

Advantech Expands WEDA-Powered Edge AI Ecosystem to Streamline AI from Development to Deployment

Accelerating the Edge AI User Journey from Silicon to AIoT Solutions



As Edge AI adoption accelerates, enterprises face growing complexity across hardware platforms, AI software environments, model deployment workflows, and distributed edge operations. Advantech's WEDA-Powered Edge AI ecosystem brings together WEDA-Ready Edge Computing, WEDA Edge, WEDA Cloud, and the Advantech Container Catalog (ACC) to establish a standardized, scalable end-to-end Edge AI lifecycle. Through a seamless three-step journey—"Build," "Scale," and "Evolve"—developers can effortlessly build AI solutions on new silicon platforms from 0 to 1, scale deployments from a single device to an entire edge fleet with a single click, and continuously evolve AI models to maintain accuracy over time.

"WEDA is designed to turn Edge AI deployment from fragmented development efforts into a standardized and scalable lifecycle. By bringing together Advantech hardware, WEDA-Ready Linux, Advantech Container Catalog, WEDA Edge, and WEDA Cloud, we help developers build from Ready-to-Dev containers, scale from prototype to fleet through cloud APIs, and continuously evolve AI models through secure model management and data harvesting. This is how Advantech is building an open Edge AI ecosystem that helps customers move faster from innovation to production."

Aaron Su, Vice President, Embedded IoT Group, Advantech

“To accelerate edge AI, we need the entire value chain partnering and innovating. By aligning Intel’s broad product portfolio and Open Edge platform approach, with Advantech’s WEDA-powered solutions, we are making it simpler to develop and optimize Edge AI workloads at scale across many different environments.”

— Dan Rodriguez, Corporate Vice President, Edge Computing Group, Intel

“Qualcomm Technologies, Inc. is proud to collaborate with Advantech on the WEDA ecosystem, enabling developers to accelerate the deployment of scalable Edge AI solutions. By combining Qualcomm Technologies’ AI platform capabilities with Advantech’s WEDA-Ready infrastructure and Advantech Container Catalogue resources, we are simplifying AI adoption and bringing intelligent applications to market faster across industrial and enterprise environments.”

— Laxmi Rayapudi, VP & GM, Software, Auto & IE-IoT, Qualcomm Technologies, Inc.

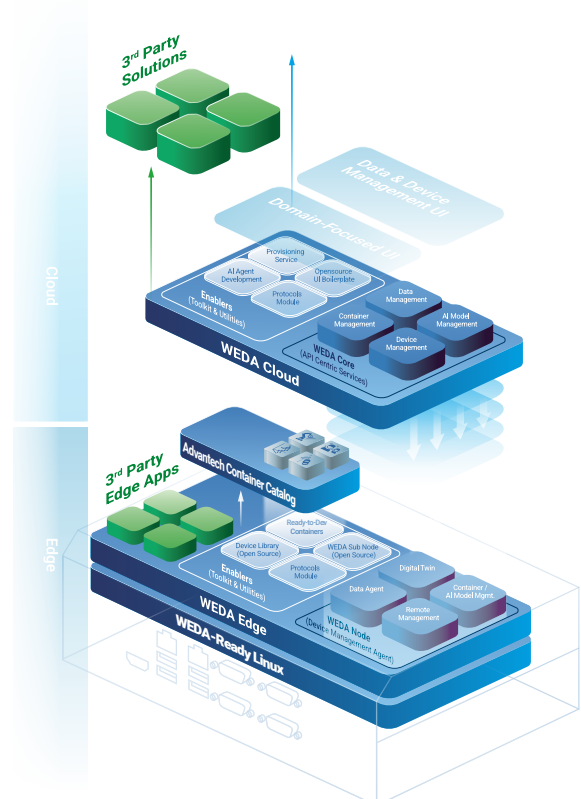
“Through collaboration with Advantech on WEDA-Ready Edge Computing and Advantech Container Catalog, AMD helps developers take advantage of AMD Ryzen™ AI Embedded processor-based platforms with pre-validated, ready-to-develop container resources. Together, we are reducing integration complexity and accelerating Edge AI workloads from prototype to scalable deployment across industrial applications.”

— Amey Doesthali, Head of Robotics, Industrial, and Healthcare, Embedded Computing Group, AMD

From Ecosystem Collaboration to Scalable Deployment

These collaborations extend beyond platform support. By aligning Advantech’s WEDA-Ready infrastructure and Advantech Container Catalog resources with different computing architectures, developers can access platform-optimized AI capabilities while maintaining a more consistent development, deployment, and lifecycle management experience.

WEDA-Ready Edge Computing currently supports Intel, Qualcomm, AMD, NVIDIA, and NXP architectures. This cross-chip approach helps developers reduce hardware-specific integration effort and select the computing platform that best matches their AI workload, performance, power, and application requirements.



