Dell Technologies works with strategic partners to deliver solutions providing business value from mobile, desktop to the data-center.

Dell Precision Workstations

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Dell Latitude Rugged PCs

Find out more ›

Dell EMC PowerEdge Servers

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Discover our GIS solutions ›
# Geographic Information System (GIS) in the Modern Era

The GIS industry is seeing a technological revolution due to access to vast amounts of data and almost limitless computing power.

## From Analog to Digital
GIS is not about creating static printed maps anymore. Digital data can be collected, analyzed, and shared in an interactive fashion that far eclipses the capabilities of the tradition printed map.

## Ubiquitous / Data is everywhere
GIS solutions can be created by almost anyone and can be distributed via the web to reach the broadest audience and device set. Data can be collected from almost any source including databases, web services, online repositories, live video feeds, drones, and satellites just to name a few.

## Real-Time and Relevant
With the move to cloud computing and the Internet of Things (IoT), maps are now able to convey real-time information that is relevant to almost every human endeavor. Artificial Intelligence is being used to quickly and accurately analyze complex problems with lightning-fast results.

## New Use Cases
GIS solutions are addressing new problems in areas such as Smart Cities, near real-time situational awareness, Emergency Operations, and Resources.

See the most common GIS workflows below.
To prosper in a world where GIS is the basis for communication and response, today’s leading GIS professionals need to streamline workflows using specialized compute platforms from the field to the office and the data center. The challenge is doing that effectively while incorporating new technologies such as IoT, artificial intelligence and rapid response.

**Challenges:**

1. Complex data from many sources requires high performance computing solutions.
2. Sophisticated analysis algorithms including artificial intelligence require extreme compute resources
3. Real-time distribution to many devices requires efficient application development and deployment

**Overcome these challenges with Dell’s ArcGIS solutions below:**

**ArcGIS Optimized Solutions**
Dell Precision 5750 Mobile Workstation

The ideal mobile workstation to provide a balance of mobility, performance, and a best-in-class 17” display for the professional ArcGIS user.

Dell UltraSharp 32 4K USB-C Monitor | U3219Q

Experience outstanding screen performance on this 31.5” 4K USB-C monitor featuring InfinityEdge and multitasking capabilities.

Dell Premier Wireless Keyboard and Mouse | KM717

Not only will it enhance productivity, but its elegant design will fit into virtually any workspace. For increased productivity you can simultaneously pair up to two compatible devices with Bluetooth® LE.

Dell Thunderbolt Dock | WD19TB

Work at full speed with Dell’s powerful Thunderbolt Dock. Charge your system faster, support up to three 4K displays and connect to your peripherals via a single cable.

Dell Optimizer for Precision

Click here to learn about dynamic customer performance tuning and analytics for GIS workflows.

Find More

ISV certification

Click here to learn about the performance and reliability benefits of ISV certification for GIS Applications.

Find More

Why Dell Precision for GIS (Mobile)?

Find More

Dell Precision 5750 Workstation is a great balance of power and mobility solution for ArcGIS desktop users.
Dell Precision 7820 Tower Workstation provide a performant and scalable solution for advanced ArcGIS desktop users.

**Dell Precision 7820 Tower**
Ideal for the advanced ArcGIS Pro Desktop user providing the power and expandability for the most demanding GIS applications.

**Peak Performance:** Up to dual 28 core Xeon® processors offer businesses the performance, manageability, built-in security features, and stability of Intel® architecture and align to a future-proof roadmap.

**Accelerate every project:** Run your software as fast as possible with the latest NVIDIA Quadro graphics for complex mapping workflows and AI related development tasks.

**Drown out distraction:** Focus on your tasks with the workstation that’s quieter than ever. A new multichannel thermal design delivers advanced cooling and acoustics for enhanced cooling and quiet operation when your system is under heavy workloads.

**Dell Wireless Premium Keyboard and Mouse Combo | KM717**
Not only will it enhance productivity, but its elegant design will fit into virtually any workspace. For increased productivity you can simultaneously pair up to two compatible devices with Bluetooth® LE.

**Dell UltraSharp 43 4K USB-C Monitor: U4320Q**
Streamline your work with UHD resolution and 43” display for the most demanding mapping applications. A height adjustable stand and USB-C connectivity maximize comfort and productivity.

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**Fixed ArcGIS Solution**

**Precision 7820 Tower Workstation**

Dell Precision 7820 Tower Workstation provide a performant and scalable solution for advanced ArcGIS desktop users.
Rugged Mobile ArcGIS Tablet Solutions

Dell Latitude 7220 Rugged Extreme Tablet

In the most challenging environments, Dell Rugged provides solutions for every scenario whilst keeping your data safe with security options like integrated SmartCard readers.

