

# Smarter connects the factory floor to the enterprise

## TELIT CUSTOMER STORY

With over 20 years as a pioneer and leader in enterprise-grade Internet of Things (IoT) products and software, Telit has earned a reputation for solving the toughest challenges in IoT. The company offers a broad range of IoT solutions including high-performance communication modules, global connectivity services that include SIMs and data plans, and cloud and edge software platforms.

Telit's products and solutions, combined with unmatched IoT expertise and developer resources, enable thousands of successful end-to-end IoT solutions around the world. Headquartered in London, UK, the company operates more than 20 sales offices and four R&D centers, and employs around 850 people worldwide.

### Building the factories of the future

Telit's IoT products and solutions help organizations across a wide range of industries and markets achieve operational efficiencies, improve productivity, and cut costs. As more and more companies look to build smart factories with responsive, adaptive, and connected production lines, the manufacturing sector is a huge potential growth area.

The Industrial Internet of Things (IIoT)—connecting and digitizing assets through the industrial value chain—promises complete operational visibility for real-time decision-making, improved levels of quality and efficiency, and opportunities for new, data-driven services.

A graphic consisting of several red and black hexagons arranged in a vertical column. The middle hexagon is black and contains the text "London UK". The hexagon below it is black and contains the text "20 sales offices globally". To the right of these hexagons, there is a small inset photograph of a man in a yellow safety vest working in a factory setting.

London  
UK

20  
sales offices  
globally

Smarter  
technology  
for all

Lenovo



# HOW **LENOVO** **EDGE DEVICES** HELP TO ACCELERATE IIOT DEPLOYMENTS

To help manufacturers harness the Industrial Internet of Things (IIoT) to optimize operations and increase efficiency, Telit teamed up with Lenovo to build an all-in-one OT-IT Integration Appliance for a plug-and-play IIoT solution. Combining robust, reliable Lenovo ThinkCentre M90n Nano PCs with innovative software, the Telit deviceWISE® platform accelerates IIoT deployments, empowering manufacturers with real-time insight into operations on the factory floor in a plug-and-play appliance model. The Lenovo M90n Nano IoT economically provides robust distributed computing in a rugged industrial IoT Gateway PC located close to the data sources. This results in lower latency for actionable information, decreased network traffic, and less need for costly data center capacity expansion projects.

With Telit deviceWISE running on Lenovo IIoT gateways, manufacturers can collect data from any machine on the factory floor, enabling real-time decision-making.

Ricardo Buranello, VP & Head of IoT Platforms at Telit, elaborates: “deviceWISE is a powerful edge logic engine that collects, analyzes and visualizes machine data from the plant floor, enables users to integrate machines to databases, IT and cloud systems, and to create dashboards and human-machine-interfaces (HMIs) in just a few clicks, without the need for any custom code.”

deviceWISE can be deployed on-premises or in the cloud and is platform-agnostic, compatible with any type of operating system and cellular gateway. To enable manufacturers to implement their IIoT strategy quickly and easily, Telit aimed to provide an all-in-one, turnkey solution.

## **Finding the right partner**

Telit teamed up with Lenovo to deliver an out-of-the-box solution that combines Lenovo hardware with deviceWISE software in a single package.

“Partnering with Lenovo represents an exciting opportunity to enhance our service offering and meet growing demand for easy-to-deploy IIoT solutions,” says Buranello. “The depth and breadth of the Lenovo portfolio really impressed us. Not only does Lenovo offer everything from small cellular devices to laptops to robust blade servers, but these products are available all over the world with local support and services.

While there are many choices from Tier2 OEMs, Lenovo’s global scale, reach, and high product quality will help us to bring the deviceWISE platform to more manufacturers worldwide with an assurance of continuity of supply, and the global certifications and local support that our customers demand.”

The all-in-one solution is based on the Lenovo ThinkCentre M90n Nano with deviceWISE pre-installed and pre-configured. Everything is fully validated and integrated, so the nodes are simple to deploy and easy to scale.

Equipped with up to 8th generation Intel® Core™ vPro™ processors, the Lenovo ThinkCentre M90n Nano PC is smaller than most paperbacks yet delivers the same compute performance as a regular desktop.

“Lenovo ThinkCentre M90n Nano is a strong match for deviceWISE,” says Buranello. “It is compact, durable, and powerful, making it ideal for IIoT at the edge.”

