

Advantech Delivers Scalable, High-performance Edge AI with Qualcomm® Cloud AI 100 Ultra

Industrial, Healthcare, Logistics, and Smart City Applications



The Challenge

Advantech's varied global customers in manufacturing, logistics, and healthcare needed AI that could:

- Reduce latency and reliability risks: Cloud-based AI inference caused delays and connectivity risks
- Enable security features by processing sensitive data On-Premises
- Reduce high scalability costs for multi-site deployments as scaling GPU or cloud infrastructure was costly
- Unify fragmented hardware-software toolchains by integrating AI into existing systems

The Solution

Advantech integrated the Qualcomm Cloud AI 100 Ultra accelerator into its AIR-410 and AIR-420 systems for industrial PCs.

- **Generative AI:** Runs up to 70B-parameter LLMs for documents, chatbots, and ERP assistants
- **Computer vision:** Real-time defect detection, PPE compliance, and surveillance
- **Multi-modal AI:** Combines vision, language, and sensor data for robotics and automation

Business Outcome

- **Reduced AI deployment** time with pre-integrated appliances
- **Achieved lower TCO** (total cost of ownership) with high performance per watt/dollar
- **Managed on-device data** with On-Premises AI inference
- **Enabled faster adoption** through reference designs such as Edge Boxes

Key Statistic

Up to 870 INT8 TOPS

for high-performance, energy-efficient edge AI in industrial, healthcare, logistics, and smart city deployments

Snapshot

Customer: Advantech

Industry: Industrial IoT and Embedded Platforms

Application: Next-gen Edge AI Systems