Dell Industrial Solutions
Rugged Portfolio Products
Technology needs beyond the desk
DELL EMC Forum, December 12th, Madrid.
75% of Industrial manufacturers have technology initiatives driven by Digital Transformation

Unique challenges drive technology needs

**Environmental Factors**
- Dirty, Dank or Dangerous operating environments
- Harsh conditions with high/low temperature, dust, water, vibrations and humidity

**Connectivity & Standards**
- Flexibility to connect modern and traditional IT and Operations systems
- Requires wide variety of native wired and wireless I/O

**Convergence of OT & IT**
- Interoperability between systems managed by Operations and IT
- Ability to manage and secure OT and IT
These unique needs require specialized solutions

Purpose built for Industrial environments

Environmental Factors

- **Extreme tested** to ensure products are designed to perform in harshest environments
- **Superior quality & reliability** to ensure no interruptions and predictable performance

Connectivity & Standards

- **Certified** for regulatory, industry and communication standards
- **Industry specific I/O support** with reliable wired and wireless connectivity

Convergence of OT & IT

- **Integrated manageability and security** with on premise or remote management
- **Extended product lifecycle** of 2-5 years of availability + 5 years of support
# Dell is One Stop Shop for Industrial Solutions

With global scale unlike other rugged manufacturers

Dell is only top-tier vendor with Rugged and Edge Computing solutions

<table>
<thead>
<tr>
<th></th>
<th>Unmatched Breadth and Support with the most complete technology portfolio</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Unmatched Breadth and Support with the most complete technology portfolio</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Supply Chain Speed you expect from a trusted IT supplier</td>
<td></td>
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<tr>
<td>3</td>
<td>Global Reach with products that are globally available</td>
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</tbody>
</table>

- **1** Unmatched Breadth and Support with the most complete technology portfolio
- **2** Supply Chain Speed you expect from a trusted IT supplier
- **3** Global Reach with products that are globally available

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>40M PC’s</td>
<td>2.5M enterprise products</td>
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<tr>
<td></td>
<td>50K Ocean containers / TEUs per year</td>
<td>12 days of inventory</td>
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<tr>
<td></td>
<td>25+ manufacturing locations</td>
<td>1800 service centers</td>
</tr>
</tbody>
</table>

Dell is One Stop Shop for Industrial Solutions
## Why Dell for Industrial PCs?

<table>
<thead>
<tr>
<th>Quality</th>
<th>Dell (Configure-to-Order)</th>
<th>Existing Market (Design-to-Order)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dell Commercial Standard (MTBF available)</td>
<td>Varies Widely</td>
</tr>
<tr>
<td>Supply Chain</td>
<td>PC Type Lead Time (Weeks)</td>
<td>Long Lead Times (Months)</td>
</tr>
<tr>
<td></td>
<td>Globally Available</td>
<td>Limited Scale</td>
</tr>
<tr>
<td>Service &amp; Support</td>
<td>ProSupport up to 5 yrs</td>
<td>Nothing or Basic</td>
</tr>
<tr>
<td></td>
<td>Global Footprint</td>
<td>Local Footprint</td>
</tr>
<tr>
<td>Financial</td>
<td>Dell Financial Stability</td>
<td>Leasing Not Available</td>
</tr>
<tr>
<td></td>
<td>Leasing Options via DFS</td>
<td></td>
</tr>
<tr>
<td>Manageability, Security &amp; SW</td>
<td>Enterprise Scale</td>
<td>Nothing or Basic</td>
</tr>
<tr>
<td></td>
<td>Similar Options as PCs</td>
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<tr>
<td></td>
<td>SW solutions</td>
<td></td>
</tr>
<tr>
<td>Certifications &amp; Regulatory</td>
<td>Out of box experience (CB report)</td>
<td>NO WW certification available</td>
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</tbody>
</table>
Dell Industrial Solutions

Rugged Mobility

- Rugged Tablets
- Rugged Laptops

Edge Computing

- Edge Gateways
- Embedded PCs

Security and Manageability

Services and Support

- Mobile Industrial Users
- Integrated Display
- Stationary Applications
- Optional Display
Latitude Rugged Portfolio

Latitude 12 Rugged Extreme Tablet **NEW!**
Workhorse tablet computing in a light-weight design that brings rugged performance to the field

