Advantech

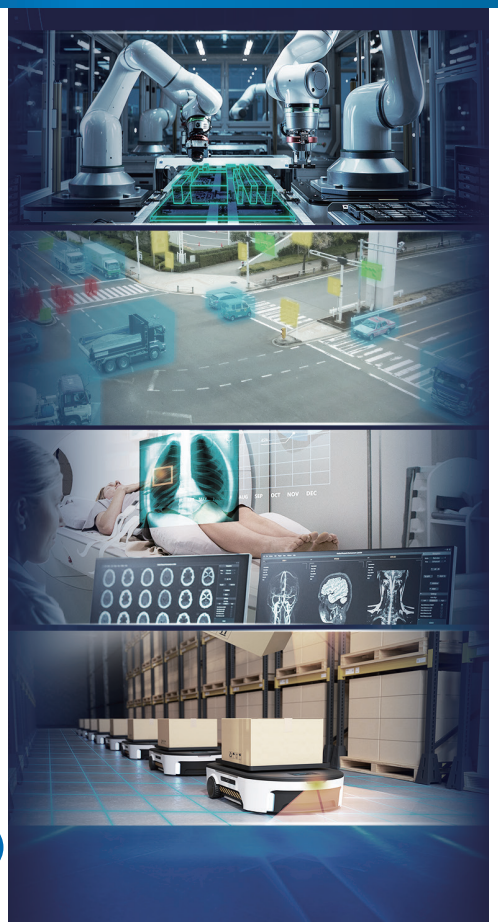
Edge Computing & Edge AI Software Solutions

ADVANTECH

Enabling an Intelligent Planet

Domain-Driven Software and Service Blueprint

Advantech, in collaboration with our partners, integrates three foundational modules—value-enhanced OS, edge applications, and scalable cloud services—to empower next-generation edge AI and IoT ecosystems. Advantech also emphasizes cybersecurity to ensure the reliability and safety of integrated solutions.



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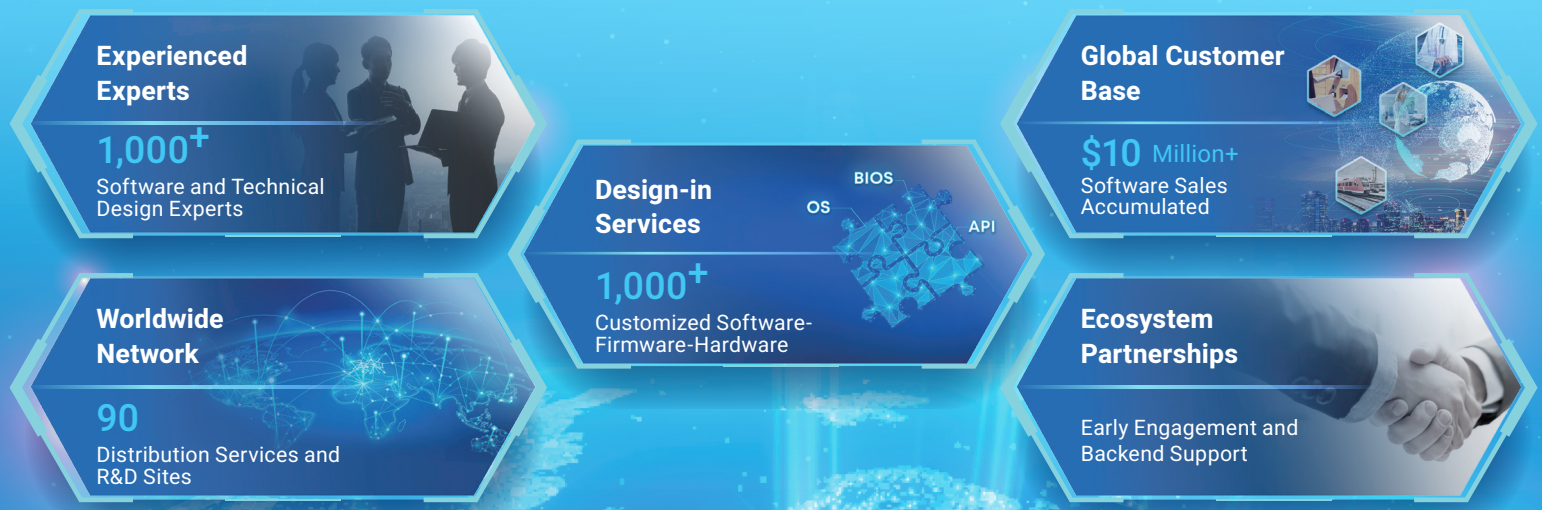
Customer-Centric Support and Services

With a global team of over 1,000 software and technical design experts, Advantech excels in delivering customized solutions for BIOS, OS, and APIs, ensuring seamless integration and optimized system performance. Supported by a global network of 90 distribution services and R&D sites, Advantech provides efficient and innovative services.
By fostering early engagement and leveraging ecosystem partnerships, Advantech strengthens customer collaboration, enabling agile deployment, streamlined workflows, and scalable solutions tailored to the most demanding edge-to-cloud applications.



Microsoft Canonical BUREAU VERITAS Acronis Trellix

AMD AXELERA ARTIFICIAL INTELLIGENCE HAILO intel MEDIATEK NXP Qualcomm Rockchip PHISON

Edge Computing & Edge AI Software Solutions

Advantech's embedded software integrates foundational software development, device management, and cloud services to address the growing demands of edge AI and diverse industries.