Establishing a Practical Foundation for Edge AI

WEDA's ecosystem approach is strengthened through collaboration with leading silicon partners. By aligning WEDA-Ready infrastructure and Advantech Container Catalog([ACC](#)) resources with different computing architectures, Advantech is helping developers access platform-optimized AI capabilities while maintaining a more consistent development and deployment experience.

WEDA-Ready Edge Computing provides an integrated foundation for industrial Edge AI development and deployment. It combines WEDA-Ready Linux, Edge AI SDK, device management, OTA and monitoring, container management, AI model management, and hardware abstraction capabilities.

WEDA-Ready Linux connects Advantech hardware, AI workloads, and cloud orchestration through a unified edge software foundation. It supports Ubuntu and Yocto environments, Windows through WSL2, real-time environments, Edge AI SDK, Robotic Suite, OTA and monitoring, and device management agents.

The platform is also designed with security and regulatory readiness in mind. Secure Boot, FOTA partitioning, TPM-based protection, filesystem integrity, and SBOM generation help customers address industrial cybersecurity requirements, including IEC 62443 and the EU Cyber Resilience Act.

Together, these capabilities help developers move away from fragmented, manual, and hardware-specific development processes toward a more standardized and manageable Edge AI workflow.

Delivery Platform – WEDA-Ready Linux

A Unified Edge Software Foundation, Bridging Hardware, AI Workloads, and Cloud Orchestration.



WEDA simplifies the Edge AI developer journey in three intuitive steps, starting with Ready-to-Dev Containers. The Advantech Container Catalog (ACC) is a key development and deployment resource within the WEDA-Powered Edge AI ecosystem. It provides Ready-to-Dev containers for Edge AI, LLM and VLM, RAG, Vision AI, robotics, AI inference, and other containerized software resources.

Developers can select suitable container resources based on chipset platform, AI workload, and application requirements. This reduces the time spent configuring development environments, resolving package compatibility issues, and integrating hardware-specific software components.

Together with WEDA Cloud APIs for container orchestration, AI model management, fleet management, and data management, these resources support a three-step Edge AI journey:

"Build" accelerates zero-to-one application development by giving developers access to Ready-to-Dev containers and pre-validated software resources. Developers can kickstart CNN and GenAI Edge AI applications on a new silicon platform within 30 minutes by selecting and running Ready-to-Dev containers from ACC, dramatically reducing the learning curve when migrating to new silicon AI SDKs.

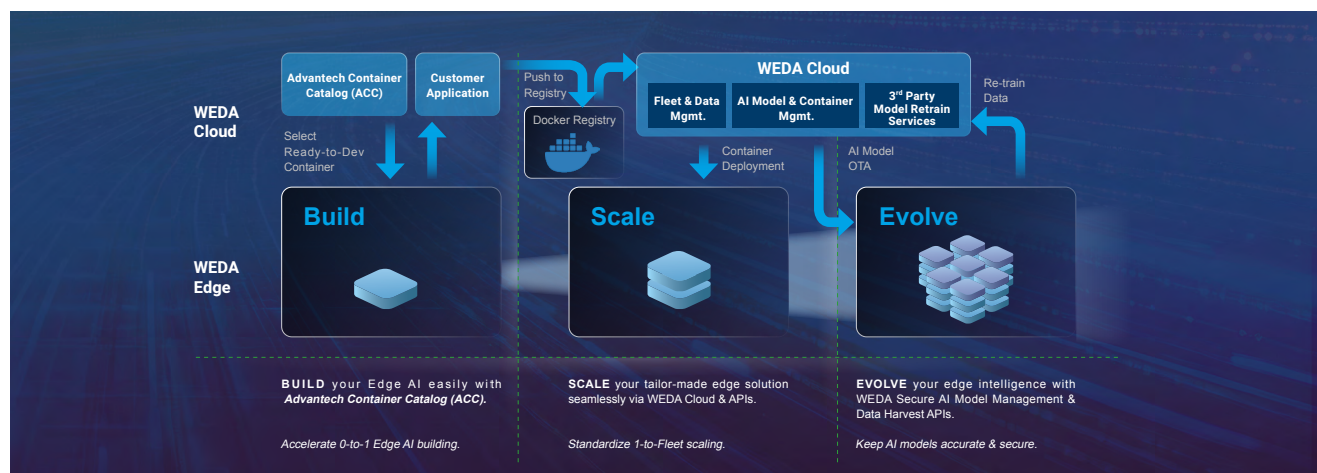
"Scale" expands a customized, validated edge application—built from Ready-to-Dev Containers—from a single unit to an entire edge fleet using cloud APIs, container orchestration, and centralized management.

"Evolve" ensures AI models get smarter over time by providing a continuous AI improvement architecture through data harvesting, AI model retraining, model management, and controlled model updates.

