DELL Technologies

Solution Brief

Dell Validated Design for Manufacturing Edge

Accelerate digital transformation at the manufacturing edge with advanced technologies

The manufacturing industry is harnessing the power of the edge. Technology can help drive better efficiency and flexibility, to resolve challenges at the manufacturing edge such as real-time analysis and insights, fragmented technology landscape, scaling across edge locations, and security of data and assets. These challenges impact the adoption of smart manufacturing initiatives and impede outcomes.

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

The Dell Validated Design for Manufacturing Edge empowers manufacturers with capabilities that accelerate Industry 4.0 initiatives. The latest edition of this validated design helps streamline smart manufacturing outcomes by:

- **Unifying Information Technology and Operational Technology seamlessly** by eliminating data silos from edge devices on the factory floor to enterprise applications in the cloud, for faster time to value.
- **Streamlining digital transformation use cases** with easy and quick deployment of new technologies for operational agility and improved production quality.
- **Scaling securely** using proven security solutions that protects edge estate, from the IT to the OT.

Solution Highlights

Quality inspection using Machine Vision

Secure Scalability

Industrial connectivity with Private 5G

Digital Twin of factory operations

Successful outcomes delivered by our integrated ISV partners:

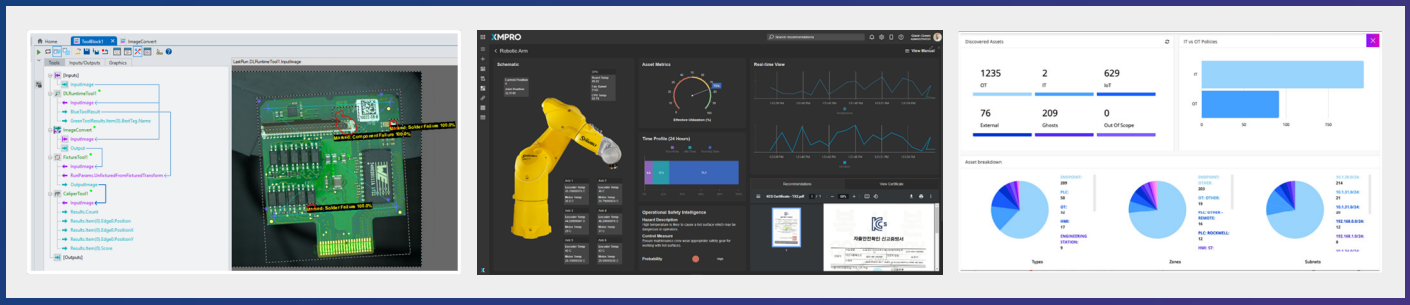
450+
extended IoT protocol
coverage by Claroty for visibility and security of cyber-physical systems

400+
vulnerabilities disclosed
by Claroty's award-winning industrial cybersecurity research team

184 hrs
of preventable downtime
identified using XMPro's application platform for Digital Twin of a factory

Integrating proven technologies to drive smart manufacturing

This solution uses an award-winning hyperconverged infrastructure–Dell VxRail–or the edge-hardened Dell PowerEdge Servers with the Dell Edge Gateways. It uses Dell Streaming Data Platform (SDP) for high-speed ingestion of data from across all sources that can be easily integrated across edge applications for real-time analysis. These edge technologies enable a scalable unified technology architecture that is validated to run advanced edge applications like Digital Twins, Machine Vision, and more. This solution also includes Dell Private Wireless to enable private 5G technology that scales up edge connectivity for manufacturers at the speed of their business.



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.

COGNEX

Improve manufacturing quality and performance using machine vision

- Optimize performance, increase throughput, and control traceability
- Inspect, identify, and align parts
- Verify assembly and track information

CLAROTY

Strengthen industrial cybersecurity

- Threat intelligence
- Vulnerability and risk management
- Network segmentation
- Remote incident management

Telit Cinterion

Simplify connecting things, machines and factories that monetize IoT (Internet of Things)

- Versatile device connection
- No-code edge logic for seamless configuration
- IT/OT convergence
- Real-time data visualization

XMPRO

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

- Prescriptive operations
- 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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