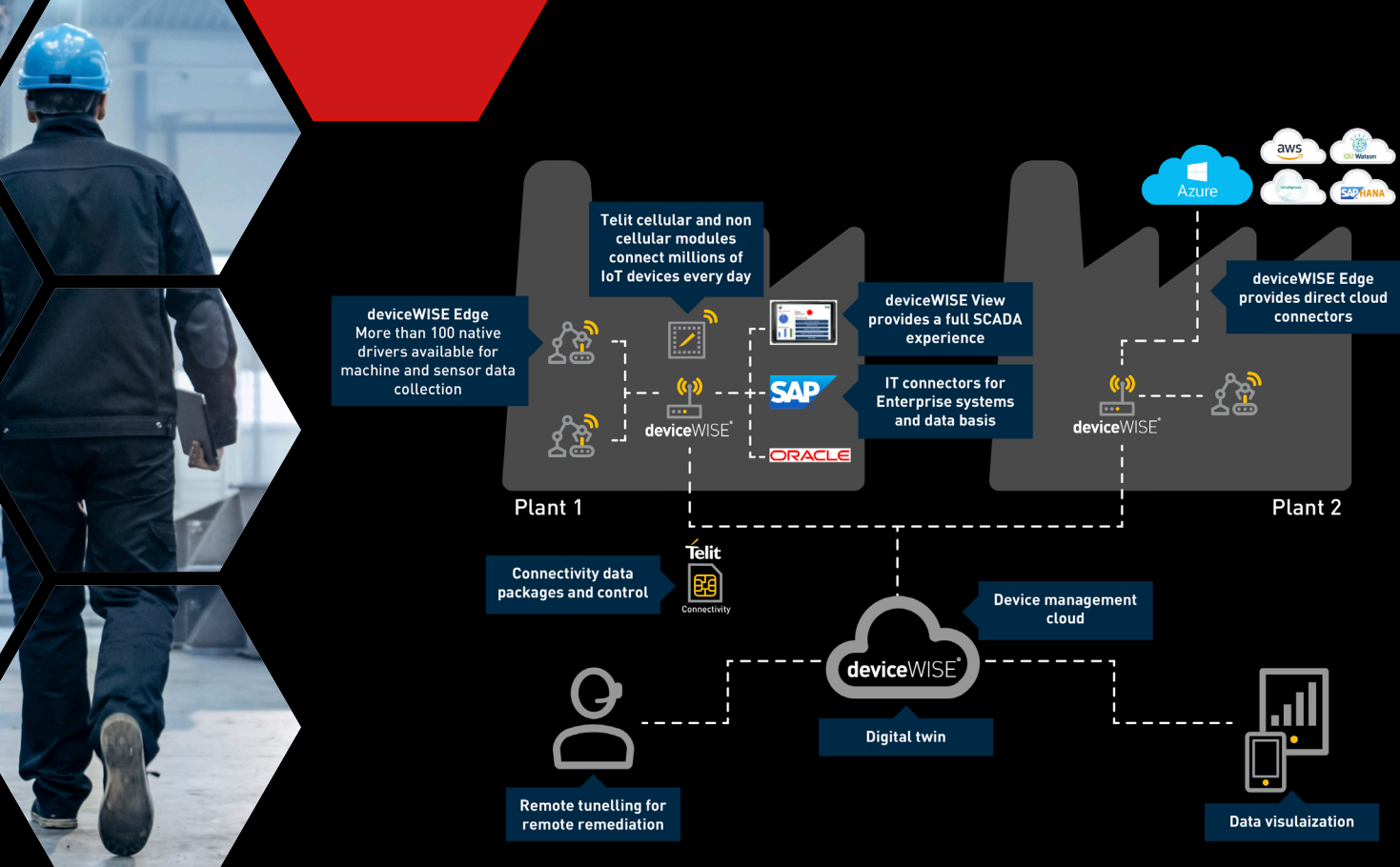
## **Accelerating IIoT deployments**

The deviceWISE platform provides edge intelligence for industrial asset management, secure remote access, OT to IT data exchange and processing, and other IIoT applications.

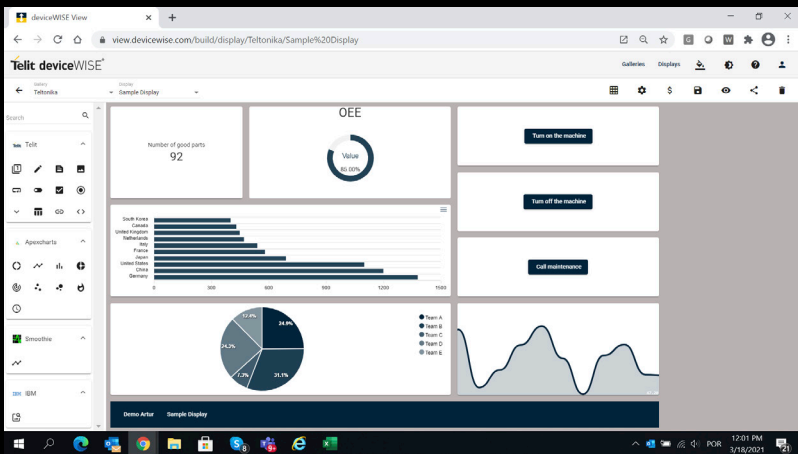
With five USB ports, WLAN, Bluetooth® and cellular connectivity, four serial ports, four GigE LAN, 2PoE, and 8GPIO ports the Lenovo ThinkCentre M90n Nano can be connected to almost any factory machinery, even older assets that do not have any embedded communication modules.