By connecting these three stages, WEDA establishes a more consistent path from initial development and validation to fleet-scale deployment and continuous AI optimization.

WEDA User Journey: Your Highway to Production-Ready Edge AI

Efficiency via Containerization & API Architecture



Enabling Cross Platform AI Development

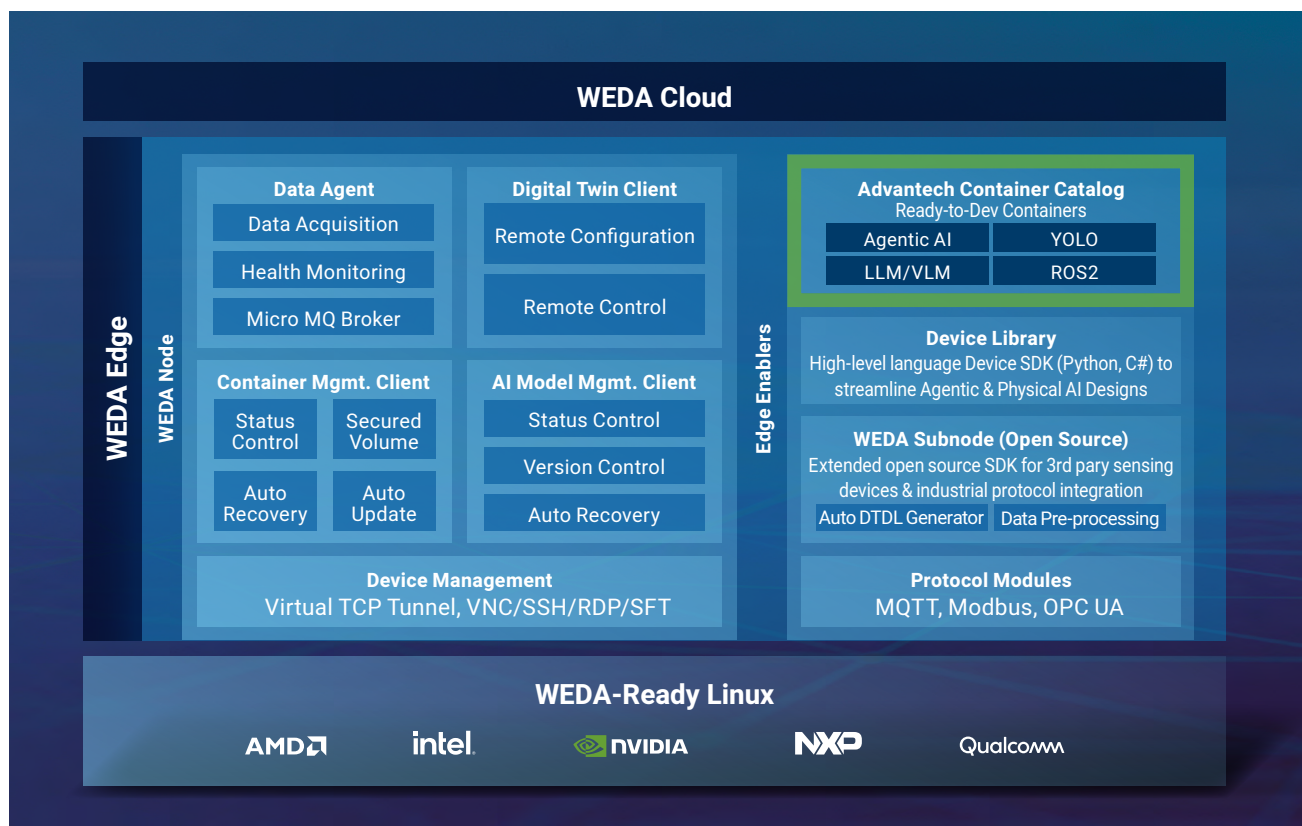
Advantech also provides Intel- and Qualcomm-based container resources through the Advantech Container Catalog as concrete technical entry points for developers.

Intel containers support vertical industry applications such as Smart Intersection Analytics and Retail AI Self-Checkout powered by OpenVINO, as well as OpenClaw on Intel integrated GPUs through OpenVINO.

Qualcomm container resources support Qualcomm IQ9 and QCS6490 platforms and include FFNet real-time segmentation, ONNX Runtime, image segmentation, object detection, pose estimation, and LLM resources optimized for Qualcomm Hexagon and Qualcomm Adreno technologies.

These Ready-to-Dev resources allow developers to select suitable AI software stacks based on chipset, workload, and application requirements. They also help reduce environment setup, package incompatibility, and cross-platform integration complexity, accelerating the journey from proof of concept and validation to real-world deployment.

