

DELLTechnologies

Engineering, Architecture and Manufacturing

INCREASING PRODUCTIVITY BY ENABLING ADVANCED ENGINEERING
DESIGNS WITH PROFESSIONAL GRADE TOOLS



DESIGN ENGINEERING, ARCHITECTURE, AND MANUFACTURING IN THE MODERN ERA.

Engineering and design workflows that simply did not exist 3-5 years ago have radically altered the way products and structures are developed and built today.

- Advances in simulation and analysis, digital twins and generative design are enabling new design paradigms that bring designs to market faster and more cost effectively.
- Augmented reality, virtual reality and real-time photo-realistic rendering are enhancing design and collaboration.
- Integrated design, additive manufacturing and IoT technologies are driving better designs despite ever increasing product complexities.
- Building Information Modeling (BIM) is driving better design and manageability of projects and is being adopted as a government mandated technology for projects across the globe.

ENGINEERING, ARCHITECTURE AND MANUFACTURING USE CASES

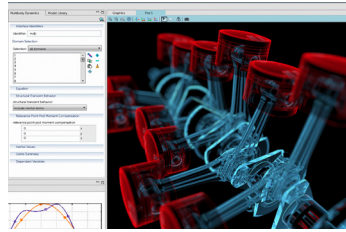
PRODUCT DESIGN (2D/3D CAD)



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

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SIMULATION AND ANALYSIS (CAE)



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

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VISUALIZATION



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.

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ARCHITECTURAL DESIGN



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

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MECHANICAL, ELECTRICAL AND PLUMBING



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

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STRUCTURAL ENGINEERING



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

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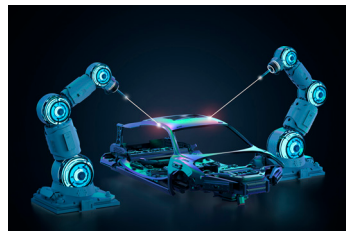
LOGISTICS



Design and improve logistical processes and systems as well as quality control to reduce costs and increase customer satisfaction.

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MANUFACTURING AUTOMATION



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

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IMMERSIVE TECHNOLOGIES



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

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EMPLOYEES ON THE GO



Mobilize your workforce to achieve increased productivity, both inside and outside of the office.

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Product design - 2D & 3D CAD

IMPROVE TIME TO MARKET BY OPTIMIZING YOUR DESIGNS USING THE LATEST ADVANCES IN CAD, INCLUDING REAL-TIME SIMULATION RESULTS DURING THE DESIGN PROCESS AND REDUCING THE NEED FOR PHYSICAL PROTOTYPES.



Dell Precision 5820 Tower 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 3DConnexion SpaceMouse to take advantage of the CAD software's features and to maximize productivity.

Dell 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 and accessories

Dell Precision 5820 Tower
Dell UltraSharp 27 USB-C Hub Monitor -U2723QE*
Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W*
Wireless 3DConnexion SpaceMouse Pro*

Mobile solution

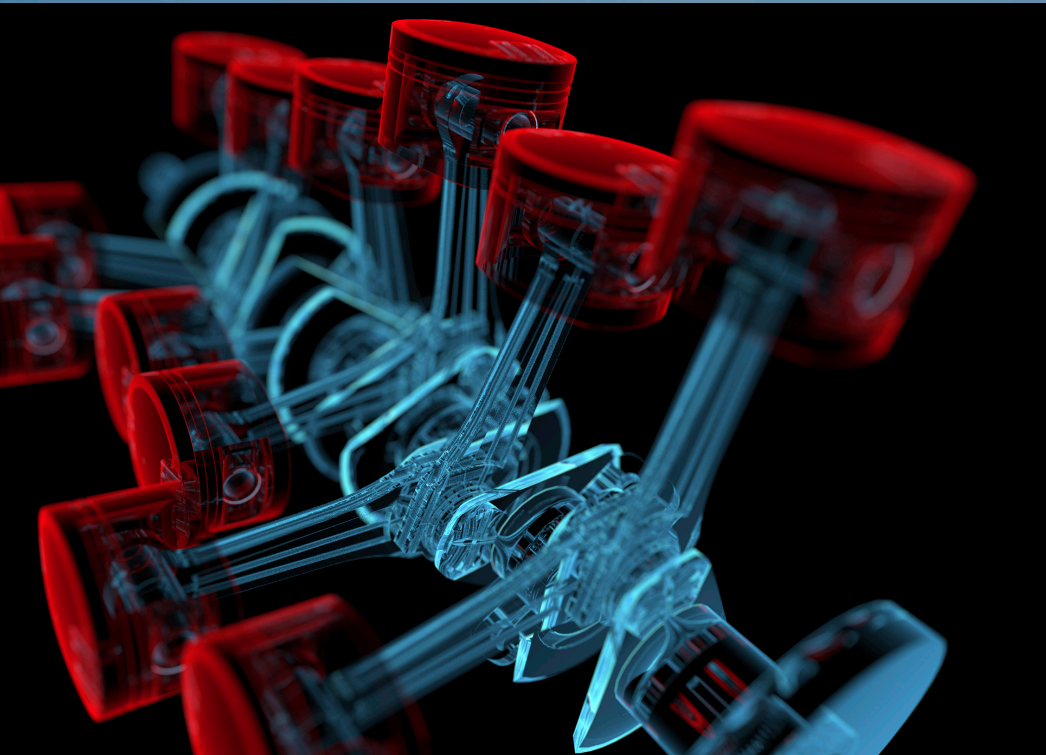
Dell Precision 3570, 3571 or 7570*
Dell Performance Dock - WD19TBS*