Value Enhanced OS

Application	Power Suite OS Operation Enhancement		DeviceOn Deployment and Management		
Application Programming Interface (API)	SUSI API Hardware Monitoring and Control	NVIDIA CUDA	Qualcomm AI Engine Direct	Intel OpenVINO	AMD ROCm
Device Driver	Advantech Peripheral I/O	SoC	AI Chip		
Operating System	Windows	Windows on Arm	Linux		
Firmware/BIOS	x86 UEFI	Arm U-Boot	Arm UEFI		

Advantech provides a range of operating systems to cater to diverse customer needs, including Windows LTSC, Windows on Arm, Linux, Ubuntu Pro, and Android. Advantech adds value through device drivers, APIs, and application software, enabling out-of-the-box functionality.

Advantech Function Test Services

Microsoft Attack Surface Reduction	Acronis Backup and Recovery	IEC 62443 4-2 VOC
Secure Boot	Trellix Data and Application Protection	

Edge Application

GenAI	Robotic	Medical	Smart Retail	Smart Manufacturing
Edge AI SDK Edge AI Toolkit	Robotic Suite Robot Function Enabler	Edge AI SDK Edge AI Toolkit	iVision Suite Vision AI Platform	WISE-IoT Edge-to-Cloud Solutions
NVIDIA AI Enterprise (NeMo)	NVIDIA AI Enterprise (Issac)	NVIDIA AI Enterprise (Clara)	SignageCMS Interactive Signage and Analytics Platform	NVIDIA AI Enterprise (OCRNet Model)
NVIDIA AI Enterprise (Riva)	Qualcomm Intelligent Robotics Product SDK	Qualcomm HexagonSDK	NVIDIA AI Enterprise (Retail Object Detection)	NVIDIA AI Enterprise (Metropolis)
Qualcomm Neural Processing SDK for AI			NVIDIA AI Enterprise (Merlin)	Intel Geti
Hugging Face			Intel SceneScape	Qualcomm PPE Detection Quantized
			Qualcomm MediaPipe Face Detection Quantized	

By integrating Edge AI resources, Advantech accelerates industry-specific model development and implementation. These Edge AI resources include self-developed applications such as Edge AI SDK and the Robotic Suite, as well as authorized software offerings such as NVIDIA AI Enterprise for comprehensive AI project development.

Scalable Cloud Services

Microsoft Azure	Canonical MicroCloud
Azure OpenAI	MicroK8s
Azure Migration Service	Auto-healing on Instances
Azure DevOps	Scalable and Low-latency HA Cluster

Additionally, scalable cloud services bridge edge and cloud computing, offering robust tools for AI model deployment, migration, and system scalability.

Industry Standards Compliance Security Solutions

Industry Standard Compliant

Energy	Medical	Manufacturing	Semiconductor
IEC 62351 TC57	IEC 80001 IEC 60601 SC62A	IEC 63283-3 TC65	SEMI E187 SEMI

Subscription–based Cloud Protection

Trellix ePo Cloud	Acronis Cyber Protect Cloud

Advantech prioritizes cybersecurity, addressing increased data flow in Edge AI applications and compliance with international regulations like the Cyber Resilience Act (CRA). Its one-stop security certification services make the integrated solutions secure and reliable.

Windows IoT

Customizable OS for Embedded Computers

As an authorized Windows IoT distributor, Advantech brings deep expertise in Windows IoT development, helping businesses create secure, connected, and intelligent solutions. Windows IoT provides up to 10 years of long-term support (LTS), enterprise-grade security, and seamless Azure IoT integration, ensuring reliable and future-proof deployments across industries such as industrial automation, healthcare, and retail. Whether you require optimized hardware, secure device management, or cloud connectivity, Advantech delivers the expertise and solutions to drive IoT innovation and digital transformation.

*Note: The image is for illustration only

Key Benefits

- Delivers powerful, efficient, highly secure digital operations.
- Provides up to 10 years of Windows IoT updates and enhancements for your devices.
- Simplifies and optimizes edge environment management.
- Leverages IoT innovation and AI-driven analytics.
- Supports environmentally and financially sustainable operations.

Windows

Power Suite

Exclusive OS Enhancement Tools and Value-Added Services

To optimize Windows IoT deployments, Advantech Power Suite—a specialized toolset—provides advanced features for OS customization, security, and management. It includes three key tools: Windows 10/11 IoT Lockdown Utility, ADV Image Manager, and the OS Enhancement Utility. These tools enable fast, hassle-free deployment, system optimization, and seamless backup and recovery, helping businesses improve efficiency and safeguard their devices with ease. Additionally, its energy-saving technology reduces costs while enhancing system performance and sustainability.

Windows 10/11 IoT lockdown

- Starup Manager
- Unified Write Filter
- Keyboard Filter
- Embedded Logon

OS Enhancement Utility

- System Setting
- Windows Update Setting
- Device Permissions Control
- Kiosk Mode
- Energy Saving

OS Image Backup & Recovery

- Environment Setting
- OS Backup
- OS Recovery

Support OS

- Windows 10/11 IoT Enterprise
- Windows on Arm

Windows

Ubuntu

Open Source Operating System on Linux

Ubuntu is the leading Linux OS, known for its stability, security, and strong developer support. As an IoT leader, Advantech offers Ubuntu Desktop for development and Ubuntu Core for secure edge computing, enabling AIoT applications with long-term security and seamless cloud integration.

Power Suite

Advantech Power Suite is also compatible with Ubuntu OS, providing a streamlined experience for Linux users.

