



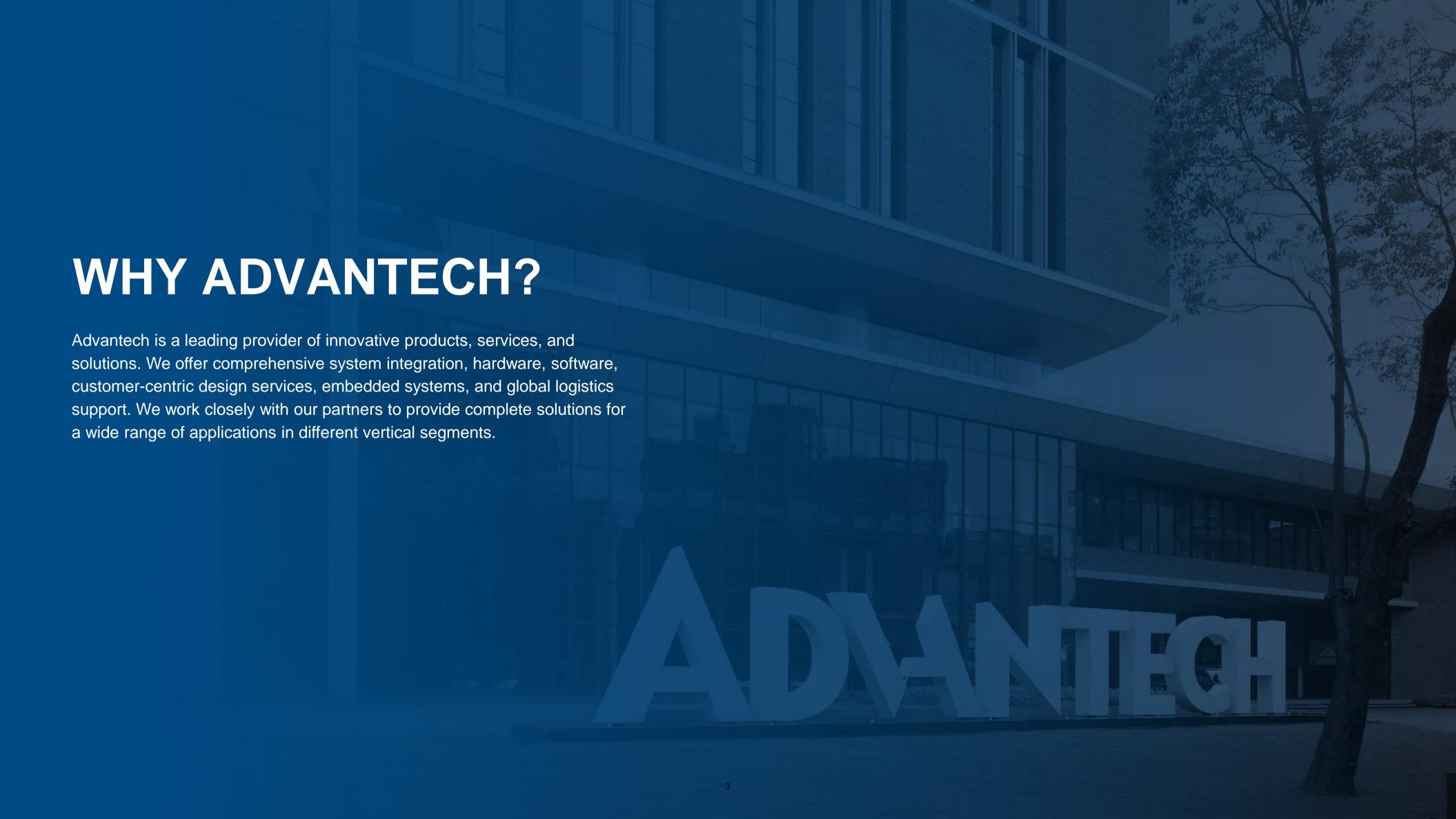
# ADVANTECH AMD SOLUTIONS eBOOK

Your Guide to Advantech Cloud, Server, and Networking Solutions with the Latest and Most Powerful AMD Platforms

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Value-Added and Al-Driven Solutions
Product Selection Guide
Advantech Global Presence







Headquarters: Taipei, Taiwan

#### **INDUSTRIES SERVED**

Industry 4.0, Industrial IoT, Embedded Computing, Medical, Retail, Logistics







#### **Honors & Awards**

No.5 in Best Taiwan Global Brands



 No.17 in Top 50 Global Automation Vendors



 No.9 in Top 100 Industrial IoT Companies



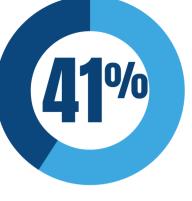
• iF Product Design Award

#### **WORLD'S LARGEST IPC COMPANY**

Advantech IPC WW Market Share







Source: OMDIA - Market Share Estimates for Industrial PCs: World, 2022 Edition



## 2021 **REVENUE**

(USD)

#### GLOBAL PARTNERS (Edge Server Group)























#### SPINGENCE





#### **CERTIFICATION**

- NEBS
- NEMA TS2
- EN 60601
- NIST







# 18MILLION+ sq. ft.

#### **MANUFACTURING PLANTS**

Linkou, Taiwan



- 9 SMT lines, 16 system lines
- Engineering sample services
- Complex product lines
- Flexible & guick production





- 12 SMT lines, 13 system lines, 6 chassis lines
- Chassis design & production
- Mature product lines
- Cost-effective production



#### Nogata, Japan

- 4 SMT lines, 1 system line
- Japan design center, CTOS service, logistics center, repair center

#### **WORLDWIDE OFFICES**



Manufacturing 3 On-site service 4 Design centers 11 CTOS centers 16 Repair centers 17 Logistics centers 20 More than 90 offices globally!

