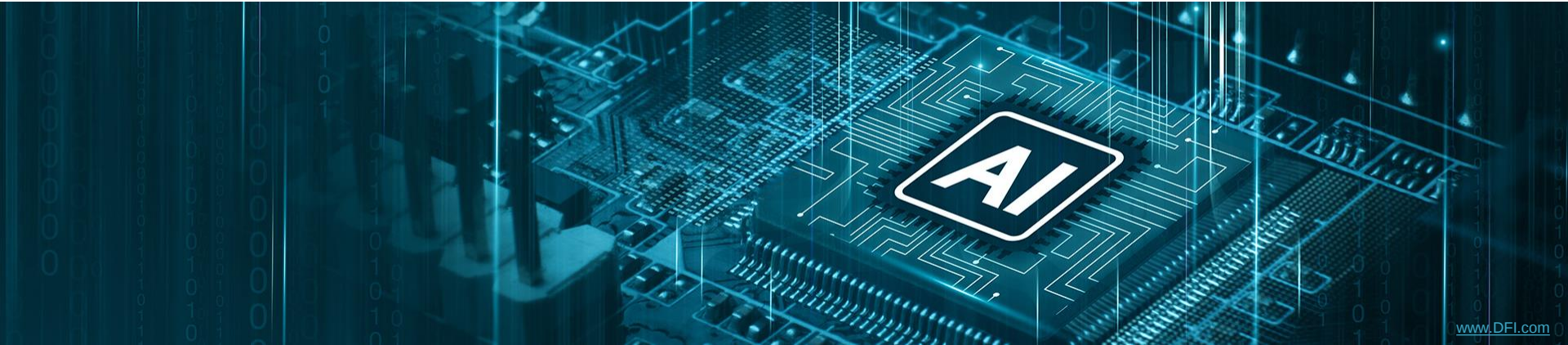




DFI & AMD Embedded Ebook

Delivering Performance Leadership for Edge Computing & AI

Your Guide to Edge AI with AMD Ryzen™ & EPYC™ Platforms

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- 03** Why DFI?
- 07** DFI & AMD Selection Guide
- 13** DFI & AMD Portfolio
- 36** Success Stories



Why DFI?

Enhancing Edge AI Solution Development

Top Tier Global IPC Leader

With over 40 years of experience, we are a leading provider of embedded solutions, committed to delivering high-value products to our customers.

PRODUCT

In-Depth & Fast Development

40+

CPU Platforms Designs
& Years Experience

2 Weeks

Product Deviation

8 Months

ODM Development

MANUFACTURE

Large & Small-Scale Capacity

300%

Picking Increased

30%

Capacity Enhanced

99%

Inspection Accuracy

SERVICE

Quick & Dedicated Support

20+

Global Sites Support

5 Days

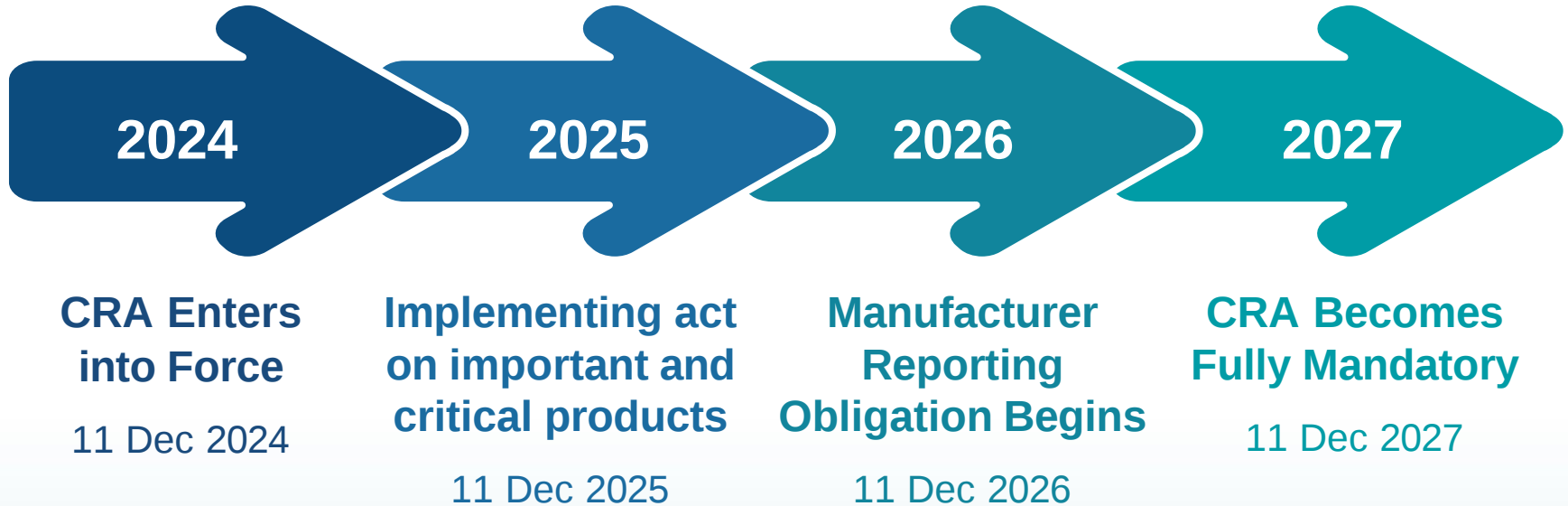
Draft Report

8 Hours

Issues Solved

Cyber Resilience Act (CRA) Timeline

DFI is CRA-Ready



DFI Flexible Manufacturing Capabilities

Scalable Capacity, Broad Certification Coverage

DFI combines its own fully-owned manufacturing lines with Qisda's extensive production network, giving customers the flexibility to scale from small-batch prototyping to high-volume mass production. This capacity is backed by a broad range of international quality, safety, and industry-specific certifications — spanning general manufacturing, medical, automotive, and transportation standards — to meet the compliance needs of diverse markets.

MANUFACTURING

DFI 100% OWNED CAPACITY

	PCBA	System
Production Lines	5 SMT Lines* 2 MI Lines 56 Test stations	10 System Assembly Lines
Monthly Capacity	100K (Boards)	39 K (Units)

QISDA FLEXIBLE CAPACITY

VIETNAM

PCBA Center	Line	Monthly Capacity
SMT	3	360K
MI	3	360K

SUZHOU

PCBA Center	Line	Monthly Capacity
SMT	40	10.5M
MI	4	0.3M

TAOYUAN

Manufacturing Center	Monthly Capacity
PCBA	360K
IPC	39K

CERTIFICATIONS



Quality

- ISO 9001
- IPC J-STD-001
- IPC-A-610
- UL-60950*/UL-62368*
- UL-61010*
- UL-60601*
- CCC China
- IEC 62443-4-1 (covers the entire product lifecycle, focusing on security requirements, design implementation, testing, validation, and defect management)



ESG

- ISO 14001
- ISO 45001
- IECQ QC080000
- RoHS-10 Compliant
- ISO 14064-1 (Greenhouse Gas Inventory Certification)