Rugged For the Real World: You can't slow down when the job is tough. No matter what challenges the world throws at you, handle them with confidence. Latitude Rugged means extreme durability for world-class reliability in rough conditions.

Productivity Anywhere: You need to stay productive and work efficiently even when the elements are working against you. Latitude Rugged is designed for the way you work with features like outdoor-readable displays, glove-capable touch, legacy IO capability and advanced wireless connectivity.

Business Class Control: The Dell Latitude Rugged portfolio allows you to take your business to the world’s most challenging job sites. Latitude Rugged systems keep you in control of your technology with the same industry-leading security, manageability and reliability as the rest of the Dell Latitude portfolio.

Why Dell for Rugged PCs?

Rugged accessories:

Rugged tablet & notebook carrying accessories
Take your rugged tablet and notebook anywhere in the field, with lightweight and flexible shoulder straps, durable nylon and rigid handles, and easy-to-use cross-straps and chest-straps.

Rugged tablet dock
Maximize productivity when the job brings you back to the office with the Tablet Desk Dock. Offers large monitor or dual display support with VGA, serial and Display Port outputs, and dual spare battery charging slots.

Vehicle/Remote Docking
Vehicle/Remote docking solutions offer computer charging, security, and connection to peripherals in the enterprise and other in-vehicle workplaces. Maximize productivity with these rugged lightweight docks which were built with theft deterrence, longevity and stability in mind.

Active Stylus
Get the most input responsiveness with an active Stylus. This Stylus is self-powered for a responsive pen experience on your Rugged Tablet.

Take mobility to the extreme

A tablet built to lighten your load on the job weighing in at only 2.82 lbs. With optional straps, handles and docking solutions we can deliver maximum mobility to keep up with you.

Work anywhere: Whether it’s the front line or the flight line, you’ll be confident you have the right solutions to accomplish your daily tasks without having to sacrifice performance.

Steadfast connection: Optimized mobile connectivity that’s 3X faster and dedicated GPS keeps you connected at the most critical moments wherever your job takes you.

Performance where you need it: Featuring the latest 8th Gen Intel® Core™ processors and dual hot swappable batteries to power through the day.

Keyboard Cover & Kick stand
Improve your productivity in the field by adding an IP-65 rated full-size keyboard with customizable RGB backlight keys for easy identification of secure/unsecure networks. The keyboard cover also offers additional screen protection and comes with a 180˚ kickstand.

Latitude 7220 Rugged Extreme Tablet spec sheet

Click here to see our Charge Solutions
Dell Latitude Rugged 5420/5424 and 7424 Rugged Extreme Laptops

When you need Rugged capability in any circumstance, Dell Rugged delivers reliability and full-scale mobility solutions to fit every scenario you encounter whilst keeping your data safe with security options like integrated SmartCard readers.

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**Nerves of steel.**
The latest 14” notebook made with shock-absorbent materials that meets rigorous military-standard requirements. Compression-sealed from sand, dust and liquids. Rugged performance powered by the latest 8th Gen Intel® Core™ processors.

**A True Workhorse.**
The Dell Rugged Extreme 7424 offers the ability to add discrete graphics, optical disk drive, GPS and mobile broadband to ensure you have the power you need, as well as dual hot swappable batteries for non-stop use. Secure your data with integrated security options like Smartcard and Fingerprint readers to keep unauthorized users out.

**Rugged accessories:**
- Shoulder strap: Enhance the portability of your notebook with the lightweight and flexible shoulder strap. The strap attaches easily and securely to the Quick Disconnect receptacles on the system and is easily removed when necessary.
- Battery Charger: Simultaneously charge Dell batteries for the 5420, 5424 and 7424 Dell Latitude Rugged notebooks and 7220 and 7212 tablets to keep spare batteries fully charged and ready-to-go to power your day.

**Latitude 5420 Rugged Laptop spec sheet ›**
**Latitude 5424 Rugged Laptop spec sheet ›**
**Latitude 7424 Rugged Extreme Laptop spec sheet ›**

**Docking Solutions:**
Flexible docking solutions for the office, vehicle or any remote location where you need to be connected. Connect to legacy IO, peripherals and networks with ease where your job takes you.