Rack solution

Dell Precision 3930 Rack*
Dell UltraSharp 24 Monitor - U2422H
OptiPlex 3000 Thin Client*
Dell Wyse 5030 Zero Client*

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 7920 Tower or 7670 mobile workstations 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.

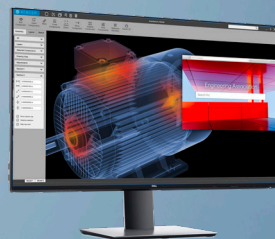
Dell Precision workstations provide the extreme performance to enable new paradigms in CAE such as digital twins, multi-physics, optimization and generative design.



A



B



C



D



E



F

Recommended products and accessories

- A. Dell Precision 7670
- B. Dell Performance Dock – WD19DCS
- C. Dell UltraSharp 32 4K USB-C Hub Monitor - U3223QE
- D. Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
- E. Dell Premier Wireless ANC Headset - WL7022
- F. Dell Portable SSD, USB-C 250GB
- G. Dell EcoLoop Pro Backpack - CP5723*
- H. Wireless 3DConnexion SpaceMouse Pro*

Desktop solution

- I. Dell Precision 7920 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 5820 Tower workstation provides scalable performance for visualization applications, such as:

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

Include 4K displays, X-Rite Colorimeter for color accuracy, and a VR solution to amp up your work space.

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



Recommended products and accessories

- A. Dell Precision 5820 Tower
- B. HTC Vive Pro
- C. Dell UltraSharp 27 4K PremierColor Monitor - UP2720Q
- D. Wireless 3DConnexion SpaceMouse Pro
- E. Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W

Mobile solution

- F. Dell Precision 7770*
- G. Dell Performance Dock – WD19DCS*
- H. Dell EcoLoop Pro Backpack - CP5723*

*Not pictured

Architectural design

MEET COMPETITIVE DEMANDS AND MEET COMPETITIVE DEMANDS AND DELIGHT YOUR CLIENTS UTILIZING DESIGN REVIEWS IN A RICH MIXED REALITY ENVIRONMENT.



The Dell Precision 3660 Tower workstation provides space-savings and powers architectural applications, such as:

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

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

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 Precision you can also show your work in VR/AR applications.



Recommended products and accessories

Dell Precision 3660 Tower
3DConnexion SpaceMouse Wireless*
Dell Premier Multi-Device Wireless*
Keyboard and Mouse - KM7321W*
Dell Pro Wireless Headset - WL5022*
Dell Dual Monitor Stand MDS19*
Dell UltraSharp 27 4K USB-C Hub
Monitor - U2723QE
HTC Vive Pro*

Mobile solution

Dell Precision 7570*
Dell Performance Dock - WD19DCS*

Rack solution

Dell Precision 3930 Rack*
Dell OptiPlex 3000 Thin Client*
Dell UltraSharp 24 Monitor - U2422H

* Not pictured † Not available in all countries

Mechanical, electrical and plumbing

PERFORM CLASH DETECTION BEFORE CONSTRUCTION TO AVOID COSTLY MISTAKES.
ALSO, SCAN PROJECTS AND USE FOR DETAILED RETROFIT AND MODIFICATIONS.