Medical

- ISO 13485
- EN 60601-2:2015



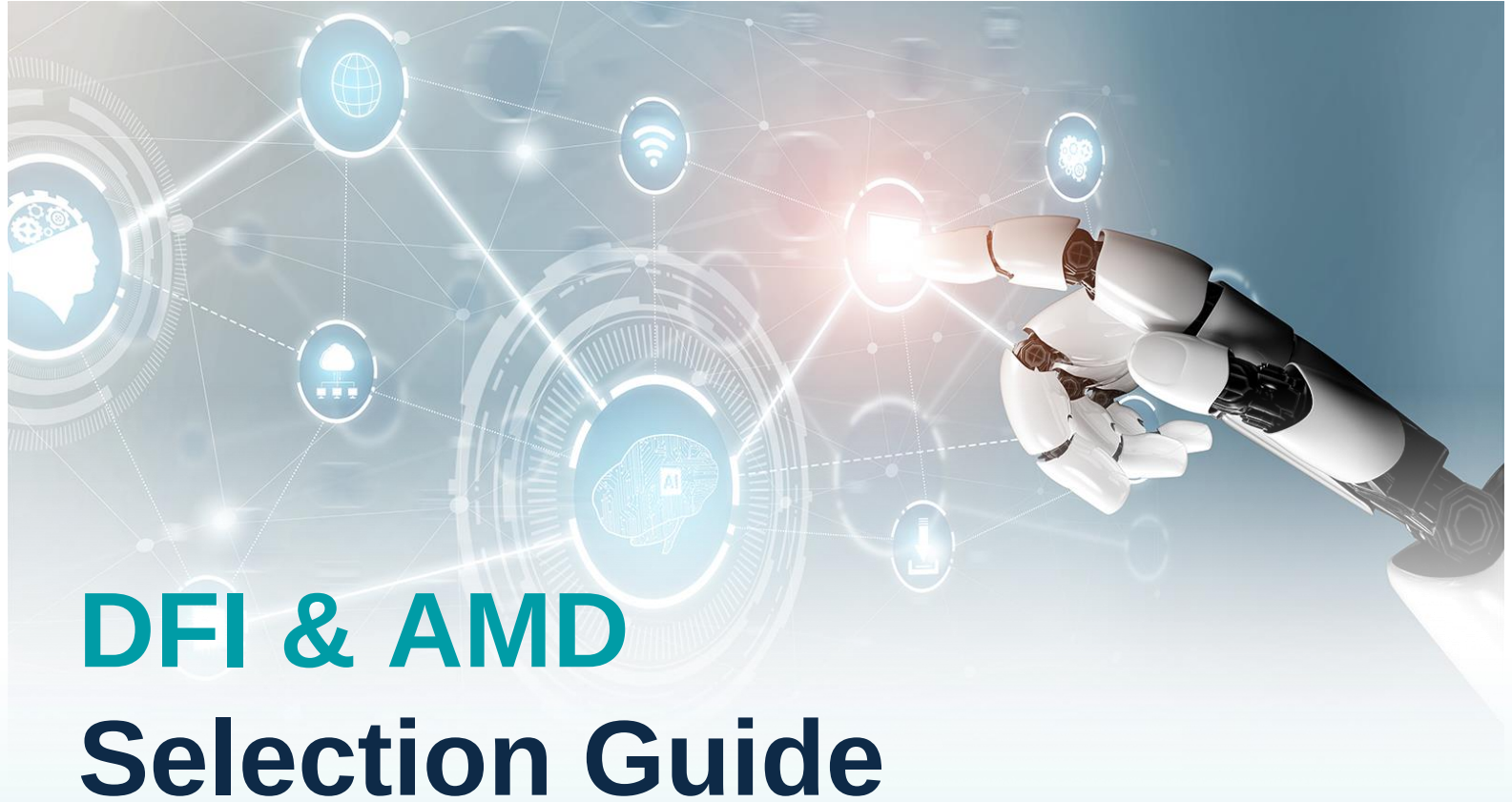
Grand

- IATF 16949**
- ISO7637-2 / E-Mark*
- MIL-STD-810F*
- EN50155*, EN45545*, EN61373*

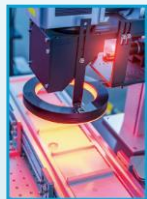
Disclaimers:

*Not all DFI products are UL, E-Mark, MIL-STD, or EN certified. However, certifications can be requested as needed. With extensive expertise in compliance qualifications, DFI supports factory automation, smart medical, transportation, and IoT applications. Certification availability varies by product and is provided upon request.

**Applicable to Suzhou factory only.



DFI & AMD Selection Guide



Machine Vision



Object Detection & Classification



AMRs & SLAM Tech.



Robotic AI & Control Tech.



Medical AI



UAV Applications



Traffic Management



AI-Driven Detection & Communication



Surveillance & Security



Next in Edge AI
And More...

Engineered for Worldwide AI Partners

At our core, we provide the exclusive industrial computing platforms leaders trust



Motherboards



Single Board Computers



System on Modules



Systems



Edge Servers



Panel PCs/
Displays



KIOSKS



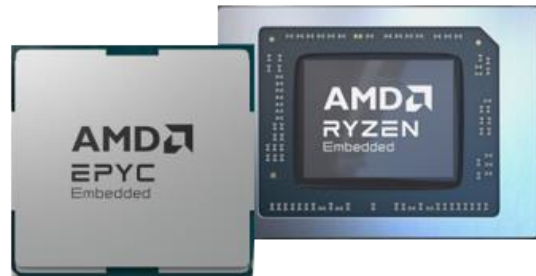
Peripherals



FW/BIOS/
Driver/OS



Why DFI x AMD Platforms?



Sensing



AI Model



Data Analysis



Real-time Input/Output



AMD EPYC™ — Leading Compute

- EPYC 8004 / 9005 server-grade at the edge
- Multi-core, PCIe Gen 5, high memory bandwidth
- Server-grade performance in embedded form factors



AMD Ryzen™ — Scalability & Integration

- Ryzen 9000 / 7000 & Embedded 8000 (Hawk Point)
- Up to 39 TOPs (CPU + GPU + NPU combined), Low TDP
- AMD Radeon™ graphics, AM5 platform, multi-display



DFI Value-Add

- Custom BIOS, OOB / iBMC, Coreboot Ready
- Signal Integrity simulation (HyperLynx / Ansys)
- Made in Taiwan, DFM, Design-in & ODM turnkey services



Longevity & Services

- Up to 15-year product lifecycle support, 7-year standard
- -40~85°C wide-temp, Conformal Coating options
- CRA-Ready; 30+ years AMD CPU partnership



Empowering the world's top leaders across every industry

Factory Automation



**Increased
Factory
Productivity**

Gaming



**Immersive
Gaming
Experience**

Defense / Marine



**Reliable &
Swift
Response**

Smart Medical



**Enhance
Diagnostic
Quality**

Smart Transportation



**Real-Time
Safety Analytics**

Gas / Oil / Energy



**Energy
AIoT
Connectivity**

Industrial Hardware Design

- Rugged mechanical & thermal design (fanless, shock/vibration resistance)
- Wide form factor coverage: rack-mount, box PC, embedded board, SOM
- Industry-specific certifications
- In-house SMT & manufacturing, global RMA support

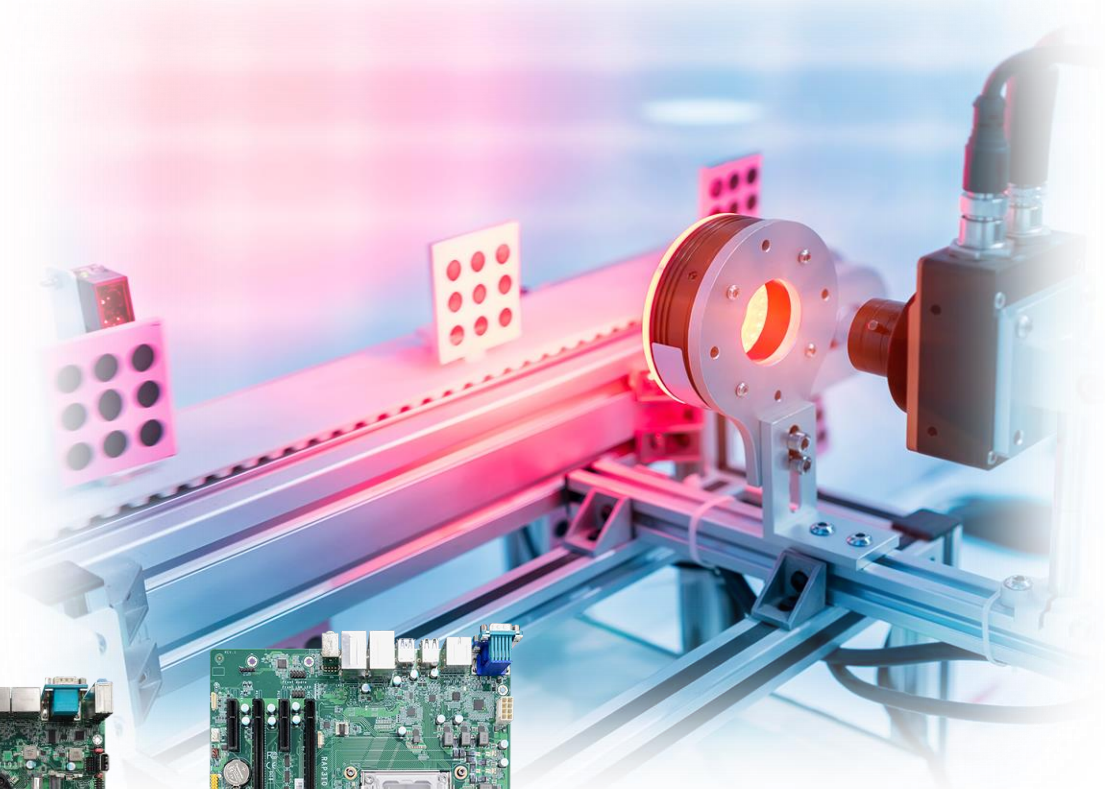
Software / R&D Capabilities

- BSP / driver support across major OS (Linux, Windows, RTOS or others)
- DFI Out-of-Band Functions Enabling
- Pre-validated OS & BIOS customization with long-term version control
- Proprietary module & circuit design database / version control, accelerating customer time-to-market