WEDA Edge – Containerized Edge Intelligence from OT-Cloud



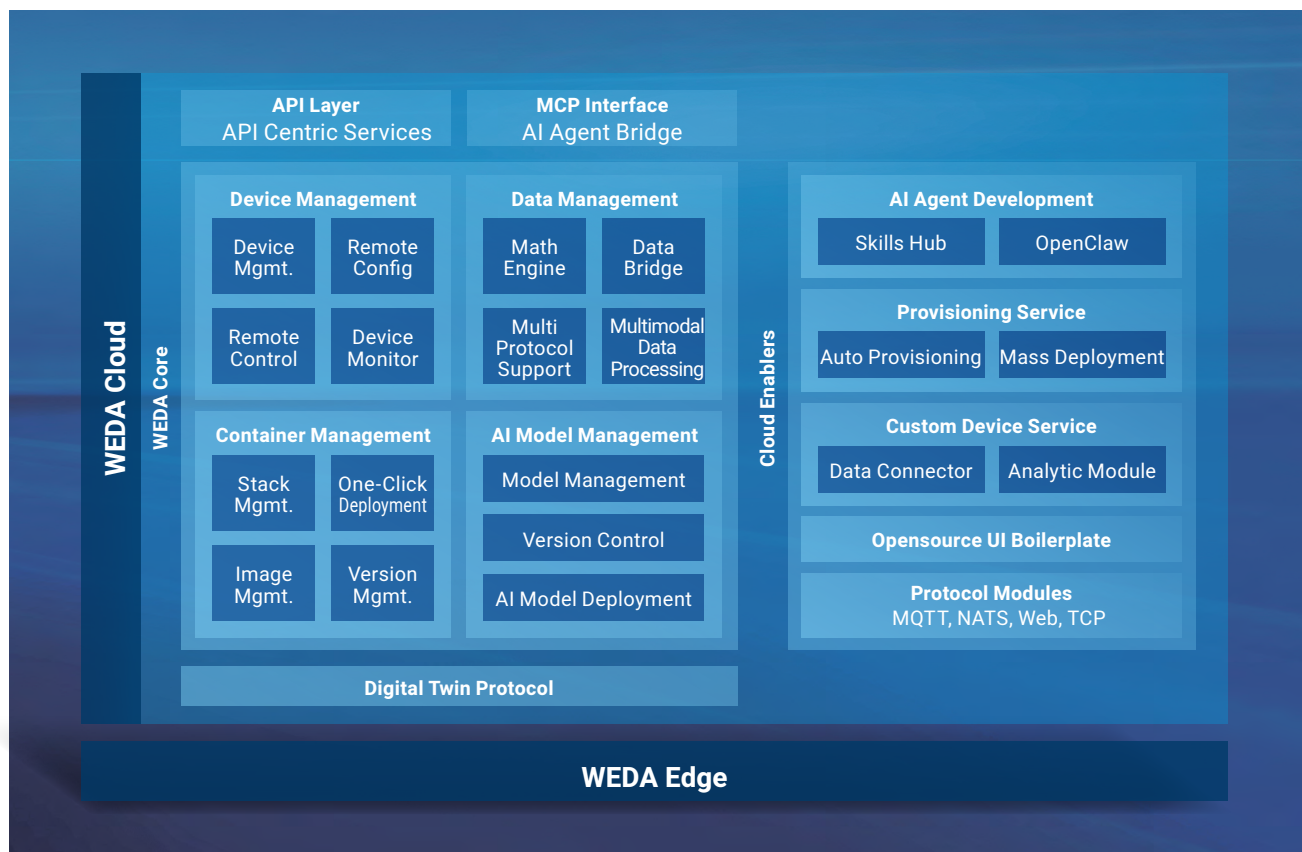
Moving Edge AI into Commercial Deployment

The WEDA-Powered Edge AI ecosystem integrates WEDA Edge, WEDA Cloud, WEDA-Ready Linux, WEDA-Ready Edge Computing, and the Advantech Container Catalog to establish a scalable, manageable, and continuously evolving Edge AI lifecycle.

By connecting application development, edge deployment, fleet operations, data management, and AI model management through a consistent edge-to-cloud architecture, WEDA helps customers move more efficiently from innovation and validation to commercial implementation.

Advantech will continue to expand WEDA technical resources, ecosystem collaboration, and global go-to-market activities to help developers and customers accelerate Edge AI from development to deployment.

WEDA Cloud – Edge AI Cloud-Edge Orchestration



Learn More and Get Started

[WEDA Landing Page](https://dev-wise.advantech.com/en-int/topics/wise-edge-developer-architecture)

<https://dev-wise.advantech.com/en-int/topics/wise-edge-developer-architecture>

[WEDA Community](https://forum.aim-linux.advantech.com/)

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[WEDA Developer Webinar Series](https://register.gotowebinar.com/register/4451909844191695449?source=advantechpr)

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[WEDA Technical Documentation](https://learn.advantech.com/weda/docs/Introduction)

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