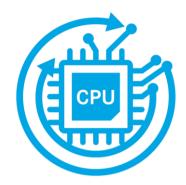




# Advantech & AMD: Enhancing Industrial Solution Development

AMD EPYC™ Server Processor Series

#### **Leading Computing Capabilities**

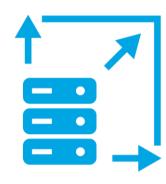


- AMD Zen 3 & 4 architecture
- Advanced 5nm process
- Up to 128 cores

- PCIe Gen 5 and USB 3.2 Gen 2
- Best performance per watt
- Instinct™ MI210 GPU Card Certified

AMD Ryzen™ Embedded Processor Series

#### **Unlocking Scalability and Integration**



- Up to 16 CPU cores and 32 threads
- 3 x display pipes up to 4K resolution
- Integrated AMD Radeon™ Graphics
   H
- HVEC and H.264 (10-bit) codec, VP9 decoding

#### **Software Utilities & OS**



- DeviceOn / iManager
- Redhat RHEL 8.3
- CentOS 8.3

- Supports Windows Server
   2019 & Windows 10 Enterprise LTSC
- Ubuntu 20.04

#### **Embedded Features & Services**



- 5- and 10-year longevity
- BIOS customization services
- Advanced thermal solutions
- Intelligent management (IPMI 2.0)
- Design-in & Manufacturing Services

# Advantech & AMD: Focusing on Domain Sectors



#### **Professional Hardware Design**

- Extensive I/O capabilities
- Enhanced expansion capabilities
- Industry-standard compliance
- Ruggedized for harsh environments
- Tailored design & integration services

#### **Optimizing Computing Performance**

- Superior computing performance
- Ultra-low latency and high throughput
- Lower TDP for energy efficiency

#### **Worldwide Eco-Partner Collaboration**

 Collaborate with Tire 1 chip and ISV partners to facilitate the implementation of cutting-edge technology and seamless solution deployment



### **IT to OT Security**

#### **Network Security**

- Full range product portfolio
- Targeting NGFW, SD-WAN, SASE, UTM, DPI, IDS/IPS applications
- Scalability, modular design, reliability, and manageability



#### **Edge Servers**

#### **5G & Telecom**

- Server-grade computing solutions
- Targeting Gen. AI, vRAN, vSAN applications
- High-performance, high-density storage/computing, remote management
- Design-in manufacturing service

# **Product Roadmap**

Available

In Development

Planning



High Performance



#### **ASMB-830**

EPYC™ 7003 Series
ATX SERVER MB



#### **ASMB-831**

- EPYC™ 9004 Series
- ATX SERVER MB



#### **ASMB-561**

- EPYC™ 8004 Series
- uATX SERVER MB



#### SKY-8260S

- EPYC™ 7003 Series
- Edge-HPC SERVER



#### SKY-821E3

- EPYC™ 9004 Series
- Short Depth SERVER



#### SKY-721E3

- EPYC™ 9004 Series
- HCI SERVER



#### SKY-602E3

EPYC™ 8004 Series
Tower GPU SERVER



4GPU DP Genoa/Turin



#### SKY-822E4

- EPYC™ 9004 Series
- 1P Genoa/Turin, Short-Depth



#### FWA-5082

- EPYC™ 8004 Series
- High-End 1U2P NA



#### FWA-6183

- EPYC™ 9004 Series
- High-End 2U2P NA



Mainstream



#### **AIMB-723**

- Ryzen™ Embedded 7000
- MicroATX MB



#### FWA-1081

- Ryzen™ Embedded 3000
- Entry NA



#### ASMB-531

- EPYC™ Embedded 4004
- MicroATX SERVER MB



Maximum Efficiency and Expansion in Critical AI and HPC Applications

**ATX Server Board** 

ASMB-831

**EPYC™ 9004 Series** 





#### **Outstanding Performance**

• Equipped with AMD EPYC™ 9004 Series processors

#### **Comprehensive Expansion Options**

- Supports 5 x PCIe 5.0 x16 and 2 x PCIe 5.0 x8, providing faster data transfer speeds and scalability for high-performance networking, storage, and AI applications
- Supports two 2280/22110 M.2 PCIe 4.0 SSDs

#### **Maximized Memory Capacity**

- 6 x DDR5 4800MHz RDIMMs, up to 576GB
- 4th Gen EPYC™ CPU supports CXL 1.1+ focused on Type3/Memory

#### **Robust Edge Computing Solution**

• Ensures reliability and low-latency performance, making it a versatile choice for diverse applications



AI AOI



**Factory Automation** 



**Edge Computing** 

# **Single Socket Motherboard**

Best Choice for High-Density GPU-Based Al Accelerators

**ATX Server Board** 

ASMB-830

**EPYC™ 7003 Series** 





#### **Excellent Performance**

- AMD EPYC™ 7003 Series—the world's fastest x86 server processors
- 9 x SATA3 ( 8 via Mini SAS HD + 1 SATA 7P)
- 2 x M.2 connectors (SATA / PCle 4.0 compatible)
- Field-proven high-reliability features from Advantech

#### **High Availability and Serviceability**

- 8 x DDR4 memory RDIMM/LRDIMM for up to 2TB capacity
- 5 x PCle 4.0 x16 + 2 x PCle 4.0 x8 expansion slots
- Supports up to 4 double-deck GPU cards

#### **Cost & Energy Efficient Performance**

- EPYC™ CPUs help minimize environmental impacts from data center operations while advancing your company's sustainability objectives
- High performance-per-watt reduces energy & operation cost

#### **Advanced Network Solution with Security & Service**

- Supports dual 10GbE ports
- Supports IPMI for BMC remote control
- AMD Infinity Guard offers the advanced capabilities required to help defend against internal and external threats and keep your data safe with virtually zero impact to system performance.