Product Portfolio

Industrial Motherboard / SBC / SOM

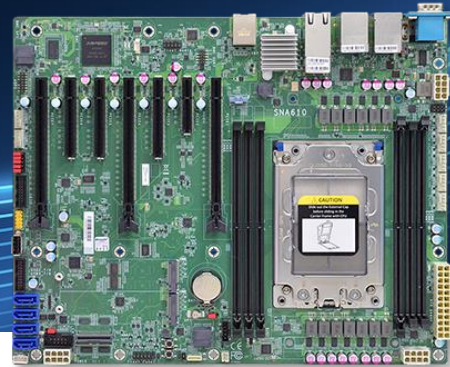


EPYC Embedded 8004

SNA610

Industrial ATX Motherboard

AMD
EPYC



Key Features

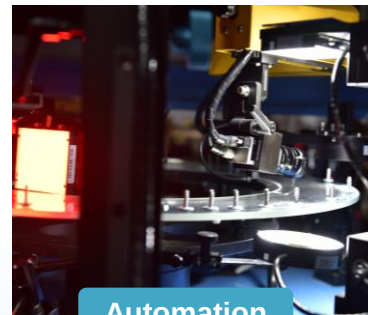
Processor & Chipset	AMD® EPYC™ Embedded 8004 Series Server processors
Memory	6 DDR5 ECC-RDIMM up to 576GB
Display	1 DP (from BMC)
Expansion	3 PCIe x 16 + 3 PCIe x 8 + 1 PCIe x4 (Gen5), 2 M.2 2280 M key
LAN	2 10GbE, 1 2.5GbE, 1GbE, 1 IPMI
COM	2 COM ports
Form Factor	ATX

Application Market



Medical

MRI (Magnetic Resonance Imaging) system



Automation

Multi-Camera Deep-Learning Inspection System

Ryzen Embedded 9000/7000
EPYC Embedded 4005

RAP311

Industrial microATX Motherboard

AMD EPYC RYZEN

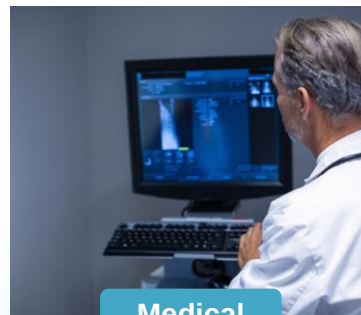
Coming Soon



Key Features

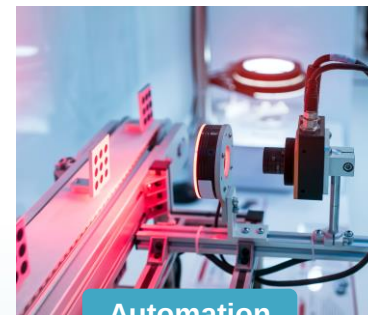
Processor & Chipset	Ryzen™ 9000/7000/EPYC 4005 Series with B650
Memory	4 DDR5 UDIMM up to 192GB
Display	1 VGA & 1 DP++ & 1 HDMI
Expansion	2 PCIe x16 Gen5 (x16 or x8+8), 2 PCIe x4 Gen5, 1 M.2 M key (PCIe x4 Gen4), 1 M.2 E key, 4 SATA3 (RAID 0, 1, 5, 10)
LAN	2 2.5GbE LAN
COM	4 COM ports (1 RS-232/422/485, 3 RS-232)
Form Factor	microATX

Application Market



Medical

*Imaging Reconstruction
Workstation*



Automation

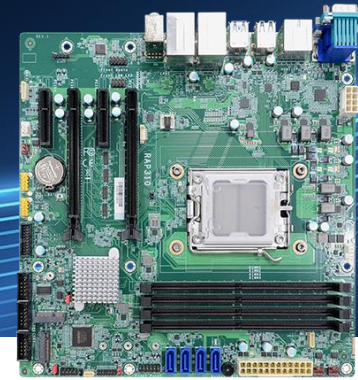
*Deep-Learning Inspection
Server*

Ryzen Embedded 9000/7000
EPYC Embedded 4005

RAP310

Industrial microATX Motherboard

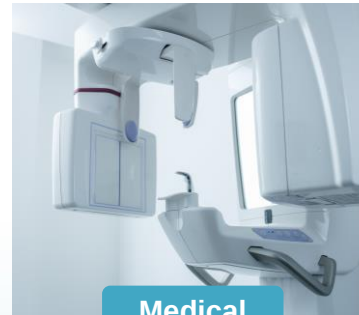
AMD EPYC RYZEN



Key Features

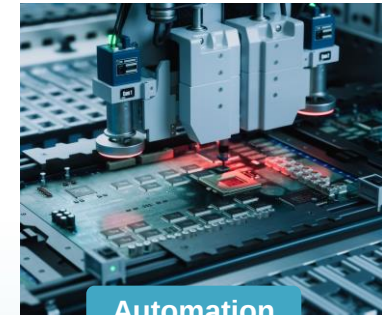
Processor & Chipset	AMD Ryzen™ 9000/7000/EPYC 4005 Series with B650
Memory	4 DDR5 UDIMM up to 128GB
Display	1 VGA & 1 DP++ & 1 HDMI
Expansion	2 PCIe x16 Gen4 (x16 or x8+8), 2 PCIe x4 Gen4, 1 M.2 M key (PCIe x4 Gen4), 1 M.2 E key, 4 SATA3 (RAID 0, 1, 5, 10)
LAN	2 2.5GbE LAN
COM	4 COM ports (1 RS-232/422/485, 3 RS-232)
Form Factor	microATX

Application Market



Medical

Digital X-Ray (DR) Imaging System



Automation

SMT / PCB Optical Inspection Controller

Ryzen Embedded 8000

HPT171

Industrial Mini-ITX Motherboard

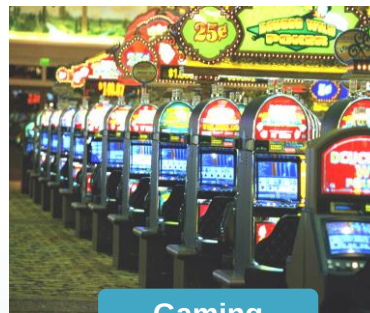
AMD
RYZEN



Key Features

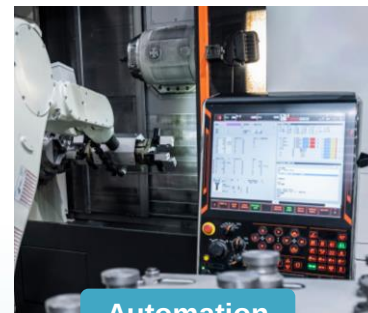
Processor & Chipset	AMD Ryzen Embedded 8000 (Hawk Point) Series TDP up to 54W
Memory	2 SO-DIMM DDR5-5600MHz up to 64GB
Display	4 x DP++ / 3 DP++
Expansion	1 PCIe Gen4 x16 slot (x8 Signal), 1 M.2 M key, 1 M.2 A Key, 1 eMMC , 1 GIO(USB2/Audio)
LAN	2 2.5GbE LAN
COM	4 RS232(ccTalk/TTL)
Form Factor	Mini-ITX

Application Market



Gaming

Slot Machine



Automation

Machine Vision Controller

Ryzen Embedded V2000

RNO171

Industrial Mini-ATX Motherboard

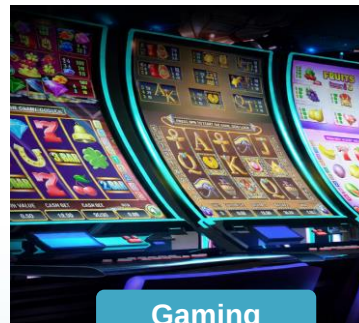
AMD
RYZEN



Key Features

Processor & Chipset	AMD® Ryzen™ V2000 Embedded CPU TDP up to 45W
Memory	2 SO-DIMM DDR4-3200 ECC/NON-ECC up to 64GB
Display	Up to 4 x DP++
Expansion	1 PCIe x16 Gen3, 1 M.2 M key
LAN	2 GbE LAN
COM	6 COM ports
Form Factor	Mini-ATX

