ENGINEERING, ARCHITECTURE AND MANUFACTURING

INCREASING PRODUCTIVITY BY ENABLING ADVANCED ENGINEERING TOOLS
THE RIGHT TOOLS FOR THE JOB.
<table>
<thead>
<tr>
<th><strong>ENGINEERING, ARCHITECTURE AND MANUFACTURING USE CASES</strong></th>
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<thead>
<tr>
<th>PRODUCT DESIGN (2D/3D CAD)</th>
<th>VISUALIZATION</th>
</tr>
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<tbody>
<tr>
<td>Enhance product design including modeling, simulation, analysis, visualization and prototyping of products. Advance redefined workflows with digital twins.</td>
<td>Efficiently enable visualization tools for creating photo realistic images and animations, as well as AR/VR tools to view and collaborate on designs in context, by visualizing in real world scale.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>SIMULATION AND ANALYSIS (CAE)</th>
<th>ARCHITECTURAL DESIGN</th>
</tr>
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<tbody>
<tr>
<td>Drive performance of Computer Aided Engineering (CAE), including finite element analysis (FEA), computational fluid dynamics (CFD), and multibody dynamics (MBD).</td>
<td>Meet the demand for increased customization, and shorter development cycles, even with large data sets.</td>
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<table>
<thead>
<tr>
<th>MECHANICAL, ELECTRICAL AND PLUMBING</th>
<th>STRUCTURAL ENGINEERING</th>
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<tbody>
<tr>
<td>Proficiently handle mechanical, electrical and plumbing (MEP), as well as HVAC system design and analysis.</td>
<td>Capitalize on tools for analyzing structural components to meet safety and building code regulations.</td>
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<table>
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<tr>
<th>LOGISTICS</th>
<th>MANUFACTURING AUTOMATION</th>
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<tbody>
<tr>
<td>Design and improve logistical processes and systems as well as quality control.</td>
<td>Listen to your manufacturing floor to help make real-time decisions.</td>
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**Page 10**
Dell Precision 5820 Tower workstation provides scalable performance for 2D and 3D CAD applications, such as:

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

Combine with a single or dual Dell UltraSharp monitor(s) and a wireless 3DConnexion SpaceMouse to take advantage of the software’s features and to maximize productivity.

For a mobile CAD solution, consider the Dell Precision 7530 mobile workstation.

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

A. Dell Precision 5820 Tower
B. Dell UltraSharp 27 4K Monitor - U2718Q
C. Wireless 3DConnexion SpaceMouse Pro
D. Dell Premier Wireless Keyboard and Mouse - KM717

For a mobile solution consider:

E. Dell Precision 7530*
F. Dell Thunderbolt Dock - TB16*

*Not pictured
The Dell Precision 7820 Tower workstation provides 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 exceptional user experience.

For a mobile CAE solution, consider the Dell Precision 7730 mobile workstation.

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

Recommended products and accessories

A. Dell Precision 7820 Tower*
B. Dell Premier Wireless Keyboard and Mouse - KM717
C. Dell UltraSharp 27 4K Monitor - U2718Q
D. Wireless 3DConnexion SpaceMouse Pro
E. Jabra Evolve 65
F. Dell Precision 7730
G. Precision Dual USB-C Thunderbolt Dock – TB18DC
H. Dell Professorial Backpack
I. Dell Portable Thunderbolt 3 SSD 1TB

* Not pictured
Visualization

Create photo-realistic images, 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 8K displays, X-Rite Colorimeter, VR set for color accuracy and a VR solution.

For a mobile visualization solution, consider the Dell Precision 7730 mobile workstation.

Recommended solution

- A. Dell Precision 5820 Tower
- B. Dell UltraSharp 32 8K Monitor: UP3218K
- C. X-Rite Colorimeter i1Display Pro*
- D. HTC Vive Pro†

For a mobile solution consider:

- E. Dell Precision 7730
- F. Precision Dual USB-C Thunderbolt Dock – TB18DC*
- G. Dell Professional Backpack 17*  

* Not pictured  
† Not available in all countries
The Dell Precision 3630 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 workspace.

For a mobile architectural solution, consider the Dell Precision 7530 mobile workstation.

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 solution
A. Dell Precision 3630 Tower
B. Dell UltraSharp 27 4K Monitor - U2718Q
C. Wireless 3DConnexion Space Navigator
D. Jabra Evolve 65
E. Dell Premier Wireless Keyboard and Mouse - KM717

For a mobile solution consider:
F. Dell Precision 7530*
G. Dell Thunderbolt Dock - TB16*

For VR, also consider:
H. HTC Vive Pro†
I. Meta 2 Developer Kit *†
* Not pictured
† Not available in all countries
The Dell Precision 5820 Tower 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.