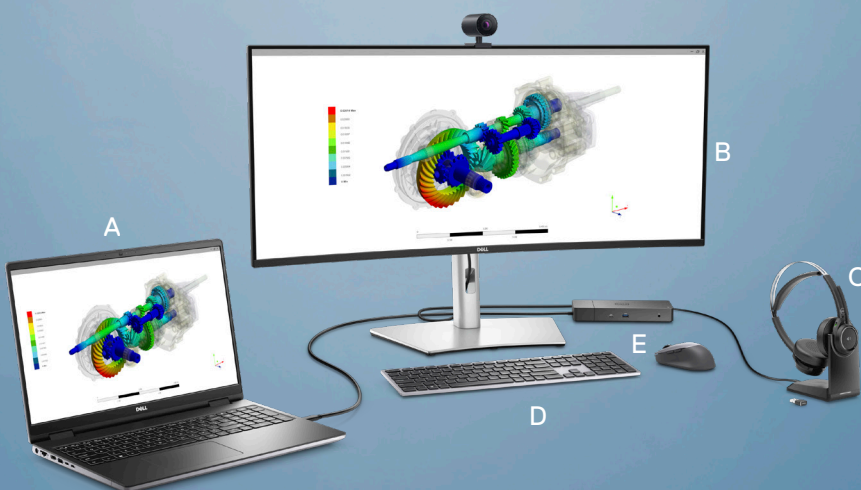


The Dell Precision 5820 Tower or 7670 mobile workstation provides outstanding performance and reliability for MEP and HVAC applications, such as:

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

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

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



Recommended products and accessories

- A. Dell Precision 7670
- B. Dell UltraSharp 38 Curved - U3821DW Headset - WL7022
- C. Dell Premier Wireless ANC
- D. Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
- E. Dell Performance Dock - WD19DCS

Desktop solution

- F. Dell Precision 5820 Tower*

* Not pictured

† Not available in all countries

Structural engineering

SIMULATE AND ANALYZE ALTERNATE SOLUTIONS TO DELIVER OPTIMIZED DESIGNS MORE EFFICIENTLY AND AT A REDUCED COST.



The Dell Precision 5820 Tower workstation 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(R) Steel

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

Dell Precision workstations provide the extreme performance to enable new paradigms in engineering analysis.



A



B



C



D

Recommended products and accessories

- A. Dell Precision 5820 Tower
- B. Dell UltraSharp 27 4K USB-C Hub Monitor - U2723QE
- C. 3DConnexion SpaceMouse Pro Wireless
- D. Dell Premier Wireless ANC Headset - WL7022
- E. Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W*