Application Market



*Casino Infotainment
Kiosks*



*Machine Vision Inspection
Controller*

Ryzen Embedded P100

KPT551

Industrial 3.5" SBC

AMD
RYZEN

Coming Soon

Key Features

Processor & Chipset	AMD Ryzen P100 series Processor
Memory	2 DDR5-5600 SO-DIMM up to 128GB, ECC support
Display	2 HDMI 2.0, 1 Type C DP, 1 LVDS/eDP
Expansion	1 M.2 E key 2230, 1 M.2 B key 3052, 1 M.2 M key 2280
LAN	1 10GbE, 1 2.5GbE
COM	4 COM ports
Form Factor	3.5" SBC

Application Market



Smart Retail

*Smart Digital Signage with
AI Audience Insights*



Automation

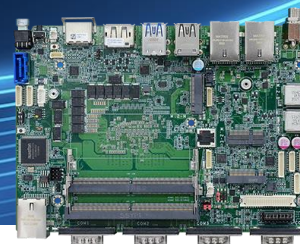
*High-Speed
Machine Vision Controller*

Ryzen Embedded 8000

HPT253

Industrial 4" SBC

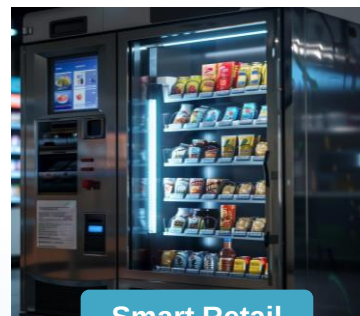
AMD
RYZEN



Key Features

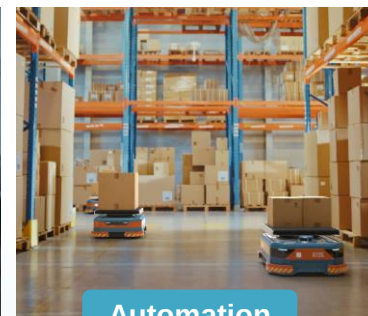
Processor & Chipset	AMD Ryzen embedded 8000 processor (Hawk Point)
Memory	2x DDR5 SODIMM up to 96GB
Display	HDMI + Type C DP Alt. Mode + LVDS
Expansion	1 M.2 2230 E key, 1 M.2 B key 3052, 1 M.2 M key 2280, 1 SATA 3.0, 1 SIM Slot
LAN	1 GbE LAN, 2 2.5GbE LAN
COM	6 COM ports
Form Factor	4" SBC

Application Market



Smart Retail

*Smart Vending
Machine*



Automation

*AMR / AGV Onboard
Controller*

Ryzen Embedded 8000

SNA9HE

Industrial SOM COM HPC

AMD
EPYC

Coming Soon

Key Features

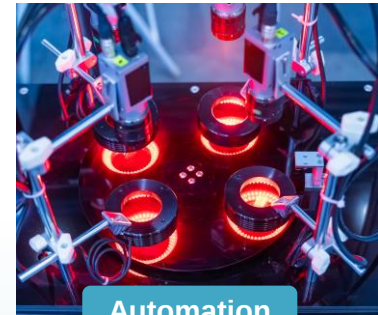
Processor & Chipset	AMD EPYC™ 8004 Series
Memory	6x DDR5-4800 RDIMM up to 576GB (ECC or non-ECC)
Display	TBC
Expansion	Up to 60x PCIe Lanes, 1x SMBus, 2x I2C, 2x UART, 1x SPI, 1x eSPI
LAN	1 2.5GbE LAN
Form Factor	COM HPC

Application Market



Medical

CT / MRI AI Inference System



Automation

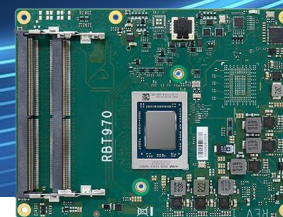
Multi-GPU Edge AI Inspection System

Ryzen Embedded V3000

RBT970

Industrial SOM COMe Basic

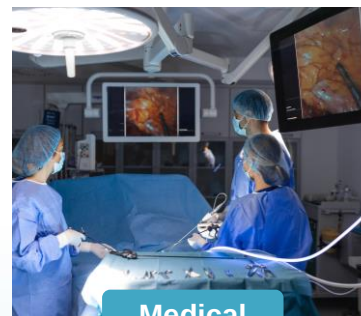
AMD
RYZEN



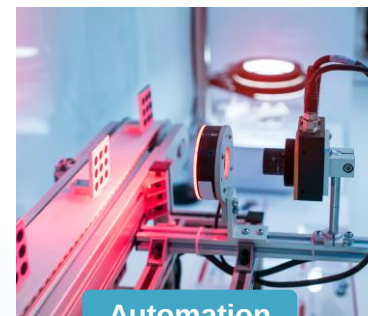
Key Features

Processor & Chipset	AMD Embedded Ryzen V3000 CPU Family
Memory	2x DDR5 4800MT/s SO-DIMM up to 64GB
Display	TBC
Expansion	2x SATA, 1x I2C, 1x SMBUS, 2x UART Up to 18x PCIe lanes
LAN	2x 10G Ethernet & 1x 2.5G Ethernet
Form Factor	COMe Basic

Application Market



*Ultrasound / Endoscopy
Imaging Module*



Machine Vision Controller

AMD Ryzen V1000 / R1000

GH960

Industrial SOM COMe Basic

AMD
RYZEN



Key Features

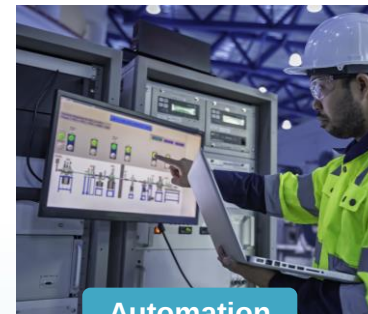
Processor & Chipset	AMD Embedded Ryzen V1000 / R1000 family, Dual / Quad Core
Memory	2x 260-pin SO-DIMM, Dual Channel DDR4 up to 32GB, 2400 / 3200MHz
Display	VGA*/DDI + LVDS*/eDP + 2 DDI
Expansion	2x SATA 3.0 (6Gb/s) RAID 0/1, up to 14x PCIe lanes, 4x USB 3.1, 8x USB 2.0
LAN	1x Intel® I210AT / I210IT (wide temp.), 10/100/1000Mbps
Form Factor	COMe Basic

Application Market



Medical

Surgical Display System



Automation

Industrial Control & HMI Terminal

AMD Ryzen R1000

GH9A3

Industrial SOM COMe Mini

AMD
RYZEN



Key Features

Processor & Chipset	AMD Embedded Ryzen R1000 (R1606G 2.6GHz 12W / R1505G 2.4GHz 12W)
Memory	Single Channel LPDDR4 2400MHz, Memory Down up to 8GB
Display	1 LVDS/eDP, 1 DDI (HDMI/DP); dual display (DDI + LVDS/eDP)
Expansion	3 PCIe x1; 2x SATA, I2C, SMBUS, 2x UART, LPC; 2x USB 3.1, 8x USB 2.0; 8-bit DIO
LAN	1x Intel® GbE, 10/100/1000Mbps
Form Factor	COMe Mini

Application Market



Rugged Portable Defense Terminal



Machine Vision/AOI Controller

Embedded System



AMD Ryzen Embedded 8840U & 8640U

EC70A-HPT

Industrial Ultra Compact Fanless System

AMD
RYZEN



Key Features

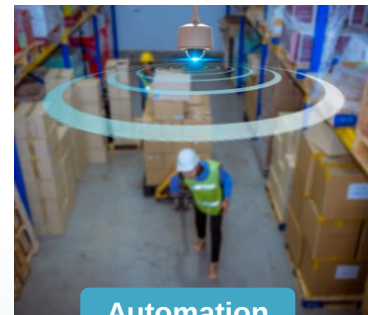
Processor	AMD Ryzen Embedded 8840U & 8640U (Fanless TDP 15W, w/Fan TDP 28W)
Memory	2x DDR5-5600 SO-DIMM up to 64GB
Storage	M.2 2280 M-Key (NVMe)
Expansion / I/O	M.2 2230 E-Key / 2280 M-Key / 3052 B-Key (M.2 Hailo AI); 2x USB 3.2, 1x USB 2.0, 1x USB Type-C, 1x HDMI, 1x DP, 4x DB9
LAN	2x 2.5GbE, 1x GbE
Power & Thermal	9~36 VDC input; Fanless -20~60°C (w/Fan -20~70°C)