Latitude 7214 Rugged Extreme 2-in-1
Mobility and flexibility come together with a rich feature set that delivers full rugged durability

Latitude 7414 Rugged Extreme
The most complete set of features and options with the highest level of rugged performance we offer

Latitude 5414 Rugged
Essential rugged features with uncompromised performance and value

**Fully Rugged MIL-810 Certifications**
Limited set of legacy features

**Semi-Rugged**
Full suite of legacy IO options
Edge Computing Portfolio

**Edge Gateway 3000 NEW!**
Smallest size for general automation & transportation

**Edge Gateway 5000**
Adaptable for manufacturing, energy & building automation

**Embedded Box 3000**
Increase in capabilities for shop floor

**Embedded Box 5000**
Most powerful box for shop floors and video solutions

<table>
<thead>
<tr>
<th></th>
<th>Intel Atom</th>
<th>Intel Core i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp:</td>
<td>-30C - +70C</td>
<td>0C - +50C</td>
</tr>
</tbody>
</table>
Industrial (Embedded) PCs are an extension of our commercial PC portfolio

<table>
<thead>
<tr>
<th>Standard Desktop (OptiPlex)</th>
<th>OptiPlex (XE2)</th>
<th>Industrial (Embedded) Box PCs</th>
<th>Edge Gateways (IoT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible and cost optimized</td>
<td>High performance General purpose</td>
<td>GUI</td>
<td>Edge-specific capabilities Focused intent Headless</td>
</tr>
</tbody>
</table>

- **OptiPlex (XE2)**
  - High performance
  - General purpose
  - GUI

- **Industrial (Embedded) Box PCs**
  - Migrated/New apps
  - Ruggedized, fanless

- **Edge Gateways (IoT)**
  - Edge-specific capabilities
  - Focused intent
  - Headless

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**Information Technology (IT) & Operations Technology (OT)**

- **Commercial Grade**
  - Information Technology (IT)
  - OptiPlex (XE2)
  - Industrial (Embedded) Box PCs
  - Edge Gateways (IoT)

- **Industrial Grade**
  - Operations Technology (OT)
  - OptiPlex (XE2)
  - Industrial (Embedded) Box PCs
  - Edge Gateways (IoT)
### Key Embedded (=Industrial PC) attributes

#### Environmental & Rugged specs
- Low and high temperature extremes
- Resistance to dirt, dust and liquids (IP Rating)
- Fanless
- Specialized locking connectors
- Resistance to shock and vibe
- Gorilla glass

#### Increased I/O
- More configurable serial ports.
- More USB ports
- GPIO
- CAN bus
- Zigbee, WWAN, 6LoWPAN, Thread

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#### Purpose built
- 5 Year minimum with longer support cycles
- Designed with embedded micros and long life components
- Backup plans for component EOL’s

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#### Long life / Stability
Commercial PC vs Industrial PC in non-office environments

Dirty Cooling Vents

Dirty Fan

Shock/Vibration

Condensation

Rugged, fanless, Solid State Drives, No vents
Mizuno Sangyo looked to improve the efficiency of staff at its logistics centers by adopting rugged tablet technology. The Dell Latitude 12 Rugged Tablet was exactly what they needed.

“We looked for a tablet that could withstand the vibration of the forklift trucks, dust and high temperatures.”

-Atsuya Tanaka, Section Head, Information Systems, Mizuno Sangyo
Remote Monitoring using the **Dell Edge Gateway 5100** for Video Surveillance decreases operational costs and improves safety.

- Deploy Remote Monitoring solution with the Dell Edge Gateway 5100 and Pixel Velocity, Video Surveillance partner, in hazardous environments needing visual checks such as remote oil fields.
Save time and improve quality in Manufacturing

- Dell’s Brazil factory transformed from effective to efficient: Improved units per labor hour by 20%
- Alps Manufacturing transformed from guessing to knowing: Reduced defect rate and scrap by 15%
Industrial Sector

Machine/plant builder
Whatever there is a production line

Applications:
- Human Machine Interface (HMI)
- Data Acquisition System
- Machine Control & Reliability
- Modernizing legacy industrial equipment
- Industry 4.0
- Predictive maintenance & Quality control
Traffic / Transportation