Ubuntu
Full-blown graphic UI OS,
Rich application support

Ubuntu Pro
10-year support,
Advanced features and more protection

Ubuntu Core
Light-weight command-line OS,
Optimized for IoT sensor devices

500+	30+	1 Stop	10 Years	200+	3 Weeks
Compatibility test between the device and OS	HW control features deliver by SUSI API	Design-in service to get integrated HW & SW	Long-term HW & SW support	IoT Snapcraft Apps	Tri-weekly of security

Ubuntu Total Solutions

Best Environment for AI Development and Computing Management

Ubuntu Pro for Devices provides 10 years of support, over 23,000 CVE patches, and hardware compatibility for robotics and gateways, ensuring security, compliance, and streamlined AI workflows. Canonical MicroCloud offers scalable, high-performance computing in a compact cluster, ideal for edge applications. Together, Advantech and Canonical deliver Ubuntu OS, Canonical MicroCloud, and Canonical AI Consulting Services to reduce AI development challenges and enhance market accuracy.

Canonical MicroCloud

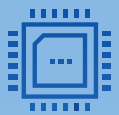
- Resource Scalability
- Automation Simplicity
- Rapid Provisioning

Ubuntu Pro for Devices

- 10-Year Support
- Security Maintenance
- ROS & Real-Time Kernel

Canonical AI Consulting Services

- Outcome-Based PoC
- End-to-End Consulting
- Fully-Managed MLOps



Broader Support
Supports x86 and Arm architectures

Long-Term Support
Starting from 16.04, every version receives 10-year support

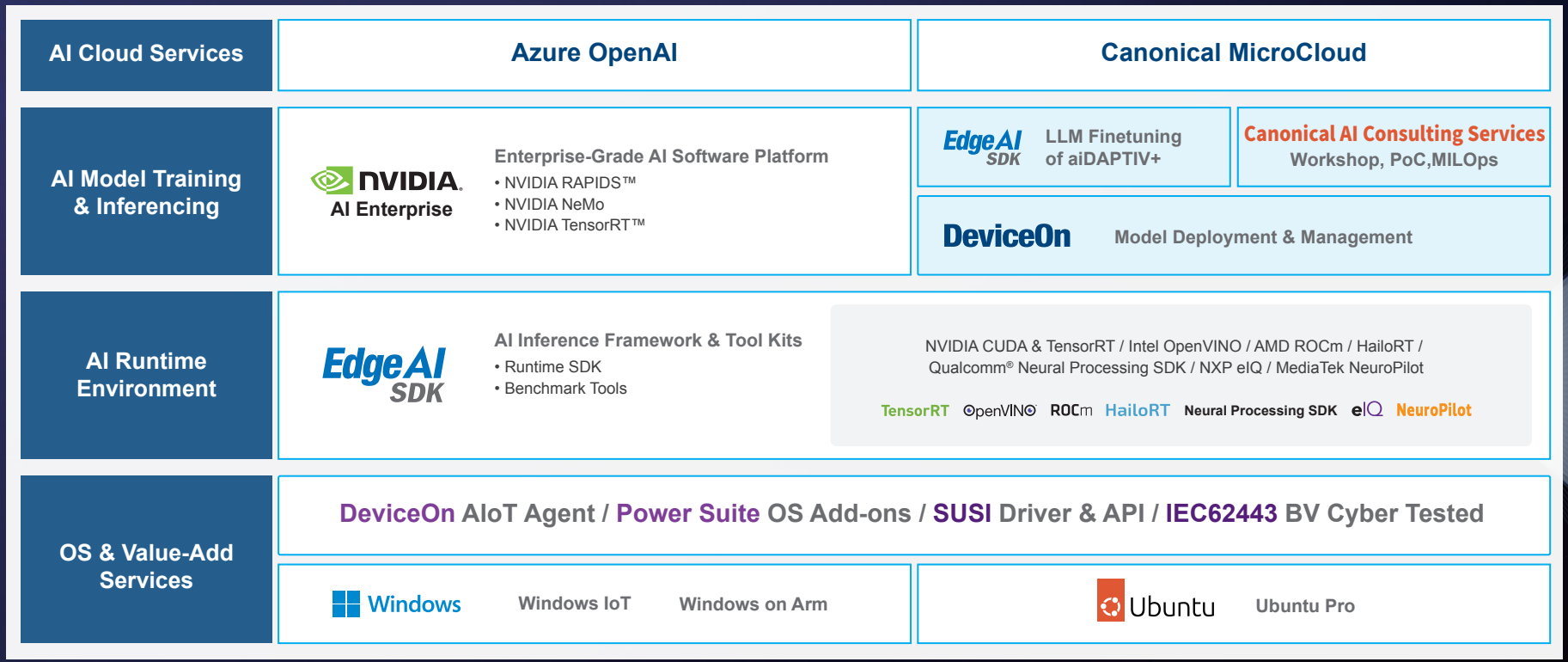
Secure
Provides security maintenance for 25,000+ packages

Ubuntu Management
Easily manage, deploy, monitor, and scale your devices using Landscape

Training and Workshops
Training is offered covering MLOps and AI architectures

Edge AI Software Architecture

Advantech's Edge AI platform provides comprehensive software and services, including OS, AI inference, model optimization, Azure OpenAI, and MicroCloud AI management. In addition to providing the platform, Advantech delivers expert technical support, collaborating with Microsoft, Canonical, NVIDIA, Qualcomm, and Intel to resolve challenges and optimize solutions—helping developers accelerate AI application development more efficiently.