#### **Applications**



AOI



IEM





Data Centers Edge Computing



#### **Industrial Server Motherboard**

#### Driving Efficiency in Emerging Al Applications

Micro-ATX Server Board

**ASMB-561** 

**EPYC™ 8004 Series** 



# AMD TEPYC Embedded

#### **Outstanding Performance**

• Equipped with AMD EPYC™ Embedded 8004 processors, up to 64C/128T

#### • 6 X DDR5 480

**DDR5 Support** 

• 6 x DDR5 4800 MHz RDIMMs, up to 576GB

#### **Comprehensive Expansion Options**

- 4 x PCle 5.0 x16
- Supports up to 2 double-deck GPU cards
- Mixed storage (NVMe M.2 + SATA)

#### **Remote Management**

• IPMI function supports remote access to multiple users at different locations for networking



Edge Al



LLM



**Smart Cities** 



Next-Gen Performance Future-Proofs AOI Deployments

ATX Motherboard

AIMB-723

Ryzen<sup>™</sup> 7000 Series





#### **ATX Motherboard Optimized for AOI applications**

- DDR5 memory up to 5200MT/s
- PCIe x16 Gen4 with ample space for a GPU card
- Flexible storage solutions with four SATA and an M.2 slot
- Supports legacy devices with four COM ports and a PCI slot

#### No. 1 IPC Manufacturer in the world

- Ultra durable, tested under 65/-5°C operating environments
- Long-lasting with MBTF up to 668,283 hours
- Longevity product support up to seven years

#### **AMD Socket AM5 + Ryzen™ 7000 Series Processors**

- Fast "Zen 4" performance on up to 105W embedded processors
- Abundant I/O with up to 12 USB connectors (8 x USB 3.2)
- Super Speed Plus USB 3.2 Gen2 10Gbps (4 ports)

#### **Maximum PCI/PCIe Expansion for Versatility**

- Optimized form factor design through PCIe placement for GPU card installation
- Accommodates up to a three-slot discrete GPU card and three PCIe add-on cards
- High performance for demanding industrial tasks

#### **Applications**

AMD

RYZEN

Embedded



AI AOI



**Equipment Builders** 



**Edge Computing** 

# Compact 2U Carrier Grade, High-Performance Server

Accelerating the Edge Server Revolution

2U Edge Server

SKY-8260SV2

**EPYC<sup>TM</sup> 7003 Series** 





AMDA

#### **Beyond High-performance**

- Single AMD EPYC™ 7003/7002 Series Processors
- High-speed networking capacity

#### **Maximize Flexibility & Expandability**

- 4 x FH/FL PCIe 4.0 x16 slots + 2 x LP PCIe 4.0 x8 slots
- 2U 20" deep rackmount server

#### **High Reliability**

- High ESD immunity
- EMC class A barebone design
- Dust filter support

#### **Advanced Network Solution with Security & Service**

- Supports IPMI for BMC remote control
- TPM support for advanced security
- Supports security boot or fast boot by customized BIOS



**High-End Computing** 



NFVi



**Genomics Analytics** 



Al-Assisted Video Analytics

## **2U Edge Server**

#### Short Depth Design for Edge Computing

2U Edge Server

SKY-821E3

EPYC<sup>TM</sup> 9004 Series





AMDA

EPYC

#### **Unmatched Computing Power**

• Equipped with AMD EPYC™ 9004 Series processors, up to 160 cores, 400W TDP 24 x DDR5 4800Mhz RDIMM, up to 3TB capacity

#### **Expansion Flexibility**

- Supports up to 10 x PCle 5.0 slots (2 x for x16 double-wide)
- 1 x OCP 3.0 PCle 5.0 x16

#### **NVMe Support**

- 2 x M.2 2280 (PCIe)
- 2 x internal U.2 NVMe (2.5" SATA SSD optional)

#### **Power Supply**

• 1200/2000 watts 1+1 power supply, redundant with 80+ platinum level certification



**Edge Computing** 



**Smart Cities** 



Broadcasting

# **2U High Performance Rackmount Server**

Delivers Unparalleled Performance

2U High-Performance Server

SKY-721E3

**EPYC™ 9004 Series** 





AMDA

EPYC

Embedded

#### **Unmatched Computing Power**

• Equipped with AMD EPYC<sup>™</sup> 9004 Series processors, up to 160 cores, 400W TDP 24 x DDR5 4800Mhz RDIMM, up to 3TB capacity

#### **Expansion Flexibility**

- Supports up to 10 x PCle 5.0 slots (2 x for x16 double-width)
- 1 x OCP 3.0 PCle 5.0 x16

#### **Robust Storage Support**

- 12 x hot-swap 3.5" SAS/SATA drives (4 x U.2 NVMe optional)
- 24 x hot-swap 2.5" drives (8 x U.2 NVMe + 16 x SATA)
- 2 x M.2 2280 (PCIe)
- 2 x internal U.2 NVMe (rear, 2.5" SATA SSD optional)

