



MODERN INFRASTRUCTURE AND MULTICLOUD

Embedded AI for IT Security and Networking



Overview

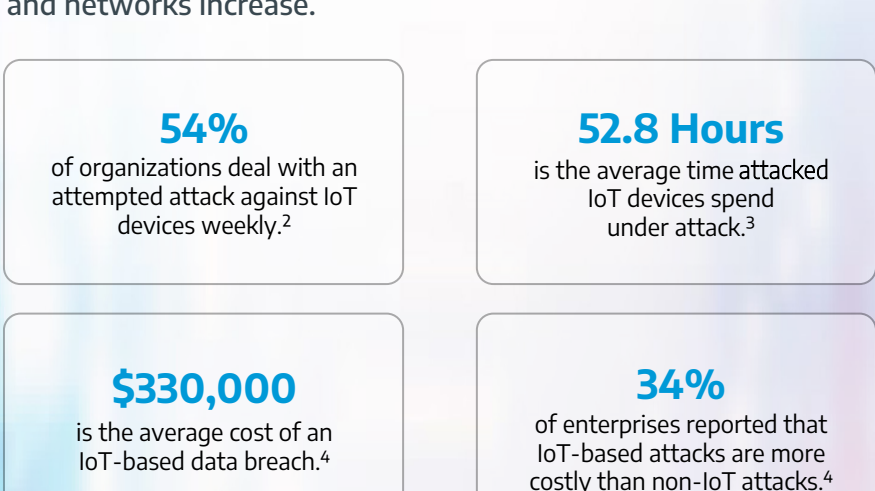
AI has become an integral part of an organization's IT security and networking, as it enables the automation of routine and repetitive tasks. However, AI requires massive computing power, making it difficult to operate AI-enabled applications from cloud environments or data centers.¹

Embedded AI solves this problem, especially for small devices and systems that rely on cloud computing, including smartphones and watches, IoT devices, POS terminals, medical devices, vehicles and industrial automation systems.

Other terms for Embedded AI include Edge AI, Tiny AI, and Tiny ML.

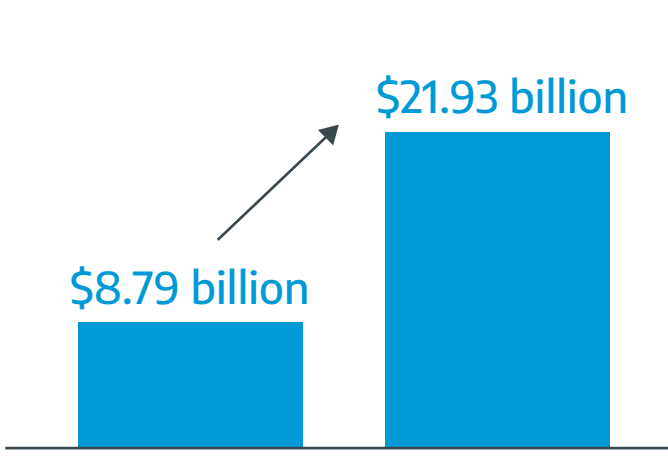
The Costly Impacts of Cyberattacks

Embedded AI cybersecurity offers a layer of protection closest to the data and device, using ML algorithms and data analytics to quickly identify and mitigate potential attacks. The benefit of AI embedded in the device is the ability for the algorithms to evolve as the threat landscape changes. This is necessary as the attacks—and the costs incurred—against IoT and smart devices and networks increase.



Embedded AI Trends

Demand for devices with embedded AI is expected to skyrocket within a seven-year period.⁵



More industries are beginning to rely on IoT devices to streamline their productivity and services.⁵

Here are examples of how embedded AI is incorporated:

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|--|--|
| Automotive <ul style="list-style-type: none"> Autonomous driving Electric vehicles Connected car features | Healthcare <ul style="list-style-type: none"> Diagnostic tools Personalized treatment Telemedicine options Improved health tracking |
| Retail⁶ <ul style="list-style-type: none"> Fraud detection and security Cardholder data security In-store surveillance Data driven decision making | Manufacturing⁷ <ul style="list-style-type: none"> Quality control Energy and process optimization Predictive maintenance |
| Agriculture <ul style="list-style-type: none"> Crop management Environmental monitoring Sustainable agriculture practices | Supply Chain <ul style="list-style-type: none"> Autonomous robotics in warehouses RFID tags and QR codes for inventory tracking and order fulfillment |

Benefits of Embedded AI in IoT and End Point devices

- Enhances automation on routine tasks
- Seamless AI integration into devices
- Improves optimization and reduces latency
- Real-time security and safety
- Bandwidth and energy efficiency
- Data privacy

How Connection Can Help

Connection is your partner for AI, modern infrastructure, and cybersecurity solutions and services. From hardware and software to consulting and customized solutions, we're leading the way in infrastructure modernization.

Explore our Solutions and Services

[Artificial Intelligence](#)

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Contact an Expert

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Sources:

¹ BizTech Magazine, [Why Artificial Intelligence Requires Edge Computing](#)
² Check Point Solutions, [The Toppling Domino: Escalating the Surge in IoT Security Breaches](#)
³ SonicWall, [2023 Virus and Cyber Threat Report](#)
⁴ World Economic Forum, [How the Internet of Things \(IoT\) Became a Security Risk](#)
⁵ Grand View Research, [Embedded AI Market Size, Share & Trends Analysis Report](#)
⁶ American Public University, [Artificial Intelligence in Retail and E-commerce](#)
⁷ Edge Impulse, [Industrializing Smart Manufacturing with Edge AI](#)