

RUGGED SOLUTIONS FOR MANUFACTURING

DIGITAL MUSCLE FOR INDUSTRIAL ENVIRONMENTS

DELLTechnologies

 NVIDIA.

LAPTOPS AND TABLETS BUILT FOR INDUSTRIAL ENVIRONMENTS KEEP PRODUCTION PROCESSES GOING.

Standard PCs, laptops and tablets won't withstand the harsh conditions and intense usage in production plants and distribution facilities. Your workers need hardware that they can count on. Dell Technologies offers a rich portfolio of Rugged solutions designed for industrial production settings, where they can run reliably at the highest performance levels.



Empowering the workforce

Dell Technologies Rugged laptops and tablets are engineered for the needs of your mobile workers and the demanding environmental conditions they may encounter. At a time of generational turnover and a competitive labor market, they will also help you demonstrate that you are serious about empowering people.

One technology partner

When you source Rugged laptops and tablets from Dell Technologies, you can rely on the same provider that designs and manufactures the computing, storage, networking, peripherals and other solutions your company may already use. You receive responsive, knowledgeable support for all Dell Technologies products through one single point of contact, backed by manufacturing expertise.

Manageable and simple

Don't complicate IT workloads by introducing a new device type. IT managers can deploy and manage our Rugged solutions from Dell Technologies efficiently with the same tools they may already know, such as the Dell Client Command Suite together with VMware Workspace ONE. They can also use Dell Rugged Control Center software to customize Rugged hardware to your organization's workflows and propagate the same policies to all Rugged devices.

Continuous innovation

Dell Technologies' culture of pervasive innovation allows standard and Rugged solutions to evolve in tandem. We are always seeking more ways to break new ground and raise the bar in performance, power efficiency, parts engineering and other aspects of device design. Because the resilience and durability of the Rugged laptops and tablets are key to their success, we have also made testing extremely stringent.

The best result from your investment

Customized Dell Financial Services and Dell Technologies APEX Flex on Demand models can help keep your spending controlled and predictable. These offerings can wrap Dell Technologies hardware, software and services with production machinery and equipment from other vendors.

Rugged hardware can perform reliably long past the point when ordinary devices would fail. Assuming a five-year equipment life span, it's considerably less expensive for manufacturers to own Rugged than standard devices. Use our TCO calculator to estimate your costs and the advantages of owning Rugged solutions for your environment.

[TCO calculator](#)



WHAT MAKES RUGGED SOLUTIONS FROM DELL TECHNOLOGIES UNIQUE?

Some technology providers only provide ruggedized hardware while others may offer a broad product portfolio that does not include such products. Dell Technologies covers the full spectrum of technology, from the harshest, most remote environments in your facilities to the back office, the cloud and anywhere in between. But that's not all that makes our Rugged solution family uniquely valuable. Also consider the following:

Resilient, agile supply chain

Rest assured that you'll receive the Rugged products you ordered, properly preconfigured, when you expect them. Comprising many of the same components as the standard devices, our Rugged solutions benefit from the scale and resilience of the worldwide supply chain Dell Technologies has created and perfected over many years.

Global support ensures uptime

With services like SupportAssist within Dell ProSupport Plus, we can identify and address potential hardware issues in your business-critical Rugged devices before they disrupt your processes. Next-day, on-site support minimizes downtime and gets people back to work. The consistency of components across Rugged and standard devices ensures fast help from our support experts.

Ready for production

You can hand the Rugged devices to workers as soon as the shipment arrives. With Rugged Custom Factory Integration from the Dell Technologies ProDeploy Client Suite, the hardware comes fully tested and preconfigured for your industrial environment, with the right software image already installed. Once employees sign in, they can be up and running with their new Rugged laptop or tablet in very short order.

Thriving in extremes

In Dell Technologies labs, Rugged solutions, components and peripherals undergo extensive, rigorous testing beyond the challenges of most manufacturing environments. Test engineers ensure that Ruggedized devices can withstand rough handling, punishing temperatures, moisture, chemical exposure, shocks, drops, salt air, sand, pressure, vibration and noise. Third-party laboratories verify and certify our test protocols and results.

Many ways to get work done

Your team members need to use the Rugged laptops and tablets while they operate equipment or vehicles, walk through a facility, sit at a desk, or transition between locations. Dell Technologies provides a wealth of options, including vehicle and desktop docking stations, keyboards, kickstands, shoulder and hand straps, styluses, chargers, mobile mounts and other accessories, to help employees use Rugged devices effectively under real-life conditions. You can also extend the usefulness of Rugged tablets with modules that allow you to add a barcode scanner, additional USB ports and a detachable keyboard.