Application Market



AMR / AGV

Onboard Vision Controller



Automation

*Factory Surveillance &
Safety Monitoring*

AMD Ryzen Embedded R1000

EC90A-GH

Industrial Ultra Compact Fanless System

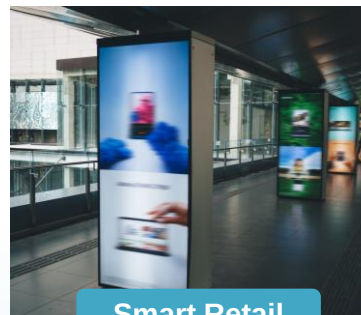
AMD
RYZEN



Key Features

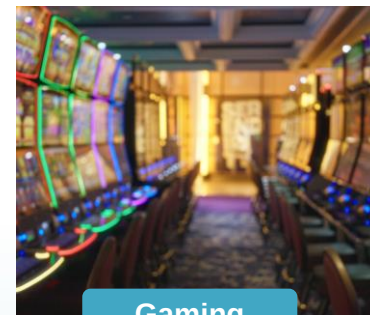
Processor	AMD Ryzen™ Embedded R1000 Series (Radeon™ Vega 3 GPU)
Memory	Single Channel DDR4 Memory Down, up to 4GB / 8GB
Storage	32GB / 64GB eMMC
Expansion / I/O	2x Micro HDMI (4K); 1x USB 3.1 Type-C; 8-bit DIO & SMBUS; 2x COM or LTE / Wi-Fi (Mini PCIe)
LAN	1x Intel® GbE
Power & Thermal	12 VDC input; Fanless design

Application Market



Smart Retail

Digital Signage & Self-Service KIOSK



Gaming

Electronic Table Game / Amusement Terminal

AMD Ryzen Embedded 8000

GM841-HPF

Agile Gaming System

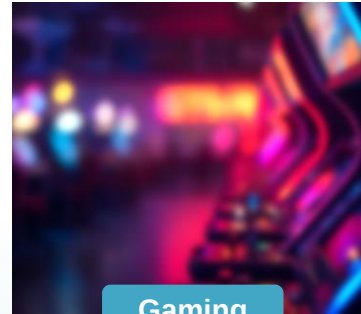
AMD
RYZEN



Key Features

Application Market

Processor	AMD® Ryzen™ Embedded 8000 Hawk Point APUs, up to 38 TOPs (CPU/GPU/NPU)
Memory	2x DDR5-5600 SO-DIMM up to 64GB
Graphics	1 PCIe x16 (NVIDIA T1000, 70W); 4 Display (4x DP++)
Security	Jurisdiction BIOS, RSA & Hash Verification, TPM 2.0; 5-yr NVRAM retention (8MB); 8 Intrusion Detection
Gaming I/O	32x DIDO, 8x Meter, iButton x1, cctalk x4; 7 COM, 2x USB 3.2 Gen2, 7x USB 2.0; 12V DC
OS & SDK	Ubuntu 22.04, Windows® 10/11 IoT Enterprise; SDK (Utility, API)



Gaming

*Electronic Table Game
(ETG) Terminal*



Gaming

Sports Betting Kiosk

AMD Ryzen Embedded V2000

GM841-RNF

Agile Gaming System

AMD
RYZEN



Key Features

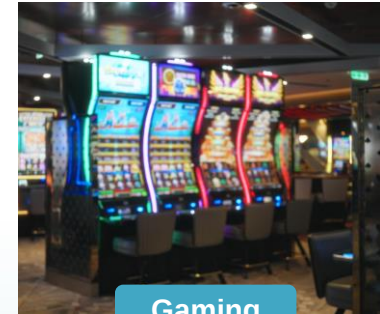
Processor	AMD® Ryzen™ V2000 Series (BGA V2748), up to 4.25GHz
Memory	2x DDR4 SO-DIMM, Dual Channel up to 64GB
Graphics	Radeon™ VEGA7 graphics; 4x DP++ up to 4096x2160 @60Hz
Security	Jurisdiction BIOS, RSA & Hash Verification, TPM 2.0; 5-yr NVRAM retention (8MB); 8 Intrusion Detection
Gaming I/O	32x DIDO, 8x Meter, iButton x1, cctalk x2; COM / USB / LAN; 12V DC
OS & SDK	Ubuntu 20.04, Windows® 10 IoT Enterprise; SDK (Utility, API)

Application Market



Gaming

Mini-ITX Slot Machine
Platform



Gaming

Arcade & Amusement
Cabinet

AMD Ryzen Embedded V1000/R1000/R2000

GM341-GHF

Agile Gaming System

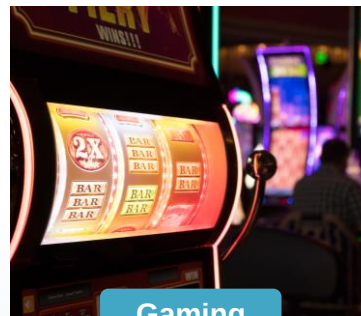
Key Features

Processor	AMD® Ryzen™ Embedded V1000 / R1000 / R2000, V1000 up to 3.8GHz
Memory	2x 260-pin SO-DIMM, Dual Channel DDR4 up to 32GB
Graphics	Radeon™ VEGA graphics; 4x DP++ (V1000)
Security	Jurisdiction BIOS, RSA & Hash Verification; 5-yr NVRAM retention; 8 Intrusion Detection
Gaming I/O	5 COM, 6 USB, 2 LAN; 2x SATADOM, 1x M.2 M key 2280; 5.1CH Audio + S/PDIF; 12V DC
OS & SDK	Windows® 10 IoT Enterprise, Linux; SDK (Utility, API)

AMD
RYZEN

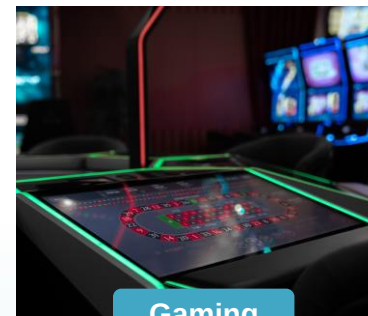


Application Market



Gaming

*All-in-One Slot Machine
System*



Gaming

*Electronic Table Game (ETG)
Terminal*

Industrial PC (IPC)



AMD Ryzen Embedded 8000

WM130-HPT

Edge AI Server

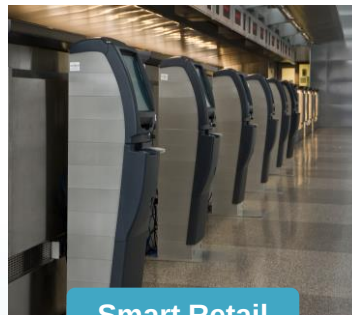
Key Features

AMD
RYZEN



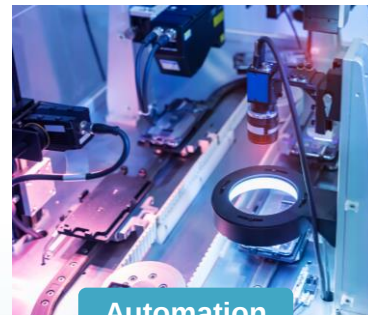
Application Market

Processor	AMD® Ryzen™ Embedded 8000 Series
Graphics	NVIDIA A400 / A1000 GPU via single PCIe slot (Quadro RTX A1000 / A400)
Expansion	Single PCIe slot for GPU; upgradeable & scalable I/O expansion
I/O	Configurable I/O ports; flexible port expansion architecture
Form Factor	Wall Mount / Desktop, for Mini-ITX motherboard
Deployment Ready	Compact design for effortless setup; DFI OOB module support by project



Smart Retail

Edge AI
Kiosks



Automation

Machine Vision Edge
Inference Server

Wall Mount System (Micro-ATX)

WM343-RAP

Edge AI Server

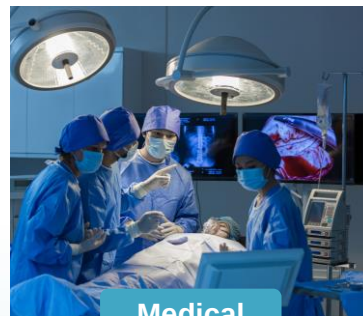
AMD
RYZEN



Key Features

Processor	AMD® Ryzen™ 9000 / 7000 / EPYC 4005 Series with AMD B650 chipset
Graphics	Dual PCIe x16 (Gen4, x16 or x8+x8); NVIDIA RTX 4000/2000 Ada, RTX A1000 / A400
Expansion	2x PCIe x16, 2x PCIe x4, 1x M.2 E key, 1x M.2 M key, 4x SATA 3.0
I/O	Triple display (1 VGA, 1 DP++, 1 HDMI, 4K); 2x Intel 2.5GbE, 4 COM, 6x USB 3.2 Gen2, 2x USB 3.2 Gen1, 6x USB 2.0
Form Factor	Wall Mount / Desktop, for Micro-ATX motherboard

