

# 2

## Edge AI and SKY Servers

- ☞ 2-4 Edge AI Solutions
- ☞ 2-6 GPU Servers
- ☞ 2-7 Storage Servers and Multi-node Servers
- ☞ 2-8 Industrial Server Boards
- ☞ 2-11 Industrial Server Chassis
- ☞ 2-15 Video Capture Cards



# Edge AI and SKY Servers Overview

## Accelerate AI and HPC Transformation from the Edge to Cloud

Implementing AI technology is important for advancing the scope of Industrial IoT. AI technologies are highly tailored to individual tasks and each application requires specialized research and unique construction. Advantech has developed a complete AI platform, from the edge to the cloud, inference to training. Our mission is to provide extraordinary AI technology under different applications in industrial scenarios.

### Edge AI Solution

Advantech MIC-Jetson series are highly integrated systems with NVIDIA Jetson platform. With strong computing power, small compact design, industrial I/O supports and remote management, MIC-Jetson series allow AI application developers to rapidly create unique AI solutions in smart city, automation manufacturing, medical imaging applications.

#### Main Features

- Full NVIDIA Jetson products
- Industrial I/O support
- Remote management

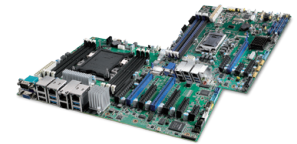


### Industrial Server Boards

Advantech industrial server boards based on Intel® Xeon® technology and Intelligent Platform Management Interface (IPMI) technology, which are ideal for industrial performance-demanding applications such as AOI, vision inspection, video transcoding, SCADA applications to accelerate deployment, ease management, and enhance virtualization to facilitate cloud computing.

#### Main Features

- Industrial-grade Design
- Interoperable and Optimized I/O
- High Network Bandwidth



### AINavi

AINavi is deep-learning-based image analysis software that includes AI defect inspection tools and independent AI training software. It is designed for inspection in multiple production lines and various defect applications. AINavi can be deployed on MIC-Jetson series.



### GPU Server

Advantech SKY-6000 series are high-density GPU AI training platforms designed to meet the growing trend toward big data and analysis. Powered by dual Intel® Xeon® scalable processors, each of these highly scalable GPU optimized servers support up to 10 NVIDIA® GPUs. High-density GPU design maximizes the acceleration of highly parallel applications like artificial intelligence (AI), deep learning, self-driving cars, smart cities, medical technology, big data, high performance computing (HPC), virtual reality, and more.

#### Main Features

- High density GPU cards
- Thermal & acoustic management
- Remote management



## Industrial Server Chassis

Advantech industrial server chassis give equipment developers high performance, efficient, and redundant solutions for industrial environments and critical applications. This product line provides customers with a total solution and value-added services rather than just a regular server product.

### Main Features

- High-availability and redundancy
- Industrial-grade design
- Product life cycle management



## Storage Server and Multi-node Server

Storage servers are high capacity, cost-effective storage solutions that comprehensive fault-tolerant capabilities with H/W RAID and online expansion capability. Multi-node server delivers the highest performance and efficiency in a 2U 4-node design — creating the flexibility to deploy independent workloads on a shared chassis resources and significantly lowers the total cost of ownership.

### Main Features

- Space-efficiency & high performance
- Quick maintenance
- Wide support of advanced form-factors including M.2 and U.2.

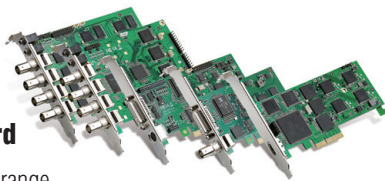


## DVP Video Capture Card

Advantech offers an extensive range of video products, including video capture cards (PCIe, mini PCIe, and M.2) and industrial-grade video processing systems, to meet various market needs. From lecture recording to medical imaging, event broadcasting, live video streaming, and 24-hour surveillance, Advantech's intelligent video platforms are capable of supporting diverse video-related applications.

### Main Features

- SDK for efficient development
- Various video interfaces supported
- High software and hardware compatibility