#### **High Availability**

- Redundant 1+1 1200/2000 watt PSU
- Redundant BMC and BIOS f/w support

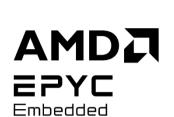


Charles Charle



**Smart Cities** 

Broadcasting





# **Compact Size Mid Tower GPU Server**

Realize Your Al Dreams in a Small Tower

Mid-Tower GPU Server

SKY-602E3

**EPYC™ 8004 Series** 



#### **Outstanding Performance**

• Equipped with AMD EPYC™ 8004 Series processors

#### **High-Density GPU Cards**

• Supports 4 x PCle x16 double-deck FH/10.5" cards or 2 x PCle x16 double deck FH/10.5" cards + 4 x PCle x8 single-deck FH/10.5" cards

#### **Installation Flexibility**

• Table-mounted for easy access, wall-mounted to save space, or use two units that can fit within a 4U rack space

#### **Remote Management**

• The IPMI function supports remote access to multiple users at different locations for networking



3D Rendering



Video Processing



Al Inference

# **Outstanding Network Appliance for Heavy Workloads**

Elevating Next-Gen Network Security Performance

2U Rackmount Network Appliance

FWA-6183

**EPYC™ 9004 Series** 





AMDA

EPYC

#### **Advanced System Performance**

- Dual AMD EPYC™ 9004 series with up to 192 cores
- 16 x DDR5 DIMM slots
- Highly energy-efficient

#### **High Connectivity and Scalability**

- 8 x NMC (network module card) expansion slots with PCIe Gen5 x8
- 1 x FH 10.5" PCle 5.0 x16 or 2 x FH/HL PCle 5.0 x16 slots

#### **High Reliability for 24/7/365**

- 4 x hot-swappable system fan
- 1 x Redundant 1200W CRPS
- Redundant BIOS & BMC

#### **Remote Management & Security**

- IPMI function supports remote access
- Comply with Redfish which provides a secured access



**Data Centers** 



Cloud



**AI-Enabled Applications** 





# **Advanced Network Gateway for SD-WAN and NFV**

The Most Cost Effective Selection for Enterprise

1U Rackmount Network Appliance

FWA-5082

**EPYC™ 8004 Series** 



#### **Optimized and Efficient Power Utilization**

- Single AMD EPYC™ 8004 series processor up to 200W with 64 cores
- Lowest TDP devices in the EPYC<sup>™</sup> portfolio

#### **High Scalability and Bandwidth**

- 12 x DDR5 RDIMMs, bandwidth is 1.5x higher than DDR4
- 4 x NMC (network module card) expansion slots with PCIe Gen5
- 1 x PCIe Gen5 x16

#### **Applications**



SD-WAN & SASE



**Network Functions Virtualization** 

#### Fail-Safe Design and Fast Recovery

- 5 x hot-swappable system fan
- 1 x Redundant 550W CRPS
- Redundant BIOS & BMC flashes with automated recovery

#### **Remote Management & Security**

- IPMI function supports remote access
- Compliant with Redfish which provides secured access

# **Ideal Compact Network Security Appliance for SMBs**

Cost-Effective Performance for Firewall & UTM

**Desktop Network Appliance** 

FWA-1081

Ryzen™ V3000 Series



#### **Efficient Performance for SMB Network Security**

- Single AMD Ryzen™ V3000 series processor up to 8 cores / 16 threads
- Low power consumption up to 45W

#### **Enhanced Networking Flexibility**

- 12 x GbE RJ-45, 2 x 2.5GbE RJ-45, 4 x 10GbE SFP+, with 2 pairs LAN bypass
- Optional support for Wi-Fi and LTE/5G modules via RF kit

#### **Enabling accelerated, seamless processing**

• DDR5 4800 MHz delivers a 50% data throughput boost over DDR4 3200 MHz

#### **24/7 Continuous Operation**

- Supports LAN bypass function
- Two 150W external power adapters for redundancy

#### **Applications**

AMDA

RYZEN

Embedded



Firewall/UTM



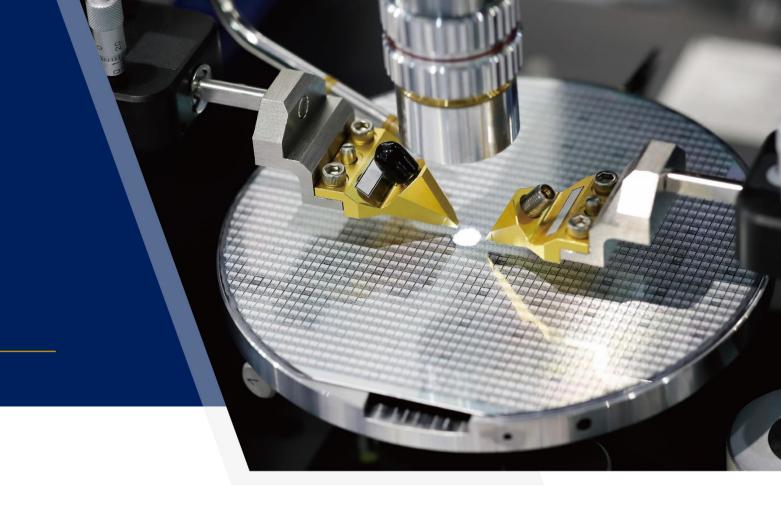
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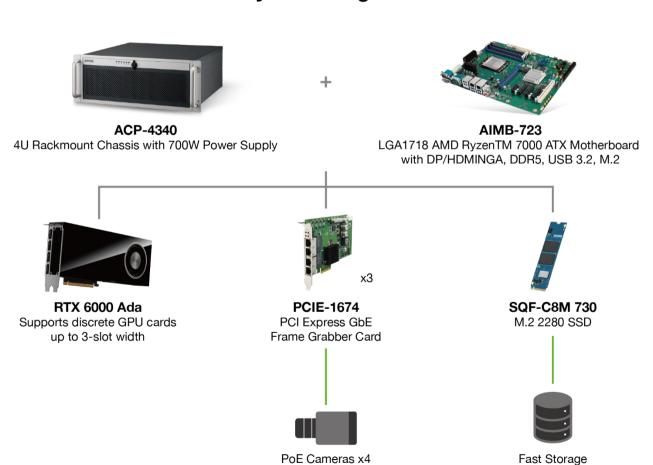
SD-WAN & SASE

# A Machine Vision Inspection Solution for an IC Production Line

Cost-Effective Performance for Firewall & UTM



#### **System Diagram**



#### Intro

In IC manufacturing, traditional manual inspection is inefficient and prone to errors. With the rise of production line automation, integrating machine vision technology has become essential to improving inspection accuracy and speed.