Application Market



Medical

*Surgical Imaging & AI
Diagnostic Workstation*



Automation

*Multi-Camera AOI / Deep-
Learning Inspection*

AMD EPYC™ 8004 processors

RM645-SNA

Edge AI Server

AMD
RYZEN



Key Features

Processor	AMD EPYC™ 8004 processors + GPU for high-performance AI computing
Graphics	NVIDIA RTX Pro 6000 / 5000 / 4500 / 4000 / 2000
Expansion	3x PCIe x16, 3x PCIe x8, 1x PCIe x4, 1x MCIO; up to 8 hot-swappable 2.5" drive bays
I/O	2x GbE + 2x 10GbE, 1x Dedicated IPMI LAN, 4x USB 3.2; 4K display
Form Factor	4U Short-Depth Rack Mount Edge AI Server
Deployment Ready	IPMI out-of-band remote monitoring & control

Application Market

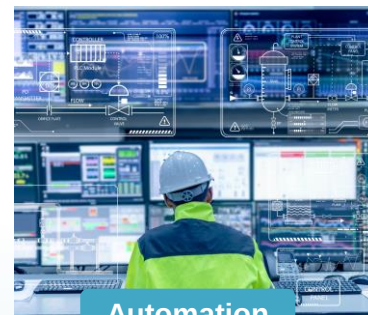
Edge Computing Server

GPU Server



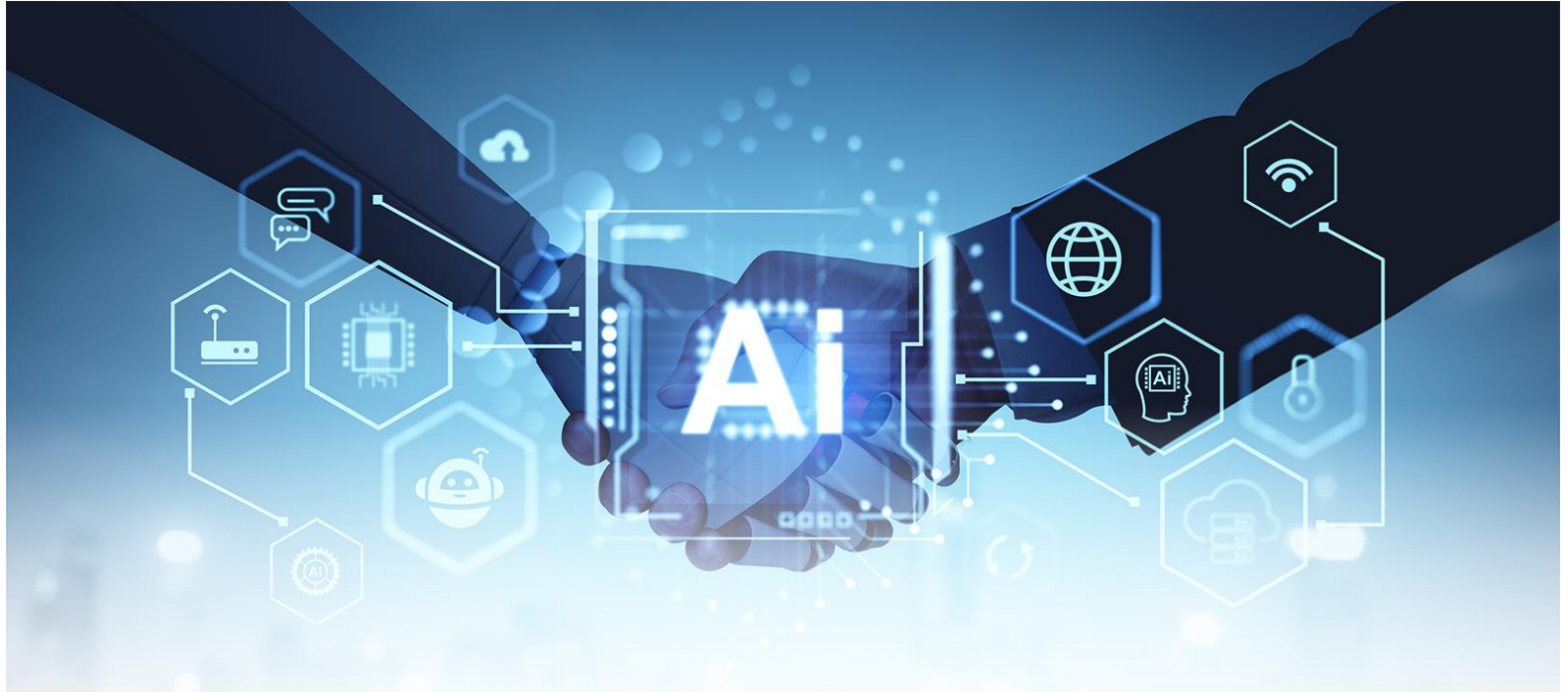
Medical

*Hospital PACS / Imaging
AI Inference Server*



Automation

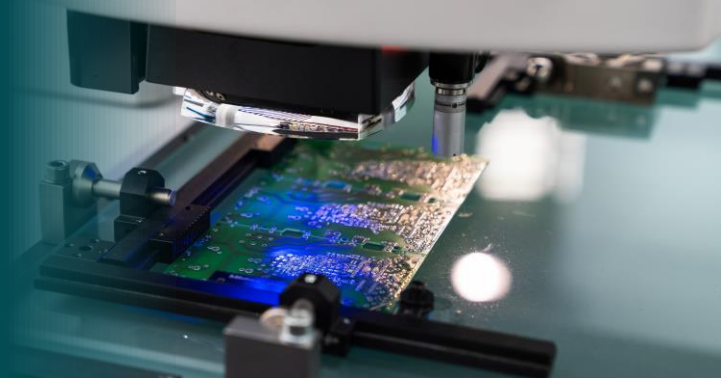
*Factory-Wide
AI Vision Server*



DFI Success Stories

High-Accuracy Automated Optical Inspection (AOI)

Featuring DFI's Expandable Edge AI Server with PoE — **RM645-SNA**



Challenges / Market Demands

- Precision AOI needs multiple high-res cameras and heavy AI compute
- Cameras and lighting require simplified power and cabling
- 24/7 production lines demand high reliability and low downtime

Technologies Highlights

- AMD EPYC 8004; 6 DDR5 ECC-RDIMM up to 576GB
- Expansion: 3 PCIe x16 + 3 PCIe x8 + 1 PCIe x4 (Gen5), 2 M.2 M key
- Rich I/O: 2 GbE + 2 10GbE, IPMI LAN, 6 USB 3.2, 2 COM; PoE-ready

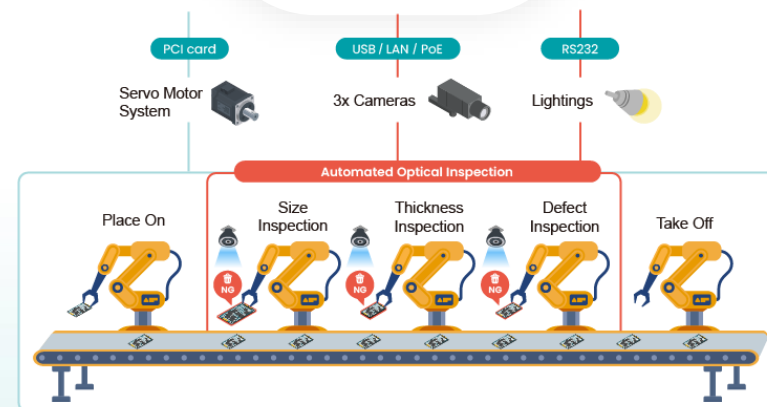
Key Benefits

- PoE ports simplify connection and power of peripheral devices
- Flexible PCIe resources for high-performance AI inspection
- DFI OOB management reduces downtime cost

EPYC 8004



RM645-SNA



AI-Powered Real-Time Analysis for Smart Retail Ads

Featuring DFI's AI Inference / Training System — **WM343-RAP**

Challenges / Market Demands

- Retailers need real-time audience insight to target digital ads
- Multi-display signage requires strong graphics and 4K output
- Accurate footfall counting demands reliable edge AI compute

Technologies Highlights

- AMD Ryzen 9000/7000 / EPYC 4005 (B650); 4 DDR5 UDIMM up to 128GB
- Triple 4K displays (VGA, DP++, HDMI); 2 PCIe x16, M.2 E/M key
- Rich I/O: 2 Intel 2.5GbE, 4 COM, 6 USB 3.2 Gen2, 6 USB 2.0