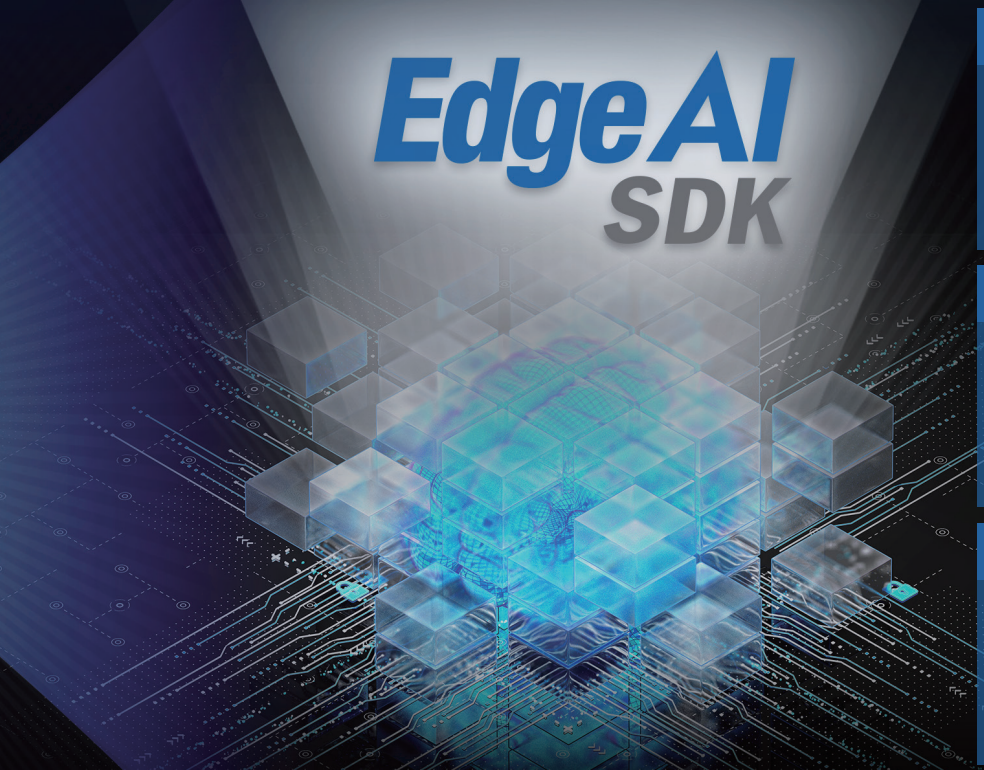


Microsoft Canonical AMD AXELERA HAILO intel MEDIATEK NVIDIA NXP Qualcomm Rockchip PHISON

Edge AI SDK

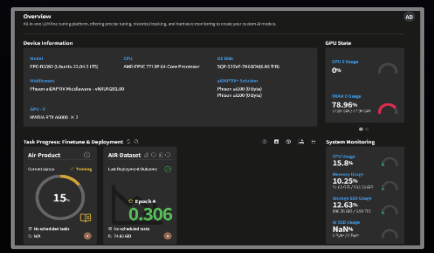
Rapid AI SDK Development Toolkit

The Advantech Edge AI SDK provides a comprehensive toolset designed for seamless edge AI development. With pre-configured hardware and optimally tuned software, it delivers a plug-and-play experience, enabling cost-effective LLM customization, seamless toolkit compatibility, and effortless management of large-scale edge deployments. Designed with reliability, scalability, and user-friendliness in mind, the Advantech Edge AI SDK simplifies the path to AI innovation.



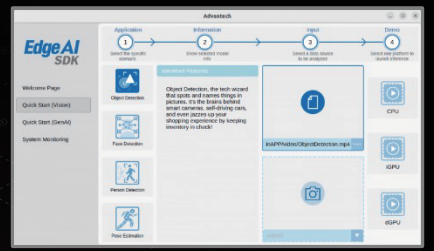
GenAI Studio

Cost-effectively build, evaluate, and integrate custom LLMs on-premises.



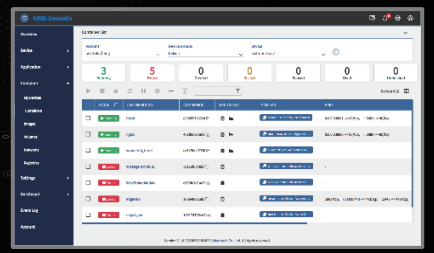
Inference Kit

Quickly create and assess efficient, compatible AI runtimes on embedded OS.



Orchestration Platform

Streamline AI model /app updates across large-scale edge deployments and integrate MLOps.



NVIDIA AI Enterprise

Enterprise-Grade AI Software Platform

NVIDIA AI Enterprise is a secure, optimized AI platform for Edge AI deployment. It streamlines AI model development, orchestration, and real-time inferencing across industrial, healthcare, and smart city applications. Featuring containerized AI workflows, pretrained models, and enterprise-grade security, it ensures efficient, scalable, and reliable AI at the edge. Built for NVIDIA GPUs and on-premise environments, it helps organizations deploy AI more quickly and intelligently where it's most needed.