Applications:
- Bus fleet management
- Passenger Information System
- Standard or free flow tolling system
- Internet on Train
- Security Video Surveillance & Control
- Train Management System
- Speed control
- Taxi fleet management and PIS
Services Industries

Retail & Hospitality Applications:
- Point-of-Sale (POS)
- Self check-in / check-out kiosk
- Self-service food ordering kiosk
- Self-service banking kiosk
- Healthcare kiosk
- DVD rental kiosk
- Digital signage
Support Services for Rugged & Edge Computing

**ProSupport Plus** is the only complete support service that combines priority access to expert support, accidental damage repair, and proactive monitoring for automatic issue prevention and resolution. It ensures PCs and tablets are running smoothly so customers can focus on what’s important.

**ProSupport** combines 24x7 access to in-region support experts, automatic monitoring, issue detection, alerts and case creation with next business day onsite support to resolve issues with minimal customer effort.

**Accidental Damage Service** provides peace of mind for hardware systems in high-risk usage environments like schools and mobile professionals. Convenient repair of damaged systems helps minimize downtime and increase productivity.

**Keep Your Hard Drive Service** delivers peace of mind by allowing you to control your own asset recovery and hardware disposal. If your hard drive fails, Dell will send you a new drive without requiring the collection of yours.

**Extended Battery Service** is designed to enable businesses and organizations with mobile users to accurately plan their laptop lifecycle costs by incorporating future replacement battery needs in their upfront purchase.

**Basic Hardware Service** If your system encounters a hardware issue, Dell offers access to online self-help tools in addition to convenient phone support hours to help you with diagnosis. Extensions are available up to five years (depending on product).

ProSupport Plus, Keep Your Hard Drive, Accidental Damage and Extended Battery Service not available as standard offers on IoT.
Deployment Services for Rugged & Edge Computing

- ProDeploy Client Suite
- Static and Dynamic Imaging
- Connected Configuration
- BIOS Settings
- Hard drive partitioning
- 3rd party hardware installation
- 3rd party software installation

- Asset Tagging and Reporting
- Laser etching
- Ship box labels
- Ready Stock (Americas only)
- Order consolidation
- Over-pack
- Custom palletization

Deployment Services vary by product

1 Excluding APJ for notebooks and not available on any tablets
One stop for all your technology needs

Fixed

OptiPlex

Precision Tower

Wyse thin client

Precision Rack

Vostro

Mobile

Latitude Rugged

Precision

Vostro

Latitude & XPS

Edge Computing

Accessories & Displays

Security & Manageability

Services and Support
Rugged details
LatITUDE 12
Rugged Extreme Tablet 7212
ATEX Edition

Work confidently and safely with the intelligently tough tablet built for hazardous locations

- ANSI ISA 12.12.01, ATEX, and IECEX hazardous location certifications
- 11.6" FHD outdoor readable display with gloved multi-touch, Gorilla® Glass, and protective shatter-shield
- Powerful Intel® processors
- Protective armor*, thumbscrew covers and battery access panel
- Connectivity anywhere with 802.11ac Wi-Fi, optional mobile broadband and dedicated GPS
- MIL-STD-810G tests and IP-65 ingress protection

* Not compatible with rugged desk dock, keyboard/kickstand, or expansion modules
Latitude 12
Rugged Extreme Tablet
(7212)

The **intelligently tough** tablet to survive the worst keeps getting **better, faster and lighter**

- Just under 2.9lbs (1.3kg)
- 11.6” FHD outdoor viewable display with gloved multi-touch and Gorilla® Glass
- 7th Gen Intel Dual and Quad Core™ CPUs
- Windows 7 compatible with Skylake option
- Fully backwards compatible ecosystem
- Desk and vehicle docking, modules
- Higher capacity batteries
- Handles, straps, softgoods
- 180-degree kickstand
Latitude 12 Rugged Extreme Convertible
(7214)

Flip into action with the convertible built for the worst field conditions.

- 12” outdoor-readable display with gloved multi-touch
- Industry-first flip-hinge display
- Latest Intel® Core™ processors
- Customizable red, green or blue backlit keyboard
- Native serial port and optional PCMCIA reader
- 802.11ac Wi-Fi optional 4G/LTE multi-mode Gobi™ mobile broadband and a dedicated GPS
- Advanced security options
Latitude 14 Rugged Extreme
(7414)

The notebook with **nerves of steel** built for the worst field conditions.