1

IoT Software Solutions

2

Edge AI and SKY Servers

3

Intelligent Systems

4

Machine Vision Solutions

5

Intelligent HMI and Monitors

6

Automation Computers

7

DAQ and Communication Gateways

8

Industrial Communication

9

Remote I/O, Wireless Sensing Modules and Converters

10

Intelligent Motion Control Solutions

11

EtherCAT Solutions and Automation Controllers

12

Industrial I/O Solutions

13

Intelligent Transportation Platforms

14

Utility and Energy Solutions

# Edge AI Solution

## Edge AI Computing



Model Name		MIC-710AIX	MIC-710AI	MIC-720AI	MIC-730AI
Form Factor		Fanless	Fanless	Fanless	Fanless
NVIDIA® Platform		NVIDIA Jetson Xavier NX	NVIDIA® Jetson Nano™	NVIDIA® Jetson™ TX2	NVIDIA® Jetson™ AGX Xavier
Processor System	CPU	6-core NVIDIA Carmel ARM® v8.2 64-bit CPU, 6MB L2 + 4MB L3	Quad Core ARM Cortex A57 (Max. Operating Frequency: 1.43GHz)	Dual Core Denver2.0 + Quad Core ARM Cortex A57	8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
	CUDA Cores	384 Volta CUDA cores and 48 Tensor cores	128 Maxwell CUDA Cores	256 Pascal CUDA Cores	512 Volta CUDA cores and 64 Tensor cores
	Memory	8GB 128-bit LPDDR4 1600Hz	4GB 64-bit LPDDR4	8GB 128-bit LPDDR4	32GB 256-bit LPDDR4
	Flash	16GB eMMC	16GB eMMC	32GB eMMC	32GB eMMC
I/O / Expansion	LAN	2 x RJ-45	2 x RJ-45	1 x RJ-45	2 x RJ-45
	PoE	-	-	1 x PoE	-
	HDMI	1 x HDMI	1 x HDMI	1 x HDMI	1 x HDMI
	USB	External: 1 x USB2.0 1 x USB3.0 Internal: 1 x USB2.0 1 x MicroUSB	External: 1 x USB2.0 1 x USB3.0 Internal: 1 x USB2.0	External: 2 x USB 3.0 Internal: 1 x USB 2.0	External: 2 x USB2.0 2 x USB3.0 Internal: 1 x USB2.0
	DI/DO	8bit (4In/4Out)	8 bit (4In/4Out)	8 bit (4In/4Out)	16 bit (8In/8Out)
	Button	NA	Recovery, Reset (Internal)	Power Buttons (External) Recovery, Reset (Internal)	Power Buttons (External) Recovery, Reset (Internal)
	COM	1x RS232/422/485	1 x RS-232/422/485	-	2 x RS-232/422/485
	SD Card	1 x Micro SD	1 x Micro SD	-	-
	SIM card	-	-	-	1 x Nano SIM
	MiniPCIe	1 x MiniPCIe (PClex1)	1 x MiniPCIe (PClex1)	-	1 x MiniPCIe (PClex1)
	iDoor	1	1	-	1
	PCIe iModule	-	-	-	MIC-75M20-00B1
Storage	Storage	1 x M.2 (SATA)	1 x M.2 (SATA)	1 x mSATA	1 x 2.5" HDD/SSD 1 x M.2 (NVME PClex2)
Power	Power Supply	Adaptor 100-240V 65W 19V (TERMINAL BLOCK)	Adaptor 100-240V 65W 19V (TERMINAL BLOCK)	Adaptor 100-240V 65W 19V (TERMINAL BLOCK)	Adaptor 100-240V 150W 19V (TERMINAL BLOCK)
Dimension	H x W x D (mm)	147 x 118 x 52 (mm)	147 x 118 x 52 (mm)	147 x 118 x 52 (mm)	192 x 230 x 87 (mm)

## AI Video Systems



Model Name		MIC-710IVA	MIC-710IVX	MIC-730IVA
Form Factor		Fan Base	Fanless	Fan Base
NVIDIA® Platform		NVIDIA® Jetson Nano™	NVIDIA Jetson Xavier NX	NVIDIA® Jetson™ AGX Xavier
Processor System	CPU	Quad Core ARM Cortex A57 (Max. Operating Frequency: 1.43GHz)	6-core NVIDIA Carmel ARM® v8.2 64-bit CPU, 6MB L2 + 4MB L3	8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3
	CUDA Cores	128 Maxwell CUDA Cores	384 Volta CUDA cores and 48 Tensor cores	512 Volta CUDA cores and 64 Tensor cores
	Memory	4GB 128-bit LPDDR4	8GB 128-bit LPDDR4 1600Hz	32GB 256-bit LPDDR4
	Flash	16GB eMMC	16GB eMMC	32GB eMMC
I/O / Expansion	LAN	1 x RJ-45	1 x RJ-45	1 x RJ-45
	PoE	8 x PoE (15.4w/ch)	8 x PoE (15.4w/ch)	8 x PoE (15.4w/ch)
	HDMI	1 x HDMI	1 x HDMI	1 x HDMI
	USB	External: 1 x USB 2.0 1 x USB 3.0 Internal: 1 x USB2.0	External: 1 x USB 2.0 1 x USB 3.0 Internal: 1 x USB2.0	External: 2 x USB 3.0 Internal: 1 x USB2.0
	DI/DO	8 bit (4In/4Out)	8 bit (4In/4Out)	8 bit (4In/4Out)
	Button	Power Switch (External) Recovery , Reset (Internal)	Power Switch (External) Recovery , Reset (Internal)	Power Switch (External) Recovery , Reset (Internal)
	COM	1 x RS-485	1 x RS-485	2 x RS-232/422/485
	SD Card	-	-	-
	SIM card	-	-	-
	MiniPCIe	-	-	-
	iDoor	-	-	-
	PCIe iModule	-	-	-
Storage	Storage	2 x 3.5" HDD (internal)	2 x 3.5" HDD (internal)	2 x 3.5" HDD (internal)
Power	Power Supply	AC100-240V 250W ATX	AC100-240V 250W ATX	AC100-240V 250W ATX
Dimension	H x W x D (mm)	57 x 300 x 330 (mm)	57 x 300 x 330 (mm)	57 x 300 x 330 (mm)

