a quiet thermal design and exceptional battery life, you can work without distractions wherever you go. Enjoy enhanced performance and efficiency with options for built-in AI, including Copilot+.

Recommended accessories

- A Dell Pro 13 Plus
- B Dell Pro 14 Plus Portable Monitor - P1425
- C Dell Pro 14-16 Plus EcoLoop Urban Backpack – CP5625G
- D Dell Pro Thunderbolt™ 4 Smart Dock - SD25TB4
- E Dell Speakerphone with Multiport Adapter - MH3021P
- F Dell Pro Plus Compact Mouse – MS5120W
- G Dell 65W USB-C Adapter*

* Not pictured



Powering manufacturing and production power with AI

ACTIONABLE DECISIONS FROM REAL-TIME DASHBOARDS

Manufacturing efficiency with AI analytics

AI PCs rapidly process large datasets, using machine learning and intelligent analytics to extract actionable insights. They leverage real-time dashboards to aid manufacturers in spotting anomalies and trends, preventing losses, and enhancing decision-making.

DIGITAL TWINS AND VIRTUAL SIMULATIONS

Refining product designs and changes

Manufacturers can run multiple simulations simultaneously predicting how design changes will impact performance and reliability. Engineers can test designs virtually using digital twins, cutting down the need for physical prototypes that shorten product development timelines and reduce costs.

AI-DRIVEN WORKFLOWS FOR MEDIA PRODUCTION

Prevent slowdowns in your equipment

Leveraging AI PCs enables predictive maintenance that continuously monitoring equipment health through real-time data collection and analysis. AI technology can identify irregular patterns that indicate potential failure, allowing teams to address problems before breakdowns occur.

Dell Recommended Solutions:

High Performance AI PCs for Inferencing

Dell Pro Max 16 Plus
Dell Pro Max 18 Plus

High Performance AI PCs for Training

Dell Pro Max 16 Plus
Dell Pro Max 18 Plus
Dell Pro Max Desktops

Buy AI Solutions:

NVIDIA Omniverse
NVIDIA AI Enterprise
Autodesk Fusion 360

Matrox Imaging Library(MIL) ANSYS
Discovery
PTC Creo

Build AI Solutions

Dell Pro AI Studio (CLIP, Phi/Gemma)
Dell Professional Services for AI
Dell Accelerator Services for RAG on Dell Pro Max AI PCs

Simplify IT

Our most secure¹ and most manageable² commercial PCs make IT management a breeze

World's Most Secure Commercial PCs¹

According to Principled Technologies, no PC manufacturer offers the BIOS-level visibility Dell does.



SECURITY

Improve fleet-wide security with multiple layers of defense.

Reduce the attack surface and enhance long-term cyber resilience with [Dell Trusted Workspace](#)



Be secure from first boot with rigorous supply chain controls.



Maintain BIOS integrity with deep, firmware-level visibility.



Protect end-user identity from malware that looks to steal credentials.



Enrich OS-level data with PC telemetry to speed detection, response and remediation.



Layer on advanced threat protection from our ecosystem of best-of-breed software partners.



Shrink the IT-security gap with an integrated, AI-enabled solution

Explore hardware-assisted security with Dell, Intel & CrowdStrike.

[Learn More >](#)

MANAGEABILITY

Best-in-class PCs and peripherals management – only from Dell.

With [Dell Management Portal](#), you can manage Dell PCs, over the cloud, in conjunction with Microsoft Intune. [Dell Management Portal >](#)

And with Dell Device Management Console, you can save time with centralized and secure peripherals management. [Dell Device Management Console >](#)

Update and secure your fleet of Dell devices, with one application – [Dell Client Device Manager](#).

[Dell Trusted Update Experience](#) makes it simple to update endpoints with the latest BIOS and driver versions. Dell is the only Top-5 PC vendor that:



Publishes³ a device drivers and downloads release schedule:

IT Admins can deploy fleet-wide device updates on a predictable timeline.

[Learn More >](#)



Dell has the industry's first:⁴

Partner Portal accessible in Microsoft Intune, with fleet-wide BIOS password access capability and Enterprise application access and publication capabilities

Binary Large Object (BLOB) package-based solution, for endpoint BIOS settings configuration, using Microsoft Intune

Hardware OEM systems management solution to integrate with Intel vPro



Simplify PC refresh with Dell Services

Enabling every step of the PC lifecycle

Dell APEX PC as a Service

Fully customizable monthly subscription that can include PCs, peripherals, software and services with no upfront investment.

[Dell APEX PC as a Service \(PCAAS\) >](#)

ProDeploy Client Suite

PC refresh starts with getting new devices in the hands of your end-users. Dell ProDeploy Suite streamlines operations and increases productivity with configured PCs that are ready to use on day one with dynamic cloud-based provisioning and imaging.