**Why Dell for Rugged PCs?**
Find Out More
GIS Server Solution
Dell EMC PowerEdge R640

The PowerEdge R640 is the ideal dual-socket platform for dense scale-out data center computing and storage. Benefit from the flexibility of 2.5" or 3.5" drives, the performance of NVMe and embedded intelligence to ensure optimized application performance in a secure platform. With embedded diagnostics and SupportAssist, the R640 delivers maximum uptime in a worry-free environment.

Dell EMC PowerEdge R640
Data center evolution starts with modern platforms that easily scale and are optimized for application performance. The PowerEdge R640 is built upon a scalable system architecture and provides the choice and flexibility to easily meet performance demands.

Simplify deployment and easily scale from 3 to 1000+ nodes for software-defined storage with Dell EMC Ready Nodes.

Maximize performance with up to 10 NVMe drives and 24 DIMMs, 12 of which can be DCPMMs or NVDIMMs

Scale compute resources with 2nd Generation Intel® Xeon® Scalable processors, and tailor performance based on your unique workload requirements.

ArcGIS Enterprise
ArcGIS Enterprise is a full-featured mapping and analytics platform that includes a powerful GIS server plus dedicated web-based GIS infrastructure to organize and share your work.

Dell / ESRI Partnership
Dell and Esri work together to provide Geographic Information System (GIS) solutions, built upon the philosophy that a geographic approach to problem solving ensures better communication and collaboration.

Why Dell PowerEdge for GIS?

Dell 18.5 in 1U Rackmount LED KMM Console - Keyboard with 1U KVM Mounting Bracket
Integrated keyboard, mouse and monitor for slide out rack mounted server connection. Easily deployed tool-less installation with ReadyRails II interface and multiple video modes in a 18.5 inch widescreen display.

1U Cable Management Arm, Customer Kit
The Cable Management Arm from Dell™ makes your work space clutter free. It organizes data and power cables to optimize the available area. This product has been tested and validated on Dell systems.
Virtualization Solution
ArcGIS Pro Virtualization Dell Appliance

The ArcGIS Pro Virtualization Dell Appliance is designed, tested, and optimized to successfully virtualize ArcGIS Pro (ArcGIS Desktop). This includes providing the capability to deliver rich graphical experience when using ArcGIS Pro or ArcMap with 2D and 3D data.

ArcGIS Pro Virtualization Dell Appliance Benefits

Click here to learn more about virtualizing ArcGIS Pro with Dell PowerEdge

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Why Dell PowerEdge for for GIS?

Find Out More

PowerEdge R740 spec sheet ›

Dell EMC PowerEdge R740 Rack Server

You can be confident because the ArcGIS Pro Virtualization Dell Appliance has been configured for you to simplify the delivery and deployment of ArcGIS Desktop, including ArcGIS Pro, in a virtualized environment. The appliance addresses the ArcGIS Pro requirement for shareable Graphics Processing Units (GPU). This appliance, a collaborative effort between Esri/Dell/NVIDIA/VMWare, represents the most cost effective and quickest path to virtualizing ArcGIS Pro.

NVIDIA Quadro Virtual Workstation Software (Quadro vWS)

Also required as part of the ArcGIS Pro Virtualization Dell Appliance is NVIDIA GRID Virtual Workstation Software. The NVIDIA GRID™ software provides the technology for the virtualization tier to deliver accelerated virtual desktops and applications from the data center to any user, anywhere. This software is priced separately from the appliance to accommodate the number of Concurrent Users to support a customer’s actual environment. The License Type of the software is an Annual Subscription: A software license that is active for 1 year and includes a support, upgrade and maintenance program during the subscription.

Find out more ›

NVIDIA has developed the Metropolis video analytics platform by partnering with Dell Technologies. The combination of an integrated and tested solution based on the Dell EMC PowerEdge R740xd server and NVIDIA T4 GPUs enables multiple video analytics applications to co-exist on a single server in a containerized manner. This solution makes it easy to deploy, manage, and scale.

Find out more ›

PowerEdge R740 spec sheet ›
Run Microsoft SQL on Modernized Infrastructure.

Deploy the powerful foundations that help unlock insights from your most valuable asset: your data.

**Modern Infrastructure**

Dell EMC provides the best-of-breed foundational components that enable you to build a modern, scalable and resilient IT infrastructure for your data estates.

**Agile Operations**

Dell EMC offers broad choice in platform and deployment models that enable greater operational flexibility including: hardware virtualization, on-premises and hybrid cloud deployments, and containerization.

**Intelligent Outcomes**

Let next-generation analytics capabilities take you behind the data to reveal valuable insights, fuel business innovation, and deliver competitive advantage.

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