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Fortifying the Edge with Advanced Security

Protecting the Edge with
Intel® and Lenovo ThinkEdge

Lenovo
ThinkEdge

Lenovo and Intel are leading edge AI security

67%

Of CISOs state that data protection and privacy are one of their top three priorities.

\$215B

Is the projected spend on security and risk management in 2024.

50%

Of CISOs believe that encrypting sensitive data both at rest and in transit is a top priority for data protection efforts.

Edge computing is improving business decision-making and productivity, while enhancing quality of life and the customer experience by bringing powerful computing out of the cloud, closer to the source of data.

The source could be on a manufacturing floor, in a hospital, or under the counter of a retail store. Alternatively, it might be in remote, unmanned locations, such as cabinets on a city street or even on an offshore drilling platform.

As data is processed closer to the source, it reduces latency and enhances real-time decision-making, but it also increases the attack surface for potential cyber threats.

While edge computing is being adopted at unprecedented rates, with 83% of companies stating that edge computing will be essential to remaining competitive in the future,¹ it will only be as effective as the security underpinning its infrastructure. Ensuring robust security measures at the edge is essential to protect sensitive data from breaches, unauthorized access, and other cyber-attacks.

Today's edge devices must have the physical security features to protect the devices themselves. They must have the digital security features to protect data with hardware-based encryption and strong authentication and authorization controls. And they must have the services and support to ensure the security of edge deployments globally.

Lenovo's ThinkEdge solutions, powered by the latest Intel processors, incorporate the highest levels of device and data security. Features such as lockable Security Bezels and Security EIA Brackets ensure systems themselves remains secure, while tamper detection sensors, security processors managing Self-Encrypting Drive keys, and XCC management functions ensure data is never at risk.

And with the powerful security of Intel hardware and software, including Intel® SGX, Intel® TDX, and Intel® QAT, you get built-in peace of mind with every ThinkEdge deployment.

¹Accenture, <https://www.accenture.com/us-en/insights/cloud/edge-computing>

Right-size infrastructure

Together with Intel, Lenovo offers the most powerful edge AI portfolio – from near edge to the data center – in a variety of form factors to meet the performance needs of businesses globally.

ThinkEdge Portfolio

SE10



Intel® Atom
Powerful performance with reliable ease and adaptability

SE30



Intel® Celeron® or Intel® Core™
For enterprise automation, smart retail, and smart buildings

SE50



Intel® Core™
Power and reliability at the edge

SE350 V2



Intel® Xeon® D
Purpose-built edge computing server

SE360 V2



**Intel® Xeon® D
Intel® Data Center GPU Flex Series**
Compact and secure with rugged reliability

SE450



**Intel® Xeon® Platinum
Intel® Data Center GPU Flex Series**
The most GPU-rich AI server for the edge

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Transform Your Business with AI at the Edge.
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Unmatched physical and data security

Data and device security is at the forefront of Lenovo's ThinkEdge series, and our clients and servers powered by Intel have been developed with advanced security at the core.



Intel® QAT (QuickAssist Technology)

QAT provides hardware acceleration technology to improve the performance and efficiency of cryptographic and data compression tasks.



Intel® TDX (Trust Domain Extensions)

TDX creates a more secure and trusted computing environment in scenarios where sensitive data and workloads are virtualized.



Device Security

Lockable Security Bezels and Security EIA Brackets ensure the devices themselves remain secure.



Encryption

Self-Encryption Drive (SED) technology that encrypts all customer data automatically.



Administrative Access

Lenovo's ThinkShield Key Vault application allows IT administrators to manage organizations, users, and devices.



Tamper-Proof

Sensors for detection of device tampering; if tampering is detected, the ThinkEdge server locks the device so that the data becomes inaccessible.



Intel® SGX (Software Guard Extensions)

SGX protects sensitive data and code from disclosure and modification by creating isolated enclaves within the memory.



Management

Lenovo's ThinkShield Edge Mobile Management application provides a set of mobile tools where users can securely claim and activate certain edge servers.

Transform Your Business with AI at the Edge.
Discover How at [Lenovo.com/IntelEdgeAI](https://lenovo.com/IntelEdgeAI)



Guided expertise for businesses globally

Lenovo and Intel have made the future of edge AI technology accessible and user-friendly with software, tools, and systems that ensure continued innovation, ease of integration, and simplified deployment.

Envision

No matter where you are on your edge journey, **Lenovo and Intel's principal consultants** will help you build a strategy that delivers insights and experiences at your unique business speed. And with **Lenovo's AI Innovators Program**, get access to guided expertise and over 150 AI solutions across key verticals.

Innovate

Intel® Geti™, part of the **Intel® Tiber™ Edge Platform** – a solution designed to solve edge challenges across industries – provides an integrated environment for AI development, allowing developers to rapidly build AI models by bringing non-technical domain experts easily into the process. Conduct edge POCs, leverage ready-to-use tools, and access experts in AI and edge computing via the **Lenovo AI Center of Discovery & Excellence**.

Optimize

Intel's OpenVINO™ toolkit, which is also a part of the **Intel® Tiber™ Edge Platform**, facilitates the development and deployment of high-performance computer vision and deep learning applications. Developers can optimize and run AI inference workloads across ThinkEdge Intel hardware platforms, maximizing the performance of deep learning models while simplifying the deployment process. Companies can also utilize **Intel® SceneScape** to transform data from many sensors to create and provide live updates to a 4D digital twin of a physical space.

Implement

Lenovo Open Cloud Automation (LOC-A) streamlines and automates the deployment, management, and scaling of edge computing infrastructure. Get near-zero-touch provisioning while reducing edge deployment time up to 70%, reducing required resources up to 76%, and saving up to 50% in deployment costs.

Scale & Save

Enjoy edge-computing-as-a-service anywhere in the world as a predictable, stable monthly payment model with **Lenovo TruScale** for edge and AI. Get access to Lenovo's hardware and infrastructure on an as-a-service basis while leveraging cutting-edge technology and infrastructure without the need for significant upfront investment or the complexities of managing and maintaining hardware in-house.



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Smarter technology for all 