For all Rugged devices, we follow the MIL-STD-810G/H standards developed by the U.S. Military to make certain that they perform as expected in real-life environments. We run additional, more stringent testing to verify that our Rugged Extreme solutions run reliably under even more demanding conditions.

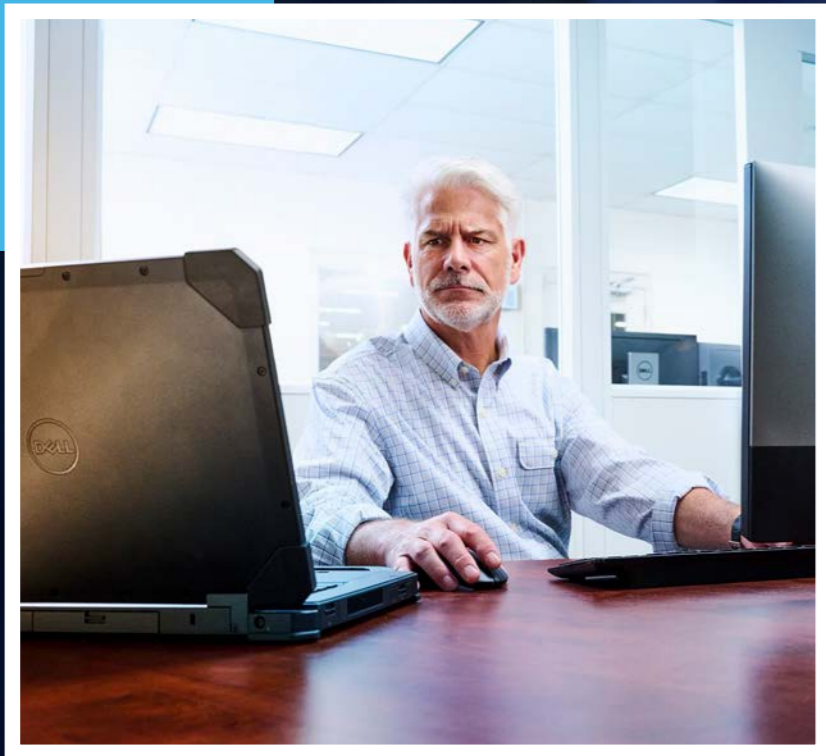




A GREAT DAY IN THE LIFE OF YOUR MANUFACTURING OPERATION

Here are a few everyday scenarios to give you a sense of how Rugged devices can prove their value in your manufacturing environment.





Through their Rugged devices, managers can stay connected with the organization in remote locations. If they need to engage somebody in product engineering, sales, services or procurement, they can rely on the devices' integrated communications options to reach the right people or data.

WIDER REACH AND VISIBILITY FOR PLANT MANAGERS

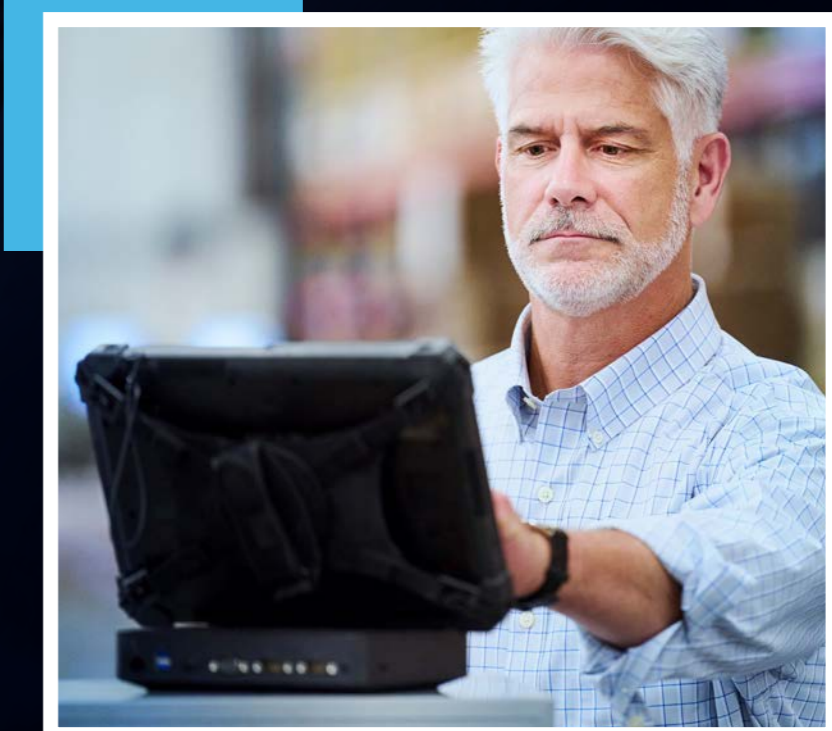


Even your most experienced plant managers may not have all the answers or remember everything they need to know. But anytime, anywhere assistance from a Rugged laptop or tablet can make their lives easier and help them focus on what matters. As they discuss activities in the manufacturing plant, they can review production milestones, delivery commitments or performance data and make the best decisions.