- 14” outdoor-readable display with gloved touch
- Latest Intel® Core™ processors
- Customizable red, green or blue backlit keyboard
- Optional PCMCIA reader
- 802.11ac Wi-Fi and optional 4G/LTE multi-mode Gobi™ mobile broadband and a dedicated GPS
- Advanced security
- MIL-STD-810G tests and IP-65 ingress protection

Gen over gen specs
Latitude 14 Rugged (5414)

**Best for performance** and durability in the field.

- 14” outdoor-readable display with optional gloved touch
- Latest Intel® Core™ processors
- Customizable red, green or blue backlit keyboard
- Optional PCMCIA reader
- 802.11ac Wi-Fi and options including 4G/LTE multi-mode Gobi™ mobile broadband and a dedicated GPS
- Advanced security
- MIL-STD-810G tests and IP-65 ingress protection

Gen over gen specs
Recommended accessories

Mobility accessories
Carry the Rugged Tablet easily with available handles, straps and carry cases.

Keyboard Accessory
Add an IP-65 keyboard for productivity on-the-go (comes with kickstand).

Modular expansion
Expand functionality with an available expansion I/O Module
• 2x USB 3.0 ports + Ethernet
• Barcode / Magnetic card reader

Kickstand
Keep your tablet upright for easy viewing at the desk.

Active stylus
Get the most input responsiveness with the active stylus pen

Rugged Tablet Vehicle Dock
Mount securely and ergonomically in vehicles with docking from industry-leaders like Havis, PMT, and Gamber-Johnson

Rugged Tablet Desk Dock
Maximize productivity by adding connectivity and battery charging at the office.
Strategic Partnerships

Vehicle Docking

PC Industry Leaders

Sensors & Telemetry

Mobility

GPS, Mapping & Mobile Communications

Field Testing
<table>
<thead>
<tr>
<th>Feature comparison</th>
<th>Base Warranty</th>
<th>ProSupport</th>
<th>ProSupport Plus(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical support through phone, chat and online</td>
<td>Business hours</td>
<td>24x7</td>
<td>24x7</td>
</tr>
<tr>
<td>Hardware repair service delivery(^1)</td>
<td>Varies</td>
<td>Onsite</td>
<td>Onsite</td>
</tr>
<tr>
<td>Self-service case management and parts dispatch through TechDirect</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Direct access to in-region ProSupport engineers</td>
<td></td>
<td>✓</td>
<td>Priority Access</td>
</tr>
<tr>
<td>Single resource for software and hardware expertise</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Command center monitoring and crisis management</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software support with collaborative 3(^{rd}) party assistance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Case Management API for helpdesk integration</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>Automated issue detection, notification and case creation by SupportAssist(^2)</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>Predictive issue detection for failure prevention by SupportAssist(^2)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Accidental damage repair for drops, spills and surges</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Retention of hard drive after replacement(^3)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Dedicated Technology Service Manager(^4)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Monthly support history and contract reporting(^4)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

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\(^1\) ProSupport Plus not available on IoT products
\(^2\) Onsite not available on Edge Gateway 3000 and some Venue and Chromebook products
\(^3\) SupportAssist not available on Linux, Windows 10S, Windows RT, Windows 10 CMIT Government Edition, Android, Ubuntu or Chrome based products; predictive technology available on hard drives and batteries
\(^4\) Hard drive retention not available on Chromebook or Venue tablets except the Venue 11 Pro

\(^5\) Available for customers with 500 or more ProSupport Plus Systems
Edge Computing details
Embedded Box PC 5000

Ensured uptime for global support

- **Environmental**: Operating: 0°C to 50°C with SSD, 0°C to 40°C with HDD (w/o airflow); IP30 rated; designed to MIL-STD-810G
- **OS Choice**: Ubuntu Desktop 16.04, Microsoft Win 10 Pro Downgrade (to Win 7 Pro), Win7 Pro for Embedded Systems (FES7), Windows Standard Embedded 7 (WES7P and WES7E), Win10 Pro, Win10 IoT Enterprise LTSB
- **Platform**: Intel® Core™ i3, i5, i7 or Celeron® | dual- or quad-core
- **Memory**: DDR4: 4, 8, 16 or 32 GB options
- **Storage**: 2x HDD, 2x SSD, or 1x SSD + 1x HDD. HDD: 500GB or 1TB. SSD: 32, 64, 128, 256, 512 GB or 1TB
- **Video**: 3 simultaneous displays: 2x DP++ 1.2, HDMI 1.4, VGA.
- **Audio**: Mic-in, Line-in, Line-out
- **Expansion**: 2x PCI, 2x PCIe, or 1x PCI + 1x PCIe