Thanks to hundreds of native drivers, deviceWISE collects data—such as the machine state, error codes, part count, temperature, humidity, and pressure—in real time. This data can be seamlessly mapped to any database and common enterprise applications or external analytics cloud platforms to support operational equipment effectiveness (OEE), preventive and predictive maintenance, and quality control.

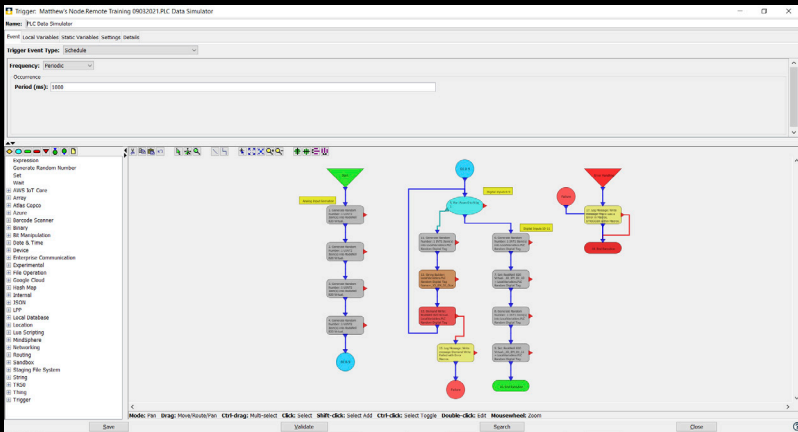




Telit deviceWISE solution architecture



Telit deviceWISE dashboard



Drag-and-drop widgets

Name:	Device name
Power MACS	
BACnet	
BACnet Client	
Barcode Scanner	
Type:	
Honeywell	
IBM POS	
IP Address	
Datalogic	
Symbol	
Port:	
Generic	
Revision:	
Sensors	
EM08	
Spindle:	
FANUC CNC	
Keep:	
FANUC 15i CNC	
FANUC 16i CNC	
FANUC 18i CNC	
Time:	
FANUC 21i CNC	
FANUC 30i CNC	
FANUC 31i CNC	
Add:	
FANUC 32i CNC	
Prop:	
FANUC 35i CNC	
FANUC 0i-B CNC	
FANUC 0i-C CNC	
FANUC 0i-D CNC	
FANUC 0i-F CNC	
FANUC PMi-A CNC	
FANUC PMi CNC	
FANUC 31i NCGuide	
FANUC 32i NCGuide	
FANUC 35i NCGuide	
FANUC 0i-D NCGuide	
Invoice:	
Inothink H3U Ethernet	
MQTT	
MQTT Connection	
MTConnect	
MTConnect Client	
Mitsubishi	
QCPU	
QCPU (Built-in Ethernet)	
LCPU (Built-in Ethernet)	
RCPU (Built-in Ethernet)	
FX3CPU	
FX5CPU	
GOT	
QnACPU	
ACPU	
Mitsubishi Listener	
Modbus	
Modbus Device	
Modicon	
Quantum CPS 111	
Quantum CPS 114	
OPC	
UA Client	
Omron	
CS1 CPU	

Hundreds of native drivers for machine data collection

The all-in-one, plug-and-play nature of the deviceWISE platform enables manufacturers to accelerate IIoT deployments, empowering them to connect the factory floor to the enterprise with speed and ease. And with the Telit deviceWISE View software built in, users can create custom dashboards using drag-and-drop widgets to visualize and analyze data.

“Partnering with Lenovo, we have built an all-in-one solution engineered for quick, easy installation and simple integration with manufacturing machinery,” says Buranello. “The deviceWISE platform reduces the risk and complexity of IIoT projects, and cuts time to market.”

Looking to the future, Telit plans to integrate deviceWISE with other Lenovo edge devices, including the Lenovo ThinkStation P920 Rack 2U workstation and Lenovo ThinkSystem SE350 edge server.

## For more information

To learn more about Lenovo’s edge devices, visit: [Lenovo.com/ThinkEdge](https://lenovo.com/ThinkEdge)

“We’re excited to continue working with Lenovo to take the deviceWISE platform to the next level: for example, by enabling computer vision, advanced data analytics, artificial intelligence, and machine learning at the edge. Backed by Lenovo’s solutions, services, and support, we can help manufacturers all over the world reap the rewards of the IIoT.”

*Ricardo Buranello, VP & Head of IoT Platforms, Telit*



ThinkCentre  
M90n Nano

Smaller  
than a VHS  
cassette

WLAN and  
Bluetooth®  
4.0

Starting  
from  
505g

### Specifications:

**Processor:** Up to 8th Gen Intel® Core™ i7 vPro™

**Memory:** Up to 16GB

**External bay:** Supports USB-C docking

**Security:** TPM 2.0, Kensington lock slot

**Operating System:** Windows 10 Pro, Windows 10 Home, Windows 10 IoT

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technology  
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