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- 4 Machine Vision Solutions
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 DAQ and Communication Gateways
- 8 Industrial Communication
- 9 Remote I/O, Wireless Sensing Modules and Converters
- 10 Intelligent Motion Control Solutions
- 11 EtherCAT Solutions and Automation Controllers
- 12 Industrial I/O Solutions
- 13 Intelligent Transportation Platforms
- 14 Utility and Energy Solutions

# GPU Servers



Specification	SKY-6100	SKY-6200	SKY-6400	SKY-6420
Key Applications	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>IoT Edge Computing</li> <li>Big Data Analytics</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>HPC / Data Analytics</li> <li>DataCenter Applications</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>Big Data Analytics</li> <li>High End Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>Cloud Computing</li> <li>Big Data Analytics</li> <li>Research lab/National Lab</li> </ul>
Features	<ul style="list-style-type: none"> <li>2 2.5" Hot-swap SAS/SATA drive bay</li> <li>8 DIMM slots, Intel Optane DCPMM</li> <li>NVIDIA Tesla P4/T4 Optimized</li> <li>Unify front bezel design</li> </ul>	<ul style="list-style-type: none"> <li>8 2.5" Hot-swap SAS/SATA support</li> <li>24 DIMM slots, Intel Optane DCPMM</li> <li>4 double deck PCI-E cards or 8 single deck PCI-E cards</li> <li>Unify front bezel design</li> </ul>	<ul style="list-style-type: none"> <li>8 2.5"/3.5" hot-Swap SAS/SATA support</li> <li>12 DIMM slot, Intel Optane DCPMM</li> <li>205W CPU support</li> <li>6 PCI-E cards support</li> <li>Unify front bezel design</li> </ul>	<ul style="list-style-type: none"> <li>12 2.5"/3.5" Hot-swap SAS/SATA support</li> <li>24 DIMM slots</li> <li>Hot-Swappable system fan design</li> <li>11 PCI-E cards support</li> <li>Peer-to-Peer support.</li> </ul>
Processor Support	Dual Intel® Xeon® Scalable/2nd Gen. Scalable Family Processor(Cascadelake/Skylake) with UPI up to 10.4 GT/s, TDP up to 140W	Dual Intel® Xeon® Scalable/2nd Gen. Scalable Family Processor (Cascadelake/Skylake) with UPI up to 10.4 GT/s, TDP up to 140W	Dual Intel® Xeon® Scalable/2nd Gen. Scalable Family Processor (Cascadelake/Skylake) with UPI up to 10.4 GT/s, TDP up to 205W	Dual Intel® Xeon® Scalable/2nd Gen. Scalable Family Processor (Cascadelake/Skylake) with UPI up to 10.4 GT/s, TDP up to 160W
Serverboard	SKY-6100	SKY-6200	ASMB-975I	SKY-6420
Chipset	Intel® C622 chipset	Intel® C622 chipset	Intel® C621 chipset	Intel® C622 chipset
System Memory (Max.)	8 DIMM slots, Up to 512GB ECC LRDIMM, Up to 2933 MHz, Intel Optane DCPMM	24 DIMM slots, Up to 1.5TB ECC 3DS LRDIMM, Up to 2933 MHz, Intel Optane DCPMM	12 DIMM slots, Up to 768GB ECC LRDIMM, Up to 2933 MHz, Intel Optane DCPMM	24 DIMM slots, Up to 1.5TB ECC 3DS LRDIMM, Up to 2933 MHz, Intel Optane DCPMM
Expansion Slots	5 PCIe 3.0 x 16 (FH, HL)	4 PCIe 3.0 x 16 (FH, 10.5"L, double deck) or 8 PCIe 3.0 x 8 (FH, 10.5"L, single deck); 1 PCIe 3.0 x 8 (FH, HL)	4 PCIe 3.0 x 16 (FH, 10.5" L, double deck); 1 PCIe 3.0 x 8 (FH single deck); 1 PCIe 3.0 x 4 (FH, single deck)	10 PCIe 3.0 x 16 (FH, 10.5"L, double deck); 1 PCIe 3.0 x 16 (FH, single deck)
Onboard Storage Controller	Intel® C622 SATA3 (6Gb/s) controller	Intel® C622 SATA3 (6Gb/s) controller	Intel® C621 SATA3 (6Gb/s) controller	Intel® C622 SATA3 (6Gb/s) controller
Connectivity	2 Intel® X557 10GBase-T + 1 Intel® I210 Gigabit Ethernet ports; VGA ports; 3 USB 3.2 Gen1 (2 in rear, 1 internal); 2 USB 2.0 at front	2 Intel® X557 10GBase-T + 2 Intel® I210 Gigabit Ethernet ports; VGA ports; 4 USB 3.2 Gen1 ports (rear); 2 USB 2.0 at front; 1 Serial port optional	2 Intel® I210 Gigabit Ethernet ports; VGA ports; 7 USB 3.2 Gen1 ports (4 in rear, 2 at front, 1 type A); 1 Serial port	2 Intel® X557 10GBase-T + 1x Realtek RTL8201EL-VC PHY (dedicated IPMI); VGA ports; 6 USB 3.2 Gen1 ports (4 in rear, 2 at front); 2 Serial port optional
Management Controller	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC
Management	IPMI2.0; KVM with share NIC	IPMI2.0; KVM with with share NIC	IPMI2.0; KVM with share NIC LAN; SUSI API; WISE-PaaS RMM	IPMI2.0; KVM with dedicated LAN
Peripheral Bays	2 hot-swap 2.5" drive support; 2 SAS/SATA3 ports; on board 1 M.2 2242 SATA	8 hot-swap 2.5" drive support; 8 SAS/SATA3 ports; optional ODD; on board 1 M.2 2280 (SATA + PCIe x4)	8 hot-swap 2.5"/3.5" SAS/SATA3 drive support; 2 internal 2.5" drive support; on board 2 M.2 2242(SATA) for OS mirror	12 hot-swap 2.5"/3.5" SAS/SATA3 ports; on board 1 M.2 2280 (SATA + PCIe x2)
Power Supply	1200W 1+1 platinum level redundant power supply	2000W 1+1 platinum level redundant power supply	2000W 1+1 platinum level redundant power supply	4800W 3+1 platinum level redundant power supply
Cooling System	6 high speed 4056 system fan; 1 internal 4028 system fan; 1 optional 4028 external fan	6 high speed 8038 fan; 2 for CPU, 4 for riser card cage	2 CPU fan; 3 high speed 12038 internal system fan; 2 high speed external 8038 system fan	6 high speed 12038 system fan; 4 optional external 8038 fan
Form Factor	1U chassis; enclosure: 438 x 44 x 650 mm (17.2" x 1.7" x 25.6")	2U chassis; enclosure: 438 x 88 x 760 (17.24" x 3.46" x 29.92")	4U chassis; enclosure: 435 x 177 x 673 mm (17.12" x 6.96" x 26.49")	4U chassis; enclosure: 438 x 176 x 770 mm (17.24" x 6.93" x 30.31")
Operating Temperature	0 ~ 35° C (32 ~ 95° F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 35° C (32 ~ 85° F) *0 ~ 30° C (32 ~ 85.9° F) for NVidia Tesla P100/V100	0 ~ 35° C (32 ~ 85° F) *0 ~ 30° C (32 ~ 85.9° F) for NVidia Tesla V100