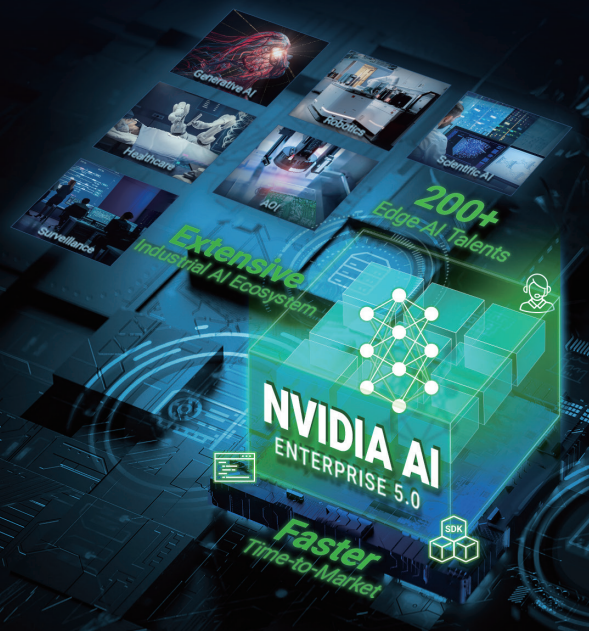
Comprehensive AI Devt. Suite

- Data preparation and training
- AI inference library and services

NVIDIA RAPIDS · NVIDIA TAO TOOLKIT · NVIDIA TENSORRT · NVIDIA TRITON INFERENCE SERVER

Lifecycle Management & Security Update

- 2 production branches/ year with 9-month lifetime
- Monthly CVE patches and bug fixes



Expert Support and Services

- Advantech tier 1 services for AI devinfra: OS, drivers and AI SDKs
- Direct access to NVIDIA AI experts

Advanced Software Offerings

- Cross-regional infra : Microsoft Azure
- Remote deployment : Advantech DeviceOn
- IoT security : Trellix, IEC62443 aligned solutions

Microsoft Azure · DeviceOn · Trellix

Annual Subscription

- 1-/3-/5-year subscription license
- Standard support included

Perpetual License

- 5-year standard support included
- Extendable support on a yearly basis

• Per GPU Licensing • Optional Upgrade for Business Critical Support • Discounted Pricing for Advantech NCS S/W Bundle

Recommended Edge AI Servers

NVIDIA CERTIFIED

AIR-510
14th Gen Intel® Core™ /
NVIDIA RTX 6000 Ada

AIR-520
AMD EPYC 7003 /
2 x NVIDIA RTX A6000

AIR-530
NVIDIA IGX Orin /
NVIDIA RTX 6000 Ada

DeviceOn

AIoT Device Management and Edge Orchestration

DeviceOn is an AIoT device management and edge orchestration platform enabling rapid deployment, flexibility, and secure AI runtime. It provides Edge Cloud Intelligence, Remote Access Services, and Application Orchestration for container management and OTA updates. With features like endpoint protection, system recovery, and ISA/IEC 62443 compliance, DeviceOn ensures 24/7 operation, OOB recovery, zero-touch enrollment, and advanced AI capabilities, enhancing edge computing efficiency and reliability.

Edge Cloud Intelligence

- Azure Open AI Integration
- Edge AI Deployment
- Nvidia Edge Support

Remote Access Services

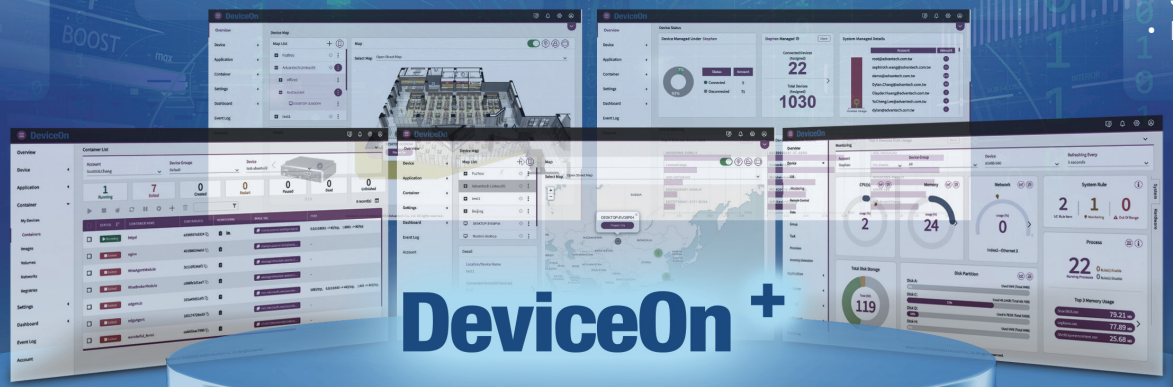
- Remote Monitoring
- Remote Troubleshooting
- Out-of-Band Control

Application Orchestrator

- Container Management
- OTA Updates
- Batch Maintenance

Endpoint Protection

- Whitelist Protection
- System Recovery
- ISA/IEC 62443 Compliance



AI Prediction

Service Chatbot

24/7 Operation

OOB Recovery

Zero-Touch Enrollment

Advantech 4-Layer Security Stack

In today's interconnected world, cybersecurity threats are rising, putting industrial systems at risk. Advantech provides a comprehensive approach to mitigate these risks with a 4-layer security stack. By integrating security at both software and hardware levels, we help businesses build resilient, compliant systems efficiently. Our expertise streamlines the certification process, saving time and reducing costs while ensuring a robust protection against evolving threats. Advantech not only accelerates certification but also lays a strong foundation for long-term security in industrial environments.

Cloud Security

Cloud-based security centralization unifies edge protection by enforcing consistent policies, real-time threat detection, and rapid updates—fortifying overall cybersecurity.