#### Challenges

- Customers require high GPU performance for AI inference optical inspection.
- High-resolution images require faster storage read and write speed.

#### Solutions and Technologies

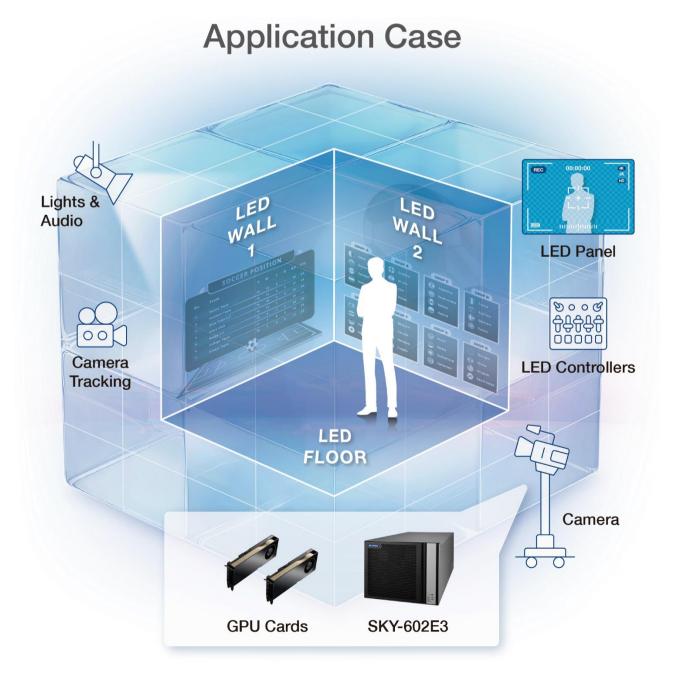
- Optimized PCIe placement for a huge GPU card, three PCIe add-on cards, and one PCI add-on card.
- Three PCIe x4 slots for I/O cards for up to twelve cameras.
- NVME M.2 M-key SSD provides fast read and write ability.

#### Why Advantech?

Advantech AIMB-723 provides a fast, accurate, and economical solution for advanced AOI.

# London Innovates XR Tech with Advantech's Latest GPU Server

**Advanced Video Solution** 



#### Intro

A London-based client specializing in Extended Reality (XR) application development required a robust solution to handle the growing demands of their XR projects. With performance and scalability in mind, they sought to overhaul their existing system to improve processing power and development efficiency.

#### Challenges

The client faced several challenges, including handling the immense computational demands of XR development. Their current setup was inadequate for managing large-scale XR simulations, resulting in long processing times and slower project turnaround. They also needed a system that could support multiple GPUs to enhance their development pipeline.

#### Solutions and Technologies

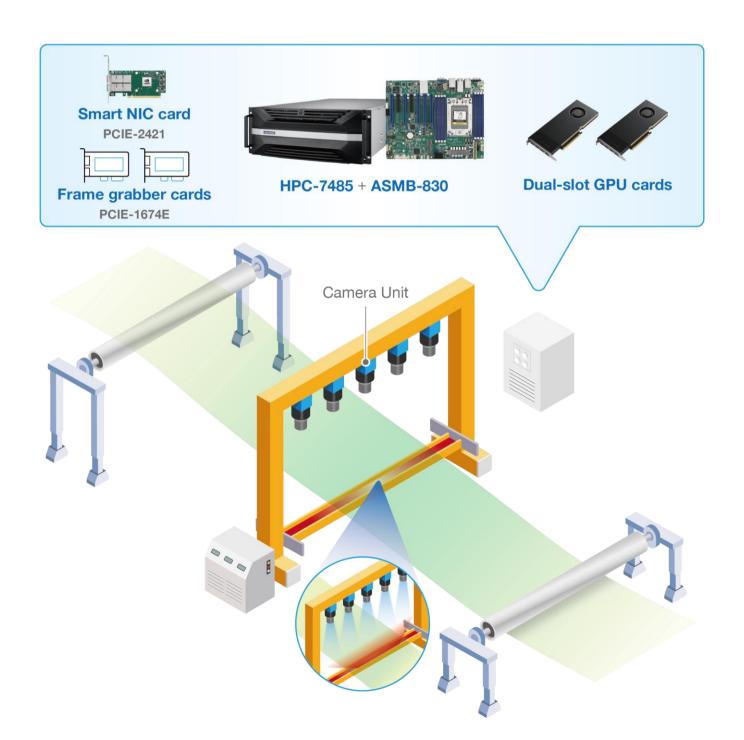
Advantech provided its SKY-602E3 GPU server, a mid-tower system capable of meeting the client's needs. The server, powered by AMD EPYC™ 8004 Series processors, offered superior performance for heavy XR workloads and enabled the integration of multiple GPUs to accelerate XR simulations. This provided a significant boost to rendering speeds and overall development capacity.

#### Why Advantech?

The SKY-602E3 GPU server, with its exceptional expandability and processing power, proved to be the ideal choice for the client, offering the reliability and performance necessary to support advanced XR development.