Key Benefits

- AI vision instantly analyzes gender and age for targeted ads
- Digital signage captures potential customers' attention
- Visual technology accurately counts customer traffic

Ryzen 9000



WM343-RAP



Enabling 24/7 Autonomous Delivery with Onboard Vision AI

Featuring DFI's Fanless Edge AI System with M.2 Hailo Module — **EC70A-HPT**



Challenges / Market Demands

- Tight robot chassis with no room for fans or large PCs
- Continuous vision AI on limited battery power in moving conditions
- Rugged operation across shock, vibration and wide temperature

Technologies Highlights

- EC70A-HPT fanless system: Ryzen embedded + M.2 Hailo AI accelerator for real-time obstacle detection
- 9–36V wide-voltage input for battery-driven robots
- Ultra-compact 181.6 × 57 × 118.4 mm, wide-temp -20–60°C

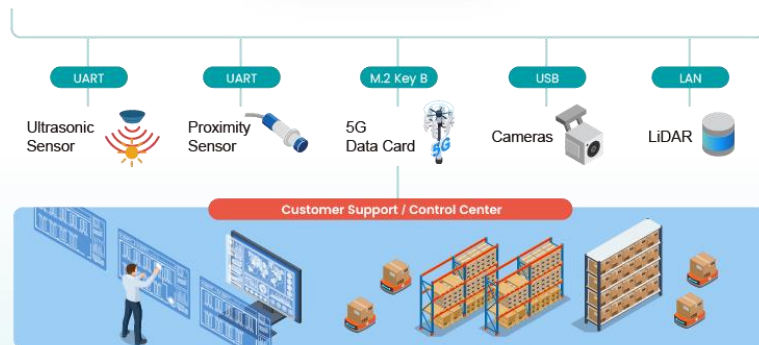
Key Benefits

- Reliable 24/7 autonomous operation with zero fan maintenance
- Onboard real-time vision AI without a bulky PC
- Faster deployment via compact, rugged, power-flexible design

Ryzen 8000



EC70A-HPT



Smart Surveillance

Real-Time Detection & Identification for Surveillance

Featuring DFI's Ultra-Compact Fanless PC with M.2 AI Module — **EC70A-HPT**

Challenges / Market Demands

- Facility security needs real-time monitoring of entries and exits
- Suspicious activity must trigger instant alerts from control room
- Compact fanless edge PC required for continuous 24/7 operation

Technologies Highlights

- AMD Ryzen 8000; dual 4K displays (HDMI 2.0 + DP 1.4)
- Expandable Hailo-8 M.2 AI acceleration module for deeper analysis
- Rich I/O (2 LAN, 4 COM, USB 3.2 / Type-C); M.2 5G-NR; OOB management

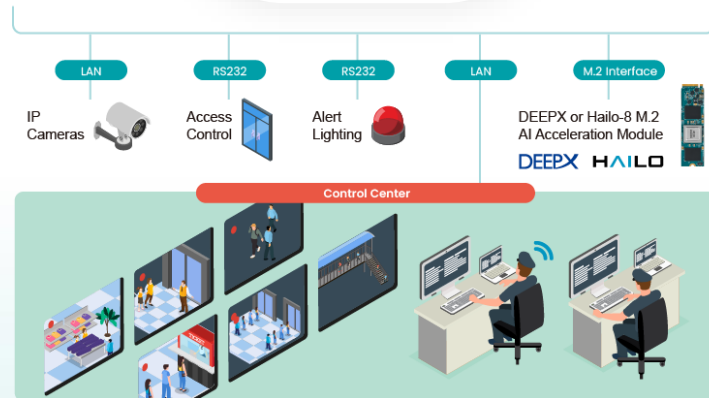
Key Benefits

- Monitor and analyze facility safety from the control room
- Instant alerts on any suspicious activity
- Hailo-8 M.2 AI module boosts real-time detection accuracy

Ryzen 8000



EC70A-HPT



Coronary OCT Imaging with High-Resolution AI Analysis

Featuring DFI's High-Bandwidth PCIe Expansion Platform — **RAP310/RAP311**

MLA 2.95mm², Ø=1.93mm, DS=11.3%

Challenges / Market Demands

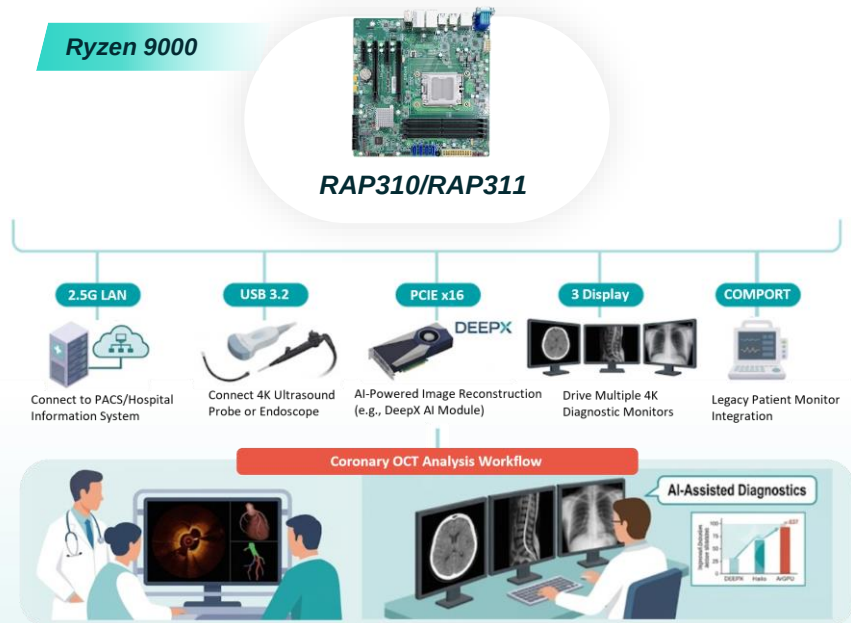
- Intravascular OCT needs real-time raw-signal reconstruction
- Live 3D vessel mapping demands ultra-fast bandwidth expansion
- Medical systems require long lifecycle and high reliability

Technologies Highlights

- AMD Ryzen 9000/7000 / EPYC 4005 (AMD AM5, B650)
- 4 DDR5 up to 128GB
- PCIe x16 expansion; triple display; 2.5G LAN, COM, USB 3.2
- AMD AM5 motherboard with high reliability and a 7-year lifecycle

Key Benefits

- Real-time intravascular coronary OCT reconstruction and rendering
- Ultra-fast PCIe bandwidth supports live 3D vessel mapping
- 7-year lifecycle ensures dependable clinical operation



Medical Imaging

Scaling Pharmacy Order-Picking with Edge AI

Featuring DFI's Mini-ITX AMD Ryzen 8000 Platform — **HPT193**



Challenges / Market Demands

- Pick thousands of SKUs with high accuracy and traceability
- One controller must drive multiple screens, scanners, dispensers
- Multi-store rollouts need remote management and long-term supply

Technologies Highlights

- AMD Ryzen 8000 (8C/16T, RDNA3) runs inventory AI locally
- Quad 4K DP++; 4 RS232, 2 2.5GbE for peripherals
- 12–24V wide DC-in; EXT-OOB (Full) remote management

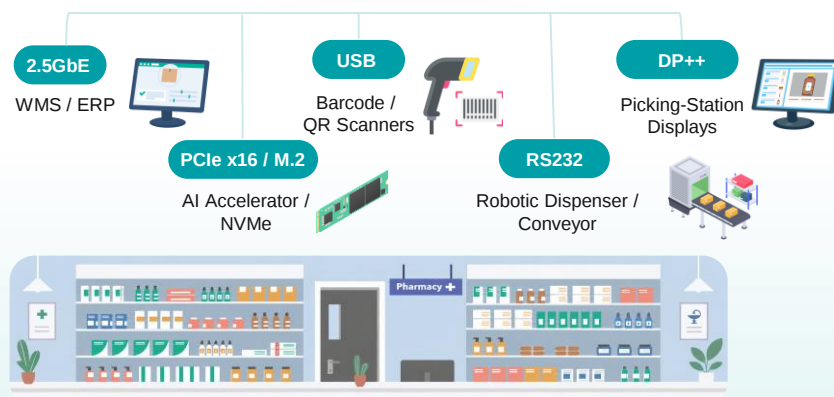
Key Benefits

- On-shelf AI analytics raise picking accuracy and traceability
- One unit runs a full picking cell, lowering cost
- Remote fleet management keeps every store running