- Microsoft Azure Security Platform
- AI-driven Threat Detection
- Enterprise-grade Protection

Customer-Side Applications

- Smart Factory: AOI, OEE, Predictive Maintenance
- Medical: Patient Monitoring, Radiology Alignment, Biosensor Calibration
- Intelligent Energy: Grid Monitoring, Power Optimization, Battery Management
- Automation: SCADA Systems, Motion Control Tuning, PLC Synchronization

OS Security & Protection

- Windows/Ubuntu Long-term Security Support
- Trellix Application Control
- Acronis Backup and Recovery
- Advantech Power Suite IEC Standard Configurator

Device Layer

- Physical TPM 2.0 Chip Encryption
- Firmware Security: Security Boot, Secure Flash
- Trusted Driver
- SUSI API: Case Open Alert

Formal Certification

- Partnered with trusted 3rd-party organizations for certification processes
- Accelerates industry-standard certification procedures

Advantech
IEC 62443-4-2
Pre-Certified

Advantech Pre-Certified

Hardware with Built-in Foundation for IEC 62443-4-2 Compliance

- Accelerates and reduces the cost of the certification process
- Fully aligned with global regulations and standards

Trellix Embedded Control

Intelligent Security for Embedded Systems

Trellix Embedded Control delivers advanced protection for IoT devices, fixed-function systems, and critical infrastructure with whitelisting and change control technology. By allowing only authorized applications to run, it blocks malware, zero-day attacks, and unauthorized changes, ensuring system integrity with near-zero performance impact. Designed for industries like healthcare, industrial automation, and retail, it helps organizations meet regulatory standards while maintaining seamless operations.

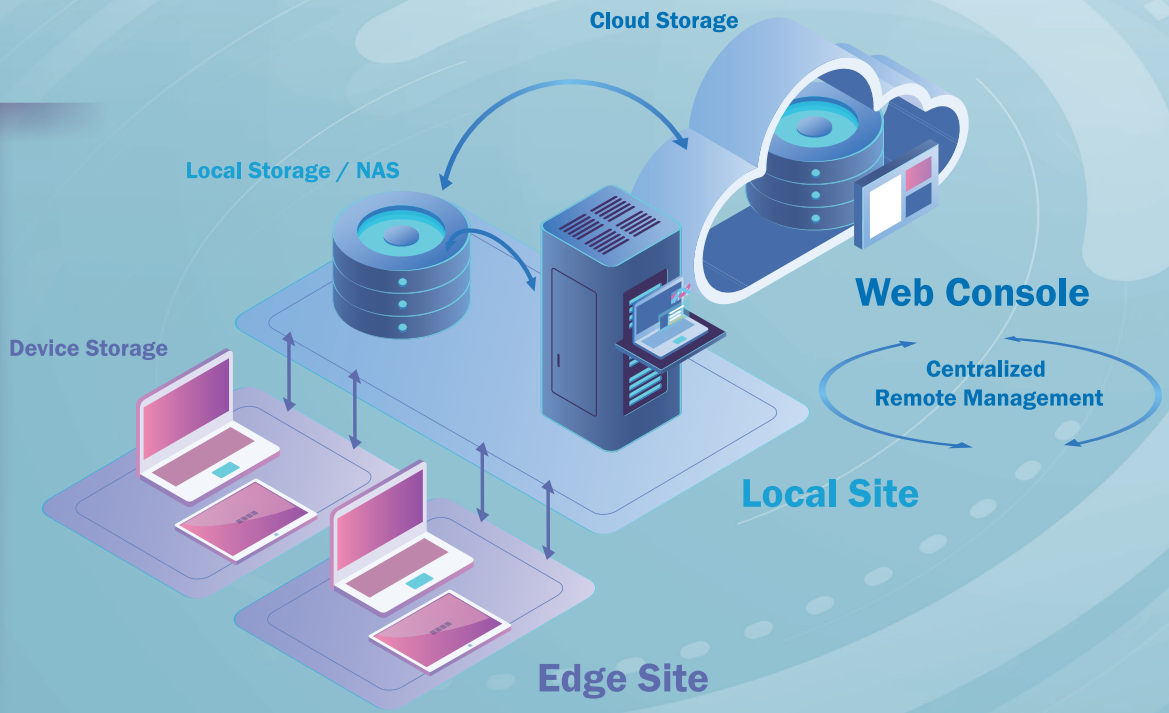
Acronis Cyber Protect Backup

Next-Generation Data Protection

Acronis Cyber Protect Backup provides seamless, cross-platform backup and recovery, all managed through a centralized dashboard. Customers can easily create, apply, and monitor backup plans via the Web Console, while local administrators efficiently manage Edge Site machines. This simplifies backup and recovery operations. With integrated cybersecurity and an intuitive interface, it ensures business continuity with minimal effort.

Acronis

- Seamless backup and recovery across platforms
- Centralized and Remote Management for easy control
- Disk health monitoring to prevent failures
- OS and application vulnerability scanning
- Proactive ransomware protection



Optimizing Steel Production for Reliability and Efficiency

The customer’s application is designed for automated production lines in the steel industry. The device must be stable, heat-resistant, and energy-efficient to reliably collect and transfer production data in harsh factory conditions. Compatibility with Microsoft tools is essential to avoid redevelopment and ensure cost-effectiveness.

Customer Pain Points

- Difficulty finding a lightweight, heat-resistant device for offline data collection.
- Challenges in identifying a cost-effective platform.
- Challenges in ensuring seamless integration with Microsoft .NET and SQL.

Solutions

- The Edge AI Box Computer (EPC-R3720) serves as a compact, energy-efficient gateway that is both lightweight and heat-resistant, making it ideal for demanding industrial environments.
- Powered by the i.MX8M Plus Arm SoC, the EPC-R3720 provides a cost-effective solution without compromising performance or reliability.
- Pre-installed Windows 10 IoT Enterprise on Arm ensures full compatibility with Microsoft .NET and SQL databases, enabling seamless integration with existing software.