# **Building AOI Technology to Accelerate Yield in Precision Manufacturing**

Advanced AOI Computer Vision Solution



#### Intro

Precision manufacturing demands high accuracy and fast inspection processes to ensure product quality, making AOI technology essential for modern industries.

#### Challenges

Manual inspections are error-prone and inefficient, while conventional systems struggle to keep up with the speed and precision required in high-demand production environments.

#### Solutions and Technologies

Advantech's ASMB-830+HPC-7485 AOI systems utilize AI, machine learning, and high-speed vision sensors to provide real-time, automated defect detection, enhancing accuracy and production efficiency.

#### Why Advantech?

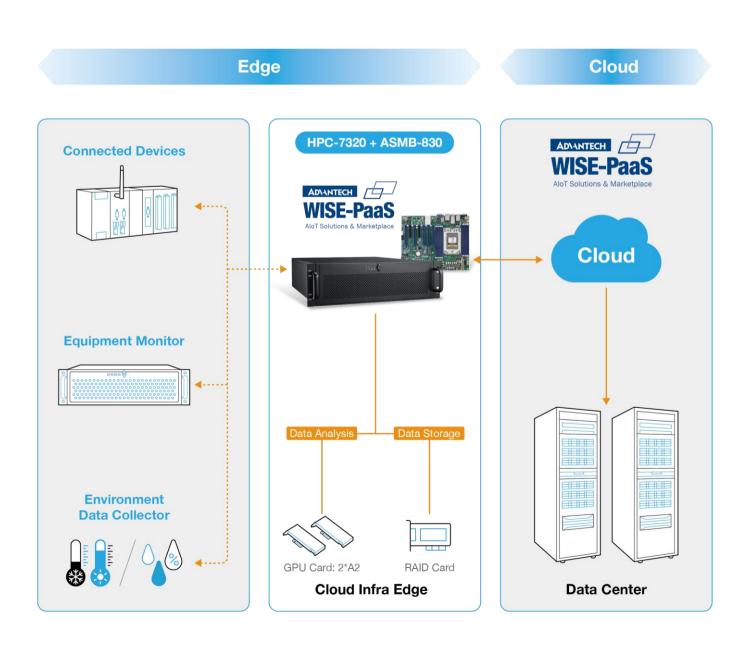
With advanced computing platforms and scalable AOI solutions, Advantech offers reliable, customizable systems that improve inspection processes and support efficient manufacturing.

Use Cases

# **Energy Transformation with an Advantech Server Solution**

Advanced Energy Management Solution





#### Intro

Advantech's server solutions are driving energy transformation by supporting the integration of renewable energy sources and optimizing energy management systems for more efficient operations.

#### Challenges

Energy providers face difficulties in managing the complexities of renewable energy integration, such as real-time data processing, system scalability, and ensuring system reliability.

#### Solutions and Technologies

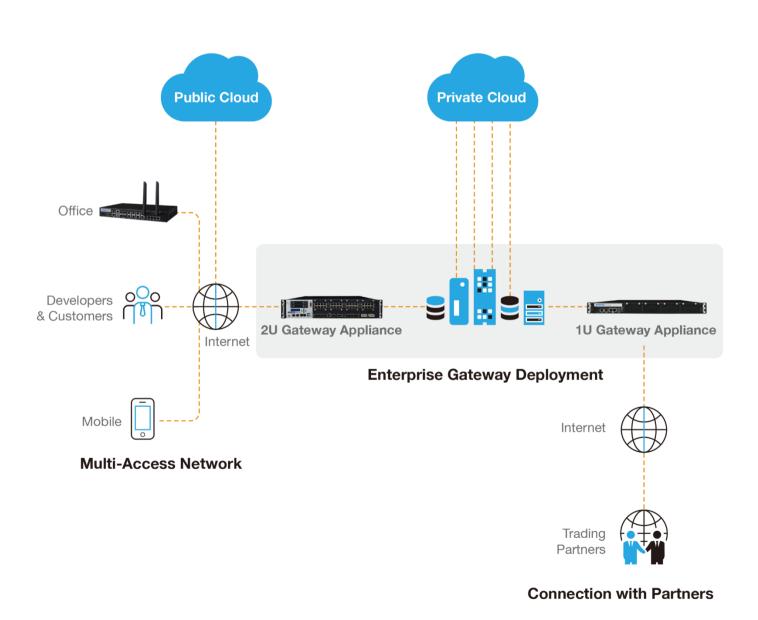
Advantech's ASMB-830+HPC-7485 server solutions offer high-performance computing, real-time data analytics, and scalable architectures that enable effective management of renewable energy sources and energy grids.

#### Why Advantech?

Advantech provides robust, reliable, and scalable server solutions tailored to the energy sector, helping companies achieve more efficient and sustainable energy management.

# Simplified Network Security Deployment with AMD Platforms

**Experience Elevated Network Performance** 



#### Intro

In a world dominated by connected devices, cloud services, and always-on mobility, many enterprises struggle to maintain secure, responsive network infrastructures, especially with distributed branch offices. Network evolution is critical to ensure the security, scalability, and performance needed to support a connected and dynamic workforce

#### Challenges

- Complexity: Traditional networks struggle to meet modern demands from cloud applications and hybrid workforces.
- Security Risks: Existing systems often lack the tools to handle new cybersecurity threats while maintaining seamless connectivity.
- Efficiency: Enterprises need scalable, remotely managed solutions that are easy to deploy without relying heavily on on-site IT support.

#### Solutions and Technologies

The AMD-powered network appliances offer flexibility and high performance for diverse needs.