Native I/O

- Gigabit Ethernet: 2x RJ-45, 4x USB2, 4x USB3. 16-bit GPIO.
- Serial Interfaces: 4x RS-232/422/485
- zigbee dongle (optional)
- CANbus (optional)
- 802.11n Wi-Fi +Bluetooth LE (optional)
- Mobile Broadband 3G/LTE (optional)
Embedded Box PC 3000

Backed by our global supply chain to scale faster

- **Environmental**: Operating: 0°C to 50°C with SSD, 0°C to 40°C with HDD (w/o airflow); IP30 rated; designed to MIL-STD-810G
- **OS Choice**: Ubuntu Desktop 16.04, Microsoft Win 10 Pro Downgrade (to Win 7 Pro), Win7 Pro for Embedded Systems (FES7), Windows Standard Embedded 7 (WES7P and WES7E), Win10 Pro, Win10 IoT Enterprise LTSB
- **Platform**: Intel® Atom™ E3825, E3827 or E3845 | dual- or quad-core
- **Memory**: DDR3L: 4 or 8 GB options
- **Storage**: 1x HDD or 1x SSD. HDD: 500GB or 1TB. SSD: 32, 64, 128, 256, 512 GB or 1TB
- **Video**: 2 simultaneous displays: 1x DP++ 1.1, VGA.
- **Audio**: Mic-in, Line-in, Line-out

**I/O**
- Gigabit Ethernet: 2x RJ-45, 4x USB2, 1x USB3. 12-bit GPIO.
- Serial Interfaces: 2x RS-232/485, 1x RS-232/422
- zigbee dongle (optional)
- CANbus (optional)
- 802.11n Wi-Fi +Bluetooth LE (optional)
- Mobile Broadband 3G/LTE (optional)
Edge Gateway 5000

Engineered for industrial work

- **Environmental**: Operating: 0°C to 50°C commercial version, 30°C to 70°C industrial version (w/o airflow); IP50 rated; designed to MIL-STD-810G
- **OS Choice**: Ubuntu Core 16, Windows 10 IoT Enterprise LTSB
- **Platform**: Intel® Atom™ E3825 or E3827 | dual-core
- **Memory**: DDR3L: 2, 4 or 8 GB options
- **Storage**: SSD: 32, 64, 128, 256 or 512 GB options
- **Video**: HDMI 1.4
- **Expansion**: I/O module with PCIe x1, USB: 2x USB2, Serial Interface: 1x RS-232, GPIO: 8-bit (4-in, 4-out). Power module.

I/O
- Dual Independent Gigabit Ethernet (RJ-45), USB: 2x USB2, 1x USB3.
- Serial Interfaces: 1xRS-232, 2xRS-485, 1xRS-422/485
- zigbee dongle (optional)
- CANbus (optional)
- Wi-Fi 802.11n+Bluetooth (optional)
- Mobile Broadband 3G/LTE (optional)
**Edge Gateway 3000**

**Edge Gateway 3001**
- General Purpose Automation

**Edge Gateway 3002**
- Transportation

**Edge Gateway 3003**
- Media & Retail Kiosks

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**Designed with uncompromised connectivity**

- **Environmental**: Operating: -30°C to 70°C (w/o airflow); IP50 rated; designed to MIL-STD-810G
- **OS Choice**: Ubuntu Core 16, Windows 10 IoT Enterprise LTSB
- **Platform**: Intel® Atom™ E3805 (Intel E3815 for 3003) | dual- or single-core
- **Memory**: DDR3L 2GB
- **Storage**: eMMC 8GB up to 32GB, uSD slot (8, 16, 32, 64 GB)