Benefits

- Ready-to-Use Solutions developed by Advantech to reduce customer development time and boost production efficiency.
- Affordability while still delivering High Performance, utilizing the Arm platform within budget.
- Pre-installed with Microsoft Windows on Arm, enhancing compatibility, streamlining integration, and reducing power consumption, while off-loading the management of the system’s architecture.

Use Cases

Windows 11 IoT Enterprise LTSC for Secure Factory Automation

In smart factories, Windows 11 IoT Enterprise LTSC powers automated production line control systems, providing long-term stability, robust security, and the ability to handle large data volumes. The OS supports real-time monitoring, predictive maintenance, and continuous optimization, while its infrequent updates ensure reliable operation in demanding industrial environments.

Customer Pain Points

- A need for long-term system stability to handle production data in demanding factory environments.
- Difficulty maintaining secure and efficient real-time monitoring and machinery management.
- Challenges ensuring system reliability due to frequent updates and an ongoing risk of instability.

Solutions

- Enhanced Security – Windows 11 IoT Enterprise LTSC includes robust security features such as Windows Defender, Credential Guard, and BitLocker, protecting against unauthorized access and malware to ensure reliable manufacturing processes.
- Seamless Integration – Backward compatibility with older hardware and software allows existing factory systems to operate seamlessly without disruption.
- Long-Term Stability – With up to 10 years of extended support, Windows 11 IoT Enterprise LTSC minimizes the need for frequent updates, ensuring continuous and stable operation.

Benefits

- Robust Security – Provides reliable protection against cyber threats, ensuring system integrity for factory automation.
- Seamless Integration – Supports smooth operation, reduces upgrade costs, and maintains compatibility with legacy systems.
- Long-Term Stability – Minimizes updates, enabling reliable, uninterrupted operation in demanding factory environments.

Optimizing Cold Storage Energy Use in Dairy Production

Dairy facilities must manage temperature and humidity for quality and safety, but inefficient energy use arises from overcompensating cooling units and siloed data. The facility plans to implement an integrated solution with edge AI, industrial motherboards, and AI software to optimize energy and maintain controls.

Customer Pain Points

- Inefficient Energy Usage – Overcooling, undercooling, and lack of real-time adjustments lead to wasted energy.
- Data Silos – Disconnected systems prevent unified monitoring and control of temperature, humidity, and energy consumption.
- Maintaining Quality and Compliance – Struggles to consistently maintain product quality and meet food safety standards.

Solutions

- Advantech AIR-101 Edge AI System with NVIDIA GPUs for real-time data processing and AI inference.
- Advantech AIMB-289 Industrial Motherboard for collecting and transmitting sensor data from cooling units.
- NVIDIA AI Enterprise software for deploying and running robust AI models to optimize energy usage.
- Advantech DeviceOn for centralized management, monitoring, and predictive maintenance alerts.

Benefits

- AI-Driven Optimization – Reduces unnecessary cooling, resulting in significant energy savings.
- Consistent Conditions – Maintains stable temperature and humidity, minimizing product spoilage and ensuring compliance with food safety standards.
- Centralized Data Management – DeviceOn consolidates all data into a single platform, eliminating silos and providing facility managers with a comprehensive view of environmental and energy metrics.
- Proactive Maintenance – DeviceOn alerts all maintenance teams to address issues before they cause downtime, ensuring continuous, efficient operations.

Use Cases

Edge AI in Autonomous Mobile Robots

A smart logistics provider sought to modernize their delivery operations in public spaces using AI-enabled service robots. By implementing autonomous robots, they enhanced traditional delivery methods, ensuring secure and efficient item delivery while navigating crowded environments. The provider required a comprehensive AI solution that could be remotely managed to optimize operational efficiency and delivery performance.

Customer Pain Points

- Complex AI Integration – Difficulty integrating AI systems for autonomous navigation in dynamic, crowded public spaces.
- Real-Time Processing – Need for reliable real-time processing of data from multiple sensors.
- Remote Management – Challenges effectively managing and monitoring of a fleet of robots remotely.
- Ongoing Optimization – Requirement for continuous updates to AI models and performance optimization.

Solutions

- AIR-520 with NVIDIA RTX 6000 Ada (x2) – A high-performance AI model training server, utilizing TAO from NVIDIA AI Enterprise for model development and Advantech DeviceOn for central deployment and management.
- AIMB-289 – Equipped with essential PCIe slots and multiple 2.5G LAN ports, paired with the EAI-3100 featuring an Intel® Arc™ A370M GPU for complex AI inferencing, supported by the Edge AI SDK for rapid, compatible runtimes.
- TAO toolkit from NVIDIA AI Enterprise - Quickly adapt pre-trained models using efficient transfer learning, enabling developers to quickly adapt pre-trained models for vision tasks, saving time and resources.

Benefits

- Remote Fleet Management - Provides centralized control and monitoring.
- Flexible AI Development - Supports multiple sensors and AI applications.
- Secure Operations - Ensures reliable and safe delivery services.
- Streamlined MLOps - Facilitates continuous AI model improvements.

Transforming Traffic Management with AI Insights

AI-assisted traffic management is key to building smarter, safer cities. Advantech's EAI-3100 AI module, combined with the AIMB-289 motherboard powered by 14th Gen Intel® Core™ desktop processors and the NVIDIA TAO toolkit, delivers real-time monitoring at 750 intersections across multiple cities. This AI-powered solution tracks vehicle count, density, and speed, providing valuable insights that help optimize urban traffic flow and enhance road safety.