- SMBs: FWA-1081 features AMD Ryzen™ processors and 4G/5G LTE expansion.
- Enterprises: FWA-5082 serves as SD-WAN, NFV, and supports up to 64 cores.
- Large-scale fields: FWA-6183 provides dual AMD EPYC™ processors and supports up to 256 cores, perfect for cloud computing and AI workloads.

#### Why Advantech?

- Cost-effective scalability: Solutions that grow with business needs.
- High performance: Powered by AMD processors, delivering superior performance.
- Advanced security: Features like Memory Guard and Secure Boot protect sensitive data.
- Ease of deployment: SD-WAN capabilities simplify integration and reduce the need for on-site IT.

# Value-Added and Al-Driven Solutions

# **Embedded Software Services** Empowering Solution Performance with Robust, Remote Security Management

- Software **remotely manages servers** across multiple locations through a unified interface, reducing the need for on-site visits.
- Receive 24/7 real-time proactive alerts with actionable guidance to ensure uninterrupted operations.
- Enable **seamless**, **convenient remote firmware updates** during off-peak hours to optimize system maintenance.
- Centralize server monitoring with a user-friendly HTTPS-dashboard for fast, informed decision-making.
- Ensure secure operations with encrypted communications and stringent access controls.



- Proven Al Host CPU / GPU Host
- High frequency and performance for massive volumes of data pre-processing
- Energy-efficiency cores to free up power for GPU use
- High memory bandwidth, high-performance I/O
- GPU and AMD ROCm™ 6 software ecosystem testing and certification
- Double precision (FP64) leadership
- Achieve 181 teraflops in peak FP16 and BF16 performance

#### **Product Offerings**









Motherboard	ASMB-831	ASMB-830	<u>ASMB-561</u>	<u>AIMB-723</u>
Wiotherboard	ATX Server Board	ATX Server Board	Micro-ATX Server Board	ATX Motherboard
AMD Processor	EPYC™ 9004 Series	EPYC™ 7003 Series	EPYC™ 8004 Series	Ryzen™ Embedded 7000
Cores	Up to 96 cores	Up to 64 cores	Up to 64 cores	Up to 12 cores
Memory	6 x DDR5 4800MHz RDIMM, up to 385GB, ECC/LRDIMM support	8 x DDR4 3200MHz RDIMM, up to 128GB, ECC/RDIMM/LRDIMM support	6 x DDR5 4800MHz RDIMM, up to 1.5TB	4 x DDR5 UDIMM up to 5200MHz, up to 128GB, Non-ECC Support
Networking Controller	Intel® X710-AT2 (dual 10GbE ports)	2 x Intel <sup>®</sup> I210AT / Intel <sup>®</sup> X550-AT2 (dual 10GbE ports)	2 x Intel <sup>®</sup> I226 , Intel <sup>®</sup> X710-AT2 (dual 10GbE ports)	GbE LAN1: Intel I226-V; GbE LAN2: Intel I226-V
Expansion	5 x PCle 5.0 x16 slots 2 x PCle 5.0 x8 slots	5 x PCIe Gen4 x16 2 x PCIe Gen4 x8	4 x PCle 5.0 x16 slots	1 x PCIe x16 slot, 3 x PCIe x4 slot 1 x PCIe *1 slot, 1 x PCI slot
Storage	2 x NVMe M.2 2280/22110 9 x SATA3 (8 via Mini SAS HD + 1 SATA 7P)	2 x M.2 2280/22110 9 x SATA3 (8 via Mini SAS HD + 1 SATA 7P)	4 x MCIO interface, each supporting 4 x SATA3 2 x NVMe M.2 2280	PCIe x2 M-Key 2280 type
I/O Ports	1 x GbE for BMC, 7 x USB 3.2 (Gen1), 1 x RS-232, 1 x VGA	1 x GbE for BMC, 5 x USB 3.2 Gen1, 1 x RS-232, 1 x VGA	1 x GbE for BMC 5 x USB 3.2 (Gen1), 1 x RS-232, 1 x VGA	1 x DP, 2 x Ethernet (2.5 GbE), 4 x USB 3.2 (Gen 2), 4 x USB 3.2 (Gen1), 4 x USB 2.0, 6 X RS-232
Power Input	ATX Input	ATX Input	ATX Input	ATX Input
Operating Temperature	0 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)
Dimensions	304 x 244 mm	304 x 244 mm	244 x 244 mm	304.8 x 244 mm
Software	Windows Linux (CentOS, Red Hat, Ubuntu)	Windows Linux	Windows Linux	Windows / Linus

<sup>\*</sup>Specification will change depending on selected SKU.