When transitioning from old to new technology, ProDeploy Plus includes the ability to securely erase sensitive end-user data with sophisticated tools to sanitize devices and includes Asset Recovery Services for responsible retirement.

[Dell ProDeploy Client Suite >](#)

Modern Lifecycle Solutions

Dell Premier

324%

ROI over 3 years⁵

Modernize IT purchasing by shopping your catalog in a tailored online solution. Gain control over the entire IT ecosystem to cut costs, standardize ordering, access analytics and more.

[Dell Premier >](#)

Asset Recovery Services

2.8B

Pounds of electronics recovered through all recovery programs since 2007²

Let Dell help you securely and responsibly retire your old IT equipment - regardless of brand - to allow for a seamless transition from old to new technology, while protecting both your business and the planet.

[Asset Recovery Services >](#)

ProSupport Suite for PCs

ProSupport Suite is more than a 24/7 break-fix solution, it's a set of tools that automate and optimize your environment with little to no human intervention or end-user disruption.

Select from a robust library of Dell-authored scripts that correct company-wide issues quickly, minimizing remediation times and maintaining peak system performance. ProSupport Suite provides telemetry-driven data to arm IT with insights and make targeted updates, all controlled from a single dashboard.

[ProSupport Suite for PCs >](#)

Disclaimers

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1. Based on Dell internal analysis, October 2024 (Intel) and March 2025 (AMD). Applicable to PCs on Intel and AMD processors. Not all features available with all PCs. Additional purchase required for some features. Intel-based PCs validated by Principled Technologies. A comparison of security features (<https://www.principledtechnologies.com/Dell/OEM-security-feature-comparison-0424.pdf>), April 2024.
2. Based on Dell internal analysis, January 2025. Most-manageable commercial PCs when comparing the systems management capabilities of Dell Update Processes, Dell Manageability Solution capabilities and integrations with 3rd Party Management Solutions, with competitor update processes, systems management solution capabilities and integrations with 3rd party management solutions. 3rd Party Management Solution - Microsoft Intune, is a separate purchase.
3. Dell publishes a device drivers and downloads release schedule. Source: Based on internal analysis, May 2023. When comparing publicly available device drivers and downloads release schedules published by the Top 5 PC vendors, as of May 2023.
4. Capabilities of Dell Update Processes, Dell Management Portal and Dell Manageability Solutions capabilities and integrations with 3rd Party Management Solutions, with competitor update processes, partner portal capabilities in Microsoft Intune systems management solution capabilities and integrations with 3rd party management solutions. 3rd Party Management Solutions - Microsoft Intune, Workspace ONE, are separate purchases. Intel vPro, to support out-of-band systems management, is an additional system configuration upgrade; and Dell has the industry's first:
 - a. Based on Dell internal analysis - October 2024. Based on Dell Management Portal capabilities in Microsoft Intune compared to competitor Partner Portal capabilities in Microsoft Intune. Dell Command | Endpoint Configure for Microsoft Intune - the industry's first Binary Large Object (BLOB) package-based solution, for securely configuring & managing endpoints, using Microsoft Intune. Disclaimer: Industry's first device manageability solution to use a Binary Large Object (BLOB) package, recognized by Microsoft Intune, for secure endpoint configuration and management.
 - b. Dell Command | Intel vPro Out of Band - the industry's first hardware OEM systems management solution to integrate with Intel vPro - for remote management of systems, regardless of power-state. Disclaimer: Based on Dell internal analysis, November 2023.
 - c. Dell Command | Intel vPro Out of Band - the industry's first hardware OEM systems management solution to integrate with Intel vPro - for remote management of systems, regardless of power-state. Disclaimer: Based on Dell internal analysis, November 2023.

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1. Payment solutions provided and serviced by Dell Financial Services L.L.C. or its affiliate or designee ("DFS") for qualified customers. Offers may not be available or may vary in certain countries. Where available offers may be changed without notice and are subject to product availability, applicable law, credit approval, documentation provided by and acceptable to DFS and may be subject to minimum transaction size. Offers not available for personal, family or household use. Dell Technologies and the Dell Technologies logo are trademarks of Dell Inc. Restrictions and additional requirements may apply to transactions with governmental or public entities. At the end of the contract, the customer may renew the contract or return the equipment to DFS.
2. Dell Technologies has recovered 2.8 billion pounds of electronics since 2007. Source: Based on Dell internal analysis of publicly available data, April 2023.
3. Based on a Forrester Total Economic Impact™ Study Commissioned by Dell Technologies and AMD, "The Total Economic Impact™ Of Dell Premier," February 2024. Full study: The Total Economic Impact™ of Dell Premier.