DRIVING FOR THE BEST POSSIBLE PROCESS QUALITY

What you see may not be the complete picture. To understand production processes, you may want to rely on your trusted Rugged device to look up product specifications, performance metrics, inventory levels, worker evaluations or equipment records. You can then make changes based on a full view of the context.

On the other hand, when you see how improvements in people, processes and production machinery work would be beneficial, act on your insights. Right there and then, you can take a picture, take notes or conference with team members to bring about productive change.



SETTING THE PRODUCTION CREW UP FOR SUCCESS

When production teams can use their Rugged devices to display supporting data and documents, they can be both more accountable for the outcomes of their workflows and more autonomous in managing them.



Team members can also use their Rugged tablets or laptops to enter their time and managers can review employees' shift records as they plan assignments. And, if there's any question about materials, inventory, equipment or production schedules, they can find the answer right there in the company's systems.



REAL-TIME, RELIABLE INVENTORY MANAGEMENT

When inventory levels change, accurate updates should promptly hit your business management systems. If they're delayed or dubitable, team members who manage materials, production and procurement are more likely to make erroneous, expensive decisions.



Equipped with a Rugged tablet, workers can record inventory movements as they happen, without having to remember them or use notepads and other workarounds. In Rugged Control Center, you can configure Rugged devices to accommodate a barcode scanner for this purpose. Warehouse workers can also take pictures of shipments and items to forward to team members. When it's time to hand off the device to a colleague at the end of a shift, they don't need to take time to recharge it. They can keep it going with hot swappable batteries. And, because screens and keyboards are made to withstand chemical exposures, they can keep them clean with alcohol or a medical-grade disinfectant.





INCH	MM
0.984	25
1.181	30
1.378	35
1.575	40
1.772	45
	50

Using the same Rugged device, employees can record deviations in parts and materials and share them with production and materials managers for consideration. When more senior workers train colleagues, they can avoid any ambiguities by referring to product and process documents and other company resources.



MAINTAINING THE PACE OF PRODUCTION

You can empower assembly workers to answer many of their own questions and take the right actions by giving them access to production specs, drawings and documentation right where they are, on a Rugged tablet or laptop within easy reach. They can keep their workflow going instead of pausing to look for a supervisor. If they have dirty hands or wear gloves — no problem for the hardware, which comes with glove touch, rain touch and finger touch modes.



FLAWLESS QUALITY CONTROL

When you are the last one to be accountable for the quality of manufactured goods before they are shipped, compromise is not an option. At the same time, you don't want to hold up the line.



The connectivity built into your device enables you to connect to company systems — no matter where you are — and look up information without asking for assistance. By using Rugged Control Center, you can enable your Rugged tablet to access the company's quality standards records by pressing just one button. You can also use the camera on your Rugged tablet to document deviations from the product standard. When departures from quality parameters need decisions and action, you can immediately reach out to the right persons and mitigate the risk of a misstep for the company.



FREEING FORKLIFT DRIVERS FROM DISTRACTION

Forklift drivers are busy moving goods around safely and efficiently. To eliminate potential distractions from using paper documentation or dismounting the forklift to access critical task information, you can provide them with a Rugged tablet mounted directly on the forklift. No matter whether they operate under intense solar glare and heat, during a frigid downpour or in an artificially lit warehouse, they can use the touch screen to access company systems and record incoming and outgoing shipments without wasting time leaving the forklift. Relying on the same device, forklift operators can reach out to warehouse and production managers or other team members.



By using Rugged Control Center, IT managers can efficiently enable one-touch access to company systems through Rugged devices and adjust the keyboard backlighting to make it easier to use for forklift drivers and other workers.



MORE UPTIME FOR INDUSTRIAL ASSETS

You rely on your expert technicians to make sure that industrial equipment runs without unplanned downtime. You want to give them access to all relevant resources and documents without forcing them to step away from the machinery.



