DELL Technologies

Dell Validated Design for **Manufacturing Edge**

Accelerate manufacturing outcomes with AI

The manufacturing industry is harnessing the power of AI at the edge. Technology can help drive better efficiency, flexibility, and resolve challenges at the manufacturing edge such as real-time analysis and insights, siloed technology deployments, scaling capabilities across edge locations, managing a vast number of heterogenous devices and security of data & assets. These challenges impact the adoption of smart manufacturing initiatives and impede outcomes.

As organizations drive towards smart manufacturing transformation, they must take an innovative technology approach to simplify their smart factory initiatives.

Presenting the **Dell Validated Design for Manufacturing Edge**, an edge solution that is an end-to-end offering that addresses some of the persistent challenges in the smart manufacturing. The latest edition of this validated design helps streamline manufacturing outcomes by:

Incorporating Dell NativeEdge

Highlighting the core of the solution, Dell's NativeEdge, which simplifies deployment and management of applications on the factory floor using blueprints. This enables rapid scaling and customization while maintaining robust security.

Strategic Partnership with Hyundai AutoEver

HYUNDAI AutoEver

Emphasizing the partnership with Hyundai AutoEver and their NeoFactory IoT software, which serves as a primary data collection and analysis tool, facilitating AI-driven optimizations and outcomes in manufacturing processes.

Solution Highlights

- Expanded AI capabilities derived from key ISV partners
- Secure scalibility with Dell NativeEdge
- Broad edge ecosystem of partners
- End-to-end solutions for manufacturing applications

Comprehensive Connectivity and Choice with ISV Partners

PTC, Telit Cinterion, and Litmus

These partners enhance the solution's ability to collect data from a wide array of sources on the factory floor, offering customers a diverse range of connectivity options to best suit their operational needs.

Claroty for IT/OT Cybersecurity

The cybersecurity layer provided by Claroty ensures robust protection against threats in the increasingly connected manufacturing environment. Customers get improved OT / IT cyber-resilience with Claroty's xDome.

XMPro for Digital Twin

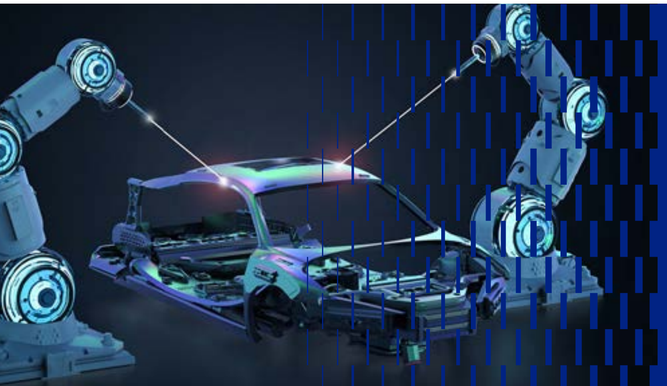
Highlighting the inclusion of XMPro for creating Digital Twins, enabling advanced simulation, analysis, and process optimization. They now leverage more sophisticated AI modeling and GenAI to develop their Digital Twin models.

Cognex for Computer Vision

Customers can use Cognex for advanced computer vision capabilities. Cognex now supports edge learning and machine vision applications on their industrial cameras, thereby making these capabilities more streamlined & efficient.

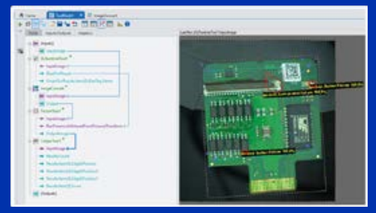
AI-Driven Insights and Operational Excellence

Underscoring the application of AI across the collected data to drive insights, improve predictive maintenance, optimize supply chain management, and ensure quality control, thereby achieving operational excellence.



Integrating proven technologies to drive smart manufacturing, this solution uses edge-hardened, Intel-based Dell PowerEdge Servers (XR4000, XR7620) with the Dell Edge Gateways. These edge technologies enable a scalable unified technology architecture that is validated to run advanced edge and AI applications like Digital Twins, Machine Vision, and more. Efficiently and seamlessly running these use cases contributes to increased productivity on the factory floor through automation, real-time monitoring, and predictive analytics, significantly reducing downtime and operational costs.

To accelerate adoption of Industry 4.0 standards, this edition of the Dell Validated Design for Manufacturing Edge brings together the following leading application vendors to enable advanced edge use cases.



HYUNDAI AutoEver

Intelligent OT / IT Convergence

- Intelligent factory management for AI analyses
- Data integration across diverse devices and network protocols
- Develop analytical model for operations optimization

COGNEX

Improve manufacturing quality and performance using advanced machine vision

- Automating complexity with AI-based analyses
- Optimize performance, increase throughput, and control traceability
- Verify assembly and track information

CLAROTY

Strengthen industrial cybersecurity

- Threat intelligence across Industrial IoT environment
- Vulnerability and risk management
- Network segmentation
- Remote incident management

XMPRO

Accelerate operational and situational awareness with a no-code digital twin composition platform

- Intelligent business operations
- Sophisticated AI 3D Modeling & virtual simulation
- Remote monitoring
- Real-time decision support

Learn more about Dell edge solutions

Contact a Dell Technologies expert

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