<table>
<thead>
<tr>
<th>General Purpose</th>
<th>Transportation</th>
<th>Media &amp; Retail Kiosks</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Serial Interfaces: 2x-RS232/422/485</td>
<td>- Main port supports PoE (15.4W)</td>
<td>- Main port supports PoE (15.4W)</td>
</tr>
<tr>
<td>- Multi Function IO connection (0-5V, 8 channel, independently programmable, DAC, ADC, GPIO).</td>
<td>- Wireless PAN: Bluetooth LE and integrated zigbee module for mesh networking</td>
<td>- Video: DisplayPort 1.1; daisy-chaining of displays not supported</td>
</tr>
<tr>
<td>I/O</td>
<td>- CANbus</td>
<td>- Audio: Line-in, Line-out</td>
</tr>
</tbody>
</table>

- **I/O**
  - 10/100 Fast Ethernet (RJ-45) – 1x on 3001, 2x on 3002 and 3003.
  - USB: 1x 3.0, 1x 2.0.
  - Integrate MEMS: Accelerometer, Pressure, Temperature, Humidity
  - Integrated GPS
  - zigbee dongle (optional)
  - Wi-Fi 802.11n+Bluetooth
  - Mobile Broadband 3G/LTE
# Edge Computing Deployment and Support Services

## Deployment services

### Configuration
- System Configuration - BIOS
- Image load
- Asset tagging and reporting
- Laser etching
- 3rd party hardware install

Configuration service availability varies by region.

### Logistics
- Warehousing
- Packaging
- Transportation

## Support services

### ProSupport
- 24x7 technical support through tools, online, and phone
- Direct access to in-region ProSupport engineers
- Next business day onsite repair*
- Operating System support
- Self service case management and parts dispatch
- Proactive automated support with SupportAssist

### Basic Hardware
- 1 year of hardware support with Mail-In Service
- Extensions available up to 5 years
- Phone support during standard business hours

*Advanced Exchange for Edge Gateway 3000. Onsite hardware repair for IoT devices has unique support requirements.
Edge Computing Manageability

Deploy
- Onboarding Provisioning

Monitor
- Remote maintenance
  - BIOS Management
- Alerts/Events
  - App Management

Update
- Security Patches
  - Firmware upgrades

Dell Technologies Tools

- Dell Command Suite
  - Free command-line and scripting tools; integrations with tools like SCCM, KACE, LANDesk

- Edge Device Manager
  - Multi-tenant public and private cloud solution for managing Dell IoT devices

- On-premise and SaaS solution for managing IoT gateways and “things”
Edge Computing Security

**Hardware**

- **Dell Edge Devices**
  - **Secure Dell Platform**
    - Establish HW-based Root of Trust and Secure Boot via TPM
    - Secure BIOS
    - Lockdown of unused ports via BIOS
    - Tamper resistance and chassis intrusion alerts

**Software**

- **Dell Software**
  - **Security Solutions**
    - **Edge Device Manager**
      - Enable TPM
      - Lock down USB ports
      - Change BIOS passwords
    - **Dell Data Protection | Encryption**
      - Full Disk Encryption
      - Up to 5x faster deployment

**3rd Party Partners**

- **Security Solutions**
  - **Mocana**
    - Encryption
    - Device Trust & Authentication
  - **Device Authority**
    - Encryption
    - Key Management
  - **ForgeRock**
    - Sensor Identity Management
    - Access and Authorization
  - **Asavie**
    - Private Tunnel
  - **NetFoundry**
    - Secure Transport
  - **GreatBay Software**
    - Network Visibility
Get to market faster with Dell’s curated partners

**Dell IoT HW/SW Ingredients**

- Edge Gateways
- Embedded Box PCs
- Edge Device Manager

**Partners advance “ingredients” into “solutions”**

<table>
<thead>
<tr>
<th>Technology Partners</th>
<th>Services Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Expertise</td>
<td>Last Mile Delivery</td>
</tr>
<tr>
<td>Platforms</td>
<td>Solution Support</td>
</tr>
<tr>
<td>Analytics</td>
<td>System Integration</td>
</tr>
<tr>
<td>Data Visualization</td>
<td>Deployment</td>
</tr>
<tr>
<td>Data Cleansing</td>
<td>Project Design</td>
</tr>
<tr>
<td>Wide Area Connectivity</td>
<td>Procuring Accessory</td>
</tr>
<tr>
<td>Security</td>
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<tr>
<td>Device Management</td>
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<tr>
<td>Protocol Normalization</td>
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**Vertical Solutions**