Using one of many available port options to connect their Rugged laptop to production equipment, technicians can diagnose current or emerging performance issues before they impact plant operations or customer commitments. The same device allows them to review drawings and documentation in company systems, order parts and tools, and schedule follow-up maintenance. Once administrators configure Rugged hardware in Rugged Control Center, workers can reach company systems by pressing a single button.



TEAMWORK BEATS MACHINE TROUBLE

Failing or underperforming production-critical equipment can rack up enormous financial costs and process overhead. When your technical specialists team up to find a remedy, they may need to work with the vendor or connect with team members elsewhere.



No matter where the industrial equipment is or what the conditions at the location are, Rugged devices can help. Technicians can access historical machine records, then download and monitor live data from the machinery while they have a discussion with peers or vendor support.



RUGGED SOLUTIONS FOR YOUR PRODUCTION ENVIRONMENT*

*All devices are equipped with Windows 10 and are available up to 8th Gen Intel i7.



	Notebooks		Tablet
	Latitude 5430 Rugged Notebook	Latitude 7330 Rugged Extreme Notebook	Latitude 7220 Rugged Extreme Tablet
Processor Options	11th Gen Intel Core i5, i7	11th Gen Intel Core i5, i7	8th Gen Intel Core i5, i7
Memory	Up to 64GB SoDIMM	Up to 32GB	Up to 16GB
Graphics	Intel Iris Xe; NVIDIA T500	Intel Iris Xe; NVIDIA T500	Intel Integrated UHD 620
Storage Options	Up to 2TB	Up to 2TB	Up to 2TB
Display	14" FHD Touch (1100 nit) and Non-Touch (400 nit)	13" FHD Touch (1400 nit)	11.6" FHD Touch (1000 nit)
OS	Windows 11, Windows 10 DGR	Windows 11, Windows 10 DGR	Windows 10
Connectivity	5G Mobile Broadband, WLAN, Bluetooth, GPS	5G Mobile Broadband, WLAN, Bluetooth, GPS	5G Mobile Broadband, WLAN, Bluetooth, GPS
IP	IP-53	IP65	IP65
Drop Height	36" (91 cm)	72" (183 cm)	48" (122 cm)
Temp Range (Operational)	-20°F to 145°F (-29°C to 63°C)	-20°F to 145°F (-29°C to 63°C)	-20°F to 145°F (-29°C to 63°C)
Temp Range (Storage)	-60°F to 160°F (-51°C to 71°C)	-60°F to 160°F (-51°C to 71°C)	-60°F to 160°F (-51°C to 71°C)
Dimensions	Height: 1.32 in (33.6 mm) Width: 13.38 in (340 mm) Depth: 8.66 in (220 mm)	Height: 1.43 in (36.5 mm) Width: 12.75 in (324 mm) Depth: 8.66 in (220 mm)	Height: 7.99 in (203 mm) Width: 12.29 in (312.2 mm) Depth: 0.96 in (24.4 mm)
Weight	Starting at 4.35 lb (1.97 kg)	Starting at 5.11 lb (2.32 kg)	Starting at 2.93 lbs (1.33kg)
MIL-STD Testing	MIL-STD-810H	MIL-STD-810H	MIL-STD-810G/H
Hazardous Location Certification	N/A	C1D2, ANSI ISA 12.12.01 +CSA / MIL-STD-461F	C1D2, ANSI ISA 12.12.01 / MIL-STD-461F
Compatible Accessories			
Pens	Passive Pen	Passive Pen	Active Pen; Passive Pen
Scanners	Camera Scanner	Camera Scanner	Detachable scanner module; Camera scanner
Keyboards	Standard, RGB Backlit, Rubberized Backlit	Standard, RGB Backlit, Rubberized Backlit	Folio KB; Rigid KB
Handles	Removable Rigid Handle, Soft Nylon Handle	Removable Rigid Handle, Soft Nylon Handle	Rigid Handle; Nylon Handle
Straps	Shoulder Strap	Shoulder Strap	Chest Strap; Shoulder Strap; Hand strap
Bags	Yes	Yes	Yes
I/O Modules	Upgradable additional ports	Upgradable additional ports	Detachable I/O module
External Battery Charger	Yes (Modular Charger)	Yes (Modular Charger)	Yes (Modular Charger)
Desk Docks	Yes	Yes	Yes
Vehicle Docks	Yes (Multiple Options)	Yes (Multiple Options)	Yes (Multiple Options)



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MORE INFORMATION.**



Connection
we solve IT™

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1.800.800.0014 ■ www.connection.com/Dell

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