For a mobile MEP solution, consider the Dell Precision 7530 mobile workstation.

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

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**Recommended solution**

A. Dell Precision 5820 Tower
B. Dell UltraSharp 27 4K Monitor - U2718Q
C. Wireless 3DConnexion SpaceMouse Pro
D. Jabra Evolve 75°

**For a mobile solution consider:**

E. Dell Precision 7530°
F. Dell Thunderbolt Dock - TB16°

*Not pictured*
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.

For a mobile structural engineering solution, consider the Dell Precision 7730 mobile workstation.

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

Recommended solution

A. Dell Precision 5820 Tower
B. Dell UltraSharp 27 4K Monitor - U2718Q
C. Wireless 3DConnexion SpaceMouse
D. Jabra Evolve 75

For a mobile solution consider:

E. Dell Precision 7730
F. Precision Dual USB-C Thunderbolt Dock – TB18DC

*Not pictured
Dell Rugged products will help improve productivity and quality control. For example, Dell Rugged Tablets work well for warehouses, forklifts and delivery services to capture real-time data that drive logistical decisions.

Recommended solution

A. Latitude 7212 Rugged Extreme Tablet
B. Dell Rugged Docking Station
C. Rugged Tablet Keyboard and Kickstand
D. Rugged Tablet Rigid Handle

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

Logistics

Keep the manufacturing floor and deliveries moving with rugged systems that thrive in tough environments.
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, with a variety of I/O options, such as CAN Bus and Zigbee, factory floors can transmit data to a wider scale of devices.

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 solution**

A. Dell Edge Gateway 3000 Series  
B. Dell Edge Gateway 5000 Series
Endpoint security solutions
Your data is vital to your success and needs protected.

Security begins at the device with Dell Commercial PCs
Dell offers the world’s most secure commercial PC’s, powered by Intel® Core™ vPro™ processors with industry-leading endpoint security solutions that include BIOS protection, data encryption, advanced authentication and next-gen malware protection options+.

Data stays protected. End Users stay productive. IT stays confident.

Dell trusted devices

Dell Encryption
Protect data at rest with flexible encryption options. Whether it’s file-based encryption, dual encryption for an increased level of security or managing Microsoft BitLocker and self-encrypting drives, do it all from a single management console with streamlined compliance reporting.

Dell Data Guardian
For the ultimate in data security, protect data wherever it goes, including non-company networks. Control access to documents ensuring the right access for the right people, and monitor data activity and location for suspicious behaviors.

Dell Threat Defense
Stay ahead of constantly changing threats and prevent more than 99% of malware at the endpoint with an AI-based algorithm, powered by Cylance. Upgrade to Dell Endpoint Security Suite Enterprise and get advanced threat protection and encryption in a unified solution.

Dell Data Security
Protect data and prevent threats with innovative Dell Data Security solutions - security that works with the modern workforce, enabling end user productivity without sacrificing security.

* Some options may not be available in all countries.
\+ Based on Dell internal analysis, October 2017.
### ProSupport Plus

**Upgrade to the most complete support service with ProSupport Plus.**

Available with all client systems.

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<tbody>
<tr>
<td>Hardware support during local business hours.</td>
<td>✔️</td>
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<td>24/7 hardware and software phone support</td>
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<td>Proactive and predictive automated support</td>
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<td>✔️</td>
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<td>Repair accidentally damaged devices and keep hard drive after replacement</td>
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<td>Resolve issues quickly with ProSupport engineers</td>
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<tr>
<td>Avoid downtime with failure prevention</td>
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When compared to key competitors, ProSupport Plus with SupportAssist reduced time to resolve a failed hard drive with:

- **92%** Up to 92% less time to resolution¹
- **68%** Up to 68% fewer steps to resolution¹
- **11x** Up to 11x faster time to resolution¹
- **13** Up to 13 fewer steps to resolution¹

### ProDeploy Plus

**Deploy PCs with greater speed and less effort.**

**Experts**

Enjoy unprecedented efficiency thanks to best practices learned from years of experience. Gain up to 56% faster deployments² and $792 reduced deployment cost per PC².

**Insights**

Gain expertise from teams who do this every day. We custom-configure and image units globally every week, and provide project documentation with knowledge transfers.

**Ease**

Effortlessly deploy PCs by outsourcing to us. You’ll have the flexibility to select the level of service that matches your IT staff outsourcing needs, and we perform deployments after hours or on weekends for zero disruptions during business hours. We’re also available in 70 countries.

- **56%** Up to 56% reduced deployment time²
- **$792** Reduced deployment cost per PC²

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