Customer Pain Points

- Limited Video Processing Capabilities – Traditional video processing units struggle to deliver detailed road monitoring and analytics, especially in low-light conditions.
- Real-Time Traffic Analysis – Accurate traffic flow analysis requires advanced image processing, recognition, and analytics capabilities.
- Frequent Device Updates – A large number of AIoT edge devices deployed across multiple locations require regular updates to ensure consistent performance.

Solutions

- AIR-520 with NVIDIA RTX 6000 Ada (x2) – A powerful AI model training server using TAO from NVIDIA AI Enterprise, also serving as a central deployment management platform with Advantech DeviceOn.
- AIMB-289 – Equipped with essential PCIe slots and multiple 2.5G LAN ports, paired with the EAI-3100 featuring an Intel® Arc™ A370M GPU for complex AI inferencing, supported by the Edge AI SDK for rapid and efficient runtimes.
- TAO toolkit from NVIDIA AI Enterprise – A no-code toolkit for transfer learning that allows developers to quickly adapt pre-trained models for vision tasks, saving both time and resources.

Benefits

- Ready for Training and Inferencing – Provides reliable and compatible AI devices, ensuring efficient development from start to finish.
- Streamlined Workflow – Enables users to smoothly transition from data preparation to model training, optimization, and deployment within a unified environment.
- Scalability and Flexibility – Allows customers to easily scale AI models across large edge networks.

Use Cases

Optimizing PCB Production with AI Quality Inspection

Traditional PCB manufacturers typically rely on rule-based machine vision algorithms for defect inspection, which still require manual rechecks by skilled inspectors. A leading PCB manufacturer is optimizing its production process by leveraging AI for more accurate quality inspections. By implementing AI, the company aims to increase DIP and SMT yield rates, addressing the 70-80% underkill rate caused by low contrast in traditional automated visual inspections.

Customer Pain Points

- Transitioning to Deep Learning – Moving from rule-based AOI to a deep learning CNN approach requires significant development time.
- Implementing AI Systems – Incorporating AI into existing workflows is challenging, requiring process changes and staff training.
- Continuous Model Retraining – Continuous retraining of AI models on the production line is essential to maintain and enhance inspection accuracy.

Solutions

- AIR-030 with NVIDIA Jetson Orin – A powerful edge inference system designed for the application, featuring vertical I/O, and the Edge AI SDK.
- AIR-520 with BMC Server-Grade Manageability – Equipped with dual GPU cards for model retraining by using open-source PyTorch and TensorFlow, plus remote AI model/container updates via DeviceOn.
- Canonical's AI Consulting Services – Provides support at every stage of the AI development journey, helping customers maximize the potential of their AI solutions.

Benefits

- AI Model Deployment and Updates – Enables easy over-the-air (OTA) updates for hassle-free AI model management.
- Fully-managed MLOps – Accelerates model deployment while handling the complexities of MLOps architecture, ensuring efficient production workflows.

AI Automation of Technician and Customer Support

Traditional tech support often involves waiting for available technicians. With AI LLMs, support is instant, available 24/7, and enhances post-sales service efficiency and quality—delivering a superior customer experience.

Customer Pain Points

- Limited Availability of Technical Staff – Service efficiency and quality depend on workforce availability and working hours.
- Knowledge Retention & Training – Developing and transferring technical expertise requires continuous investment in training.
- Inconsistent Service Quality – Variability in technician skills impacts customer satisfaction and sales retention.

Solutions

- AIR-520-70B Plus with NVIDIA RTX 6000 Ada (x2) – A high-performance server for LLM training.
- AIR-510 with NVIDIA RTX-A5000 – An efficient inference server powering chatbot services.
- aiDAPTIV+ on AIR-520 – Optimizes cost and efficiency for AI-driven support.
- AIR-500 Series with NVIDIA AI Enterprise – Ensures a secure and reliable AI pipeline for seamless deployment.

Benefits

- Instant Technical Support – Enhances customer experience and boosts retention with real-time assistance.
- Consistently High Service Quality – Maintains customer satisfaction through reliable technical support.
- Seamless Long-Term Management – Easily integrates with Advantech DeviceOn for continuous optimization and smooth operations.

Use Cases

Traffic Management for Severe Conditions

As countries move toward smarter infrastructure, the need for high-performance industrial computers is increasing. These systems must withstand harsh weather conditions, offer robust security features, and meet strict certification standards to ensure reliability and customer confidence.

Customer Pain Points

- Regulatory Compliance – Meeting strict regulations for traffic management and infrastructure projects.
- Long-Term Security & Compliance – Ensuring cybersecurity and adherence to industry standards throughout extended construction and operational phases.
- Handling Environmental Conditions – Industrial computers must withstand extreme temperatures, vibrations, and dust while maintaining high durability and reliability.

Solutions

- ARK-3534 Box PC – Certified with IEC 62443-4-2, ensuring compliance with tender requirements.
- End-to-End Security – Protects data integrity with robust security from hardware to software and firmware, minimizing vulnerability to cyberattacks.
- Industrial-Grade Durability – Operates reliably in extreme temperatures (-20 to 60°C / -4 to 140°F), resists vibrations and shocks, and supports a wide power input range (9 ~ 36 VDC) to withstand harsh industrial environments.

Benefits

- Enhanced Tender Eligibility – Compliance with IEC 62443-4-2 increases likelihood of selection while reducing certification costs and time for industry-specific standards.
- Regulatory Compliance – Ensures readiness for the 2027 Cyber Resilience Act (CRA) by utilizing IEC 62443-4-2 certified devices, meeting mandatory cybersecurity requirements.

Memo

Memo

Regional Service and Customization Centers

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