System	SKY-821E3	SKY-8260SV2	SKY-721E3	<u>SKY-602E3</u>
<b>System</b>	Edge Server	Edge Server	HCI & Storage Server	Mid Tower GPU Server
AMD Processor	EPYC™ 9004 Series	EPYC™ 7003/7002 Series	EPYC™ 9004 Series	EPYC™ 8004 Series
Cores	Up to 160 cores	Up to 64 cores	Up to 160 cores	Up to 64 cores
Memory	24 x DDR5 4800MHz RDIMM	16 x DDR4 3200MHz RDIMM, up to 1024GB, ECC/RDIMM/LRDIMM support	24 x DDR5 4800MHz RDIMM	6 x DDR5 4800MHz RDIMM, up to 576GB, ECC/LRDIMM support
Networking Controller	2 x Intel i210-AT, 1 x Realtek PHY	GbE LAN 1/2: Intel® i210-AT	2 x Intel i210-AT, 1 x Realtek PHY	Intel® X710-AT2 (dual 10GbE ports)
Expansion	Up to 4 FHFL, 2 FHHL and 2 Low Profile PCIe 5.0	4 x FH/FL PCIe Gen4 x16 + 2 x LP Gen4 x8 2 x FH/FL PCIe Gen4 x16 + 2 x FH/FL PCIe Gen4 x8 + 2 x FH/HL PCIe Gen4 x8 + 2 x LP Gen4x8	Up to 4 FHFL, 2 FHHL and 2 Low Profile PCIe 5.0	4 x PCIe x16 double-deck FH/10.5" cards or 2 x PCIe x16 double deck FH/10.5" cards + 4 x PCIe x8 single deck FH/10.5" cards
Storage	2 x 2.5" NVMe(rear, SATA optional) + 2 x M.2 2280 (PCIe)	2 x 2.5" SATA SSD (Internal) 2 x 2.5" SATA/PCIe SSD (Rear)	12 x 3.5" SAS/SATA or 24 x 2.5" hot-swap SAS/SATA drive support	2 x 2.5" SATA3 drive bays + 2 x M.2 2280 (SATA3/PCIe)
I/O Ports	2 x 1GbE RJ-45 (1 GbE RJ-45 Mgmt Share NIC)+ 2 x 10GbE RJ-45	1 x USB 3.0 & 1 x USB 2.0 VGA port, PWR, Alarm LEDs 2 x Gigabit LAN RJ-45,1 x Management 1 x VGA, 2 x USB 3.0, 1 x Console, 1 x OCP 3.0	2 x 1GbE RJ45 (1 GbE RJ-45 Mgmt Share NIC)+ 2 x 10GbE RJ-45	2 x 10GbE RJ-45 +1 x Management port
Power Input	1200W AC/DC PSU	1200W AC/ 800W DC PSU	1200W AC/DC PSU	1200 Watt 1+0 power supply with 80+ platinum level certification
Operating Temperature	0 ~ 35°C (32 ~ 104°F)	-5 ~ 40°C (23 ~ 104°F)	0 ~ 35°C (32 ~ 104°F)	0 ~ 40°C (32 ~ 104°F)
Dimensions	438 x 88 x 597 mm	438 x 518 x 87 mm	438 x 87 x 770 mm	216 x 170 x 425 mm
Software	Windows Linux (CentOS, Red Hat, Ubuntu)	Windows Linux	Windows Linux (CentOS, Red Hat, Ubuntu)	Windows Linux (CentOS, Red Hat, Ubuntu)

<sup>\*</sup>Specification will change depending on selected SKU.







System	<u>FWA-6183</u>	<u>FWA-5082</u>	FWA-1081  Desktop Network Appliance	
System	2U Network Appliance	1U Network Appliance		
AMD Processor	EPYC™ 9004 Series	EPYC™ 8004 Series	Ryzen™ V3000 Series	
Cores	up to 192 cores	up to 64 cores	up to 8 cores	
Memory	16 x DDR5 4800MH RDIMM, up to 1024GB, ECC Support	12 x DDR5 4800MHz RDIMM, up to 768GB, ECC Support	2 x DDR5 4800MHz SODIMM, up to 64GB, ECC Support	
Networking Controller	2 x Intel <sup>®</sup> i210 (2 x 1GbE RJ-45)	2 x Intel <sup>®</sup> i210 (2 x 1GbE RJ-45)	2 x 10GbE SFP+ (via X710)* 2 x 10GbE SFP+ (via SoC) 12 x 1GbE RJ-45 (via i350, with 2 pairs of LAN bypass)* 2 x 2.5GbE RJ-45 for MGMT (via i226)	
Expansion	8 x PCIe Gen5 x8 (NMC Card) 1 x PCIe Gen5 x16 HH/HL	4 x PCIe Gen5 x8 (NMC Card) 1 x PCIe Gen5 x16 HH/HL	1 x M.2 2230 E-Key for Wi-Fi module (Optional) 1 x M.2 3042/3052 B-Key for 4G/5G LTE module with 2 x antenna holes (Optional)	
Storage	2 x External 2.5" HDD/SSD 2 x M.2 2280 M-Key for SATA SSD or PCIe Gen3 x4 NVMe	2 x Internal 2.5" HDD/SSD 2 x M.2 2280 M-Key for SATA SSD or PCle Gen4 x4 NVMe	2 x M.2 2280 M-key for SATA 3.0 SSD	
I/O Ports	1 x RJ-45 Type Console, 2 x USB 3.0, 1 x VGA port, 1 x dedicated 1GbE LAN for IPMI	1 x RJ-45 Type Console, 2 x USB 3.0, 1 x VGA port, 1 x dedicated 1GbE LAN for IPMI	1 x RJ-45 Type Console, 2 x USB 3.0, 1 x VGA port, 1 x dedicated 1GbE LAN for IPMI	
Power Input	Type: AC Redundant CRPS AC: 100-240V~, 12-7A, 50-60Hz (Option: DC -48V)	Type: AC Redundant CRPS AC: 100-240V~, 8-4A, 50-60Hz (Option: DC -48V)	100-240 V ~ 2.5A 50-60 Hz	
Operating Temperature	0 ~ 40°C (32 ~ 104°F)	0 ~ 40°C (32 ~ 104°F)	0 ~ 40°C (32 ~ 104°F)	
Dimensions	438 x 88 x 600 mm	438 x 43.7 x 600 mm	340 x 241.86 x 43.7 mm	
Software	Linux (CentOS, Red Hat, Ubuntu, Fedora)	Linux (CentOS, Red Hat, Ubuntu, Fedora)	Linux (Only UEFI FW and UEFI aware Linux OS)	

<sup>\*</sup>Specification will change depending on selected SKU.

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