Ryzen 8000

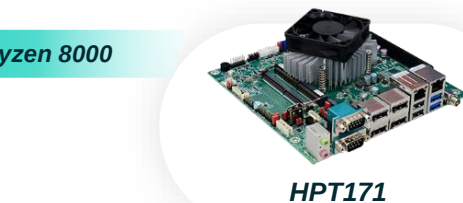


HPT193



Automating Baseball Umpiring with Multi-Camera AI

Featuring DFI's Mini-ITX AMD AI Platform — **HPT171**



Challenges / Market Demands

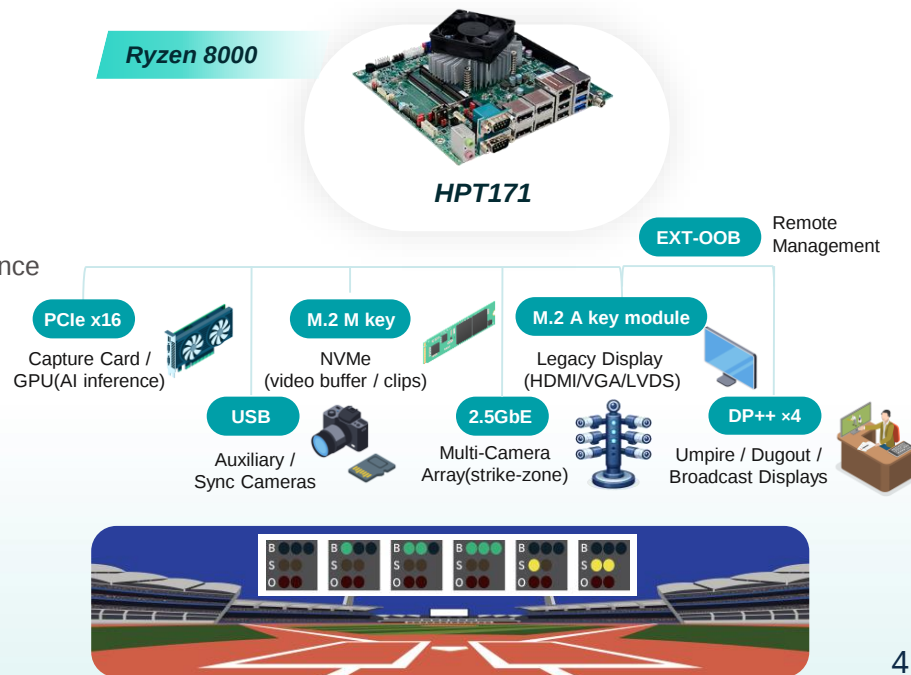
- Strike calls need multiple cameras synced to the millisecond
- Instant replay must reach umpire, dugout and broadcast
- Venue hardware must be reliable and display-flexible

Technologies Highlights

- AMD Ryzen 8000 (8C/16T, RDNA3) for real-time multi-camera inference
- 2 2.5GbE + USB ingest synced cameras; PCIe x16 for capture / GPU
- 4 DP++ or 3 DP++ + M.2 A key display module

Key Benefits

- Real-time multi-camera strike-zone analysis
- Accurate, automated umpiring decisions
- Flexible expansion adapts to venue setups



Autonomous Mobility

Powering Autonomous Vehicles with COM-HPC Server Compute

Featuring DFI's EPYC 8004 COM-HPC Server Module — **SNA9HE**



Challenges / Market Demands

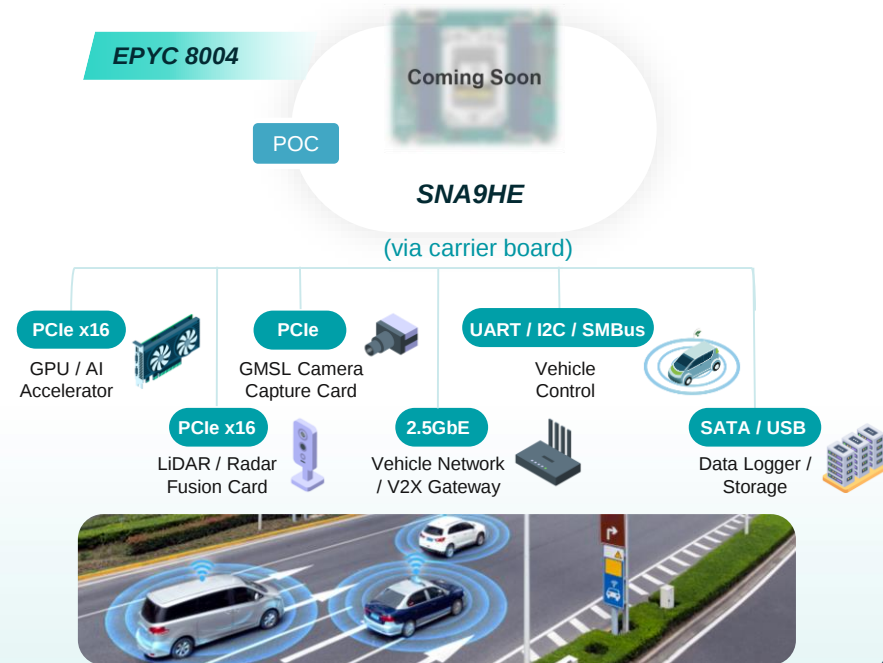
- Autonomy needs server-class fusion of LiDAR, radar, cameras
- Central compute must host multiple GPUs and sensor NICs
- AV programs need secure, upgradeable, long-life compute

Technologies Highlights

- AMD EPYC 8004 up to 64 cores for sensor fusion
- Up to 79 PCIe Gen5 lanes for GPUs and sensor NICs
- 6-channel DDR5 up to 576GB ECC; TPM 2.0 security

Key Benefits

- Enables vehicles to sense and operate without human involvement
- High compute supports real-time analytics
- Rich I/O expansion integrates the full sensor suite
- Upgradeable module with ECC / TPM de-risks long AV programs



High-Bandwidth Fabric for AI Training & Inference

Featuring DFI's EPYC 2005 COMe Type 7 Module — **FRE970**

Challenges / Market Demands

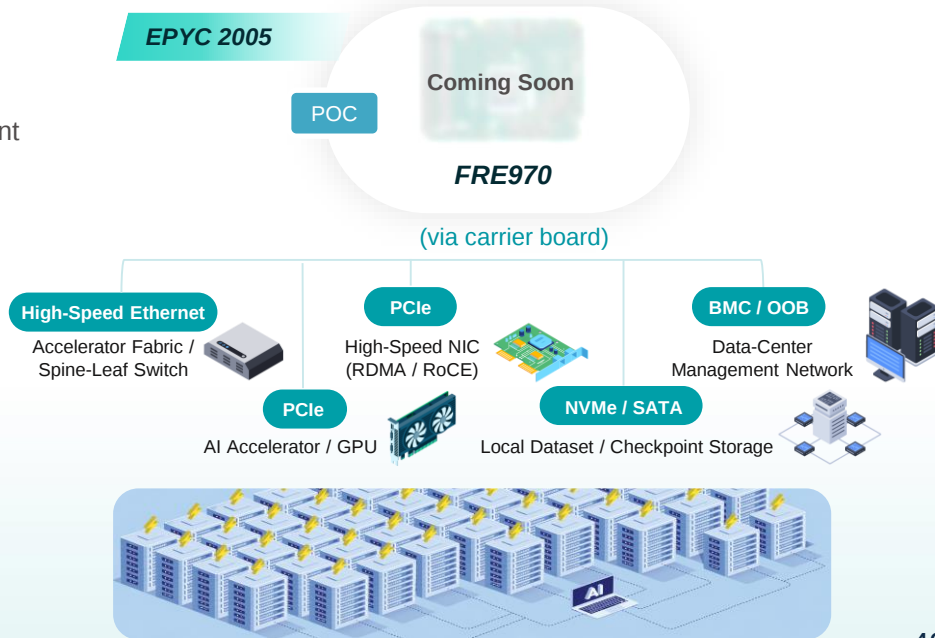
- Distributed AI training needs a high-bandwidth accelerator fabric
- Fabric nodes must pack many NICs and accelerators densely
- Data-center nodes need headless reliability and remote management

Technologies Highlights

- AMD EPYC Embedded (2005) server cores on COMe Type 7
- High-Speed Ethernet (10GbE+) ready for Spine-Leaf topologies
- Server-grade PCIe for NICs / accelerators, BMC/OOB readiness

Key Benefits

- High-bandwidth domain connects accelerators into one fabric
- Supports distributed training and large-scale inference
- Compact, scalable COMe Type 7 form factor maximizes computing power per rack





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