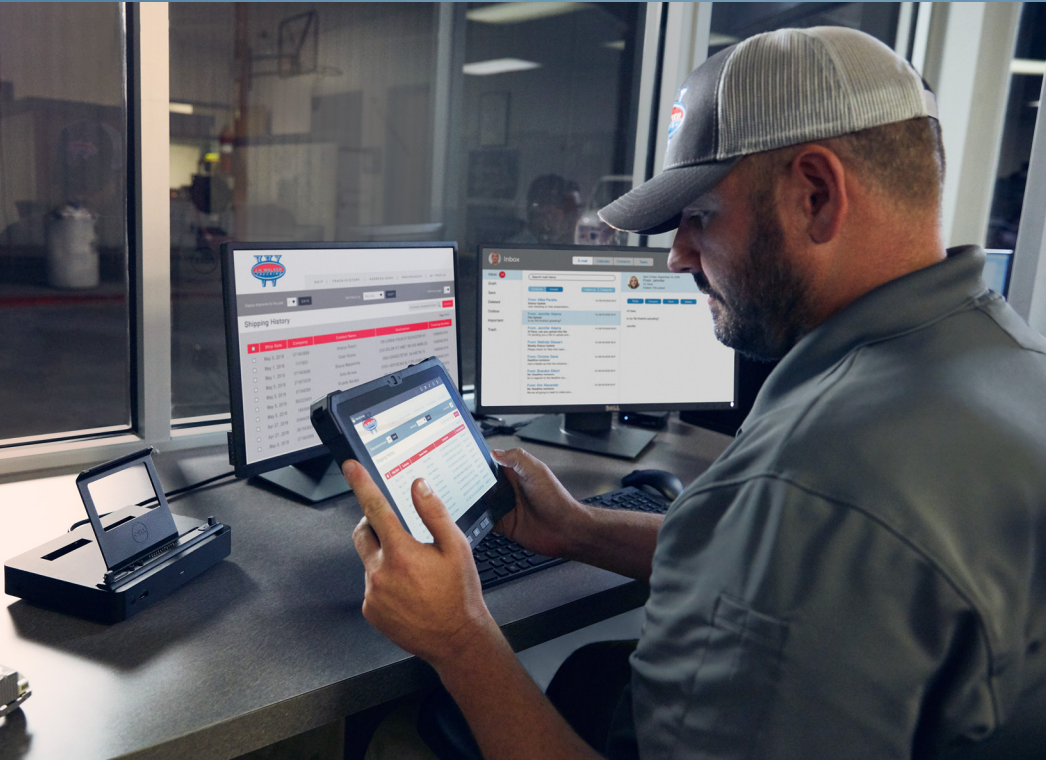
Mobile solution

- F. Dell Precision 7770*
- G. Dell Performance Dock - WD19DCS*
- H. Dell EcoLoop Pro Backpack - CP5723*

*Not pictured

Logistics

KEEP THE MANUFACTURING FLOOR AND DELIVERIES MOVING WITH RUGGED SYSTEMS THAT THRIVE IN TOUGH ENVIRONMENTS.



Dell Rugged products will help improve productivity and quality control.

The Latitude Rugged laptops and tablets capture real-time data for making logistical decisions in warehouses and on manufacturing floors.

Dell Rugged computing solutions are built for world-class reliability in the most extreme conditions. Get the toughest jobs done with stunning performance, reliable connectivity and outdoor-readable displays.

Dell rugged products can handle harsh environments where dust, water, extreme temperatures and vibrations are present.



Recommended products and accessories

- Latitude 7220 Rugged Extreme Tablet
- Keyboard with Kickstand
- Scanner Module*
- Extended I/O Module*
- Rugged Active Pen*
- Rugged Tablet Dock*
- Shoulder Strap*
- Rugged Cross-Strap*
- Lind Modular Battery Charger*
- Rigid Handle*

*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.

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.



Recommended products and accessories

- Dell EMC Edge Gateways 3200
- Dell EMC Edge Gateways 5200*

Rack solution

- Dell Precision 3930 Rack*
- Dell OptiPlex 3000 Thin Client*
- Dell UltraSharp 24 Monitor - U2422H*

*Not pictured

Immersive productivity

TAKE YOUR DESIGNS TO NEW LEVELS WITH ARTIFICIAL INTELLIGENCE AND XREALITY.



Dell has “Ready for VR” and AI 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.

Take advantage of these technologies with Dell Precision workstations, either a tower or mobile.

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 and accessories

- A. Dell Precision 7920 Tower
- B. HTC Vive Pro[†]
- C. X-Rite Colorimeter i1Display Pro^{*}
- D. Dell UltraSharp 32 4K USB-C Hub Monitor - U3223QE

Mobile solution

- E. Dell Precision 7770
- F. Dell Performance Dock – WD19DCS
- G. Del EcoLoop Pro Backpack - CP5723

* Not pictured

† Not available in all countries

Employeess on the go

RUN TO MEETING. COLLABORATE. PRESENT. ROCK IT. REPEAT.



Get to work faster and stay productive longer with Dell Latitude notebooks and 2-in-1s, which provide light, stylish mobility for faster and smarter end user experiences. With an intelligent, unified approach to management, Express technologies and the trusted Safe suite of solutions, Latitude delivers both innovation and security.

Stay connected and get more done with Latitude notebooks.



Recommended products and accessories

- A. Dell Latitude 9430
 - B. Dell Premier Rechargeable Wireless Mouse – MS7421W
 - C. Dell 7-in-1 USB-C Multiport Adapter - DA310
 - D. Dell EcoLoop Leather Sleeve 14 - PE1422VL
 - E. Dell UltraSharp 27 4K USB-C Hub Monitor - U2723QE*
 - F. Dell Premier Wireless ANC Headset - WL7022
 - G. Dell Premier Rechargeable Active Pen - PN7522W
 - H. Dell USB-C Mobile Adapter - DA310
 - I. Dell Thunderbolt™ Dock - WD19TBS*
- * Not pictured

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