# Storage Servers and Multi-node Servers



Specification	SKY-4311	ASR-3100	SKY-5240
<b>Key Applications</b>	<ul style="list-style-type: none"> <li>Cache/Hot Data Machine</li> <li>3D Rendering</li> <li>Broadcasting &amp; Editing</li> <li>Financial Market and eCommerce OLTP</li> </ul>	<ul style="list-style-type: none"> <li>Cache/Hot Data Machine</li> <li>3D Rendering</li> <li>Broadcasting &amp; Editing</li> <li>Financial Market and eCommerce OLTP</li> </ul>	<ul style="list-style-type: none"> <li>High performance computing</li> <li>Distributed computing/storage</li> <li>Optimized for space efficiency &amp; performance-per-watt</li> </ul>
<b>Features</b>	<ul style="list-style-type: none"> <li>Up to 8 NVMe/SATAIII and optional up to 8 SAS drives</li> <li>Dual SATA M.2 2242 for OS mirror</li> <li>2 Intel® Gb LAN</li> </ul>	<ul style="list-style-type: none"> <li>Up to 16 NVMe/SATAIII and optional up to 8 SAS drives</li> <li>Dual SATA M.2 2242 for OS mirror</li> <li>2 Intel® Gb LAN</li> </ul>	<ul style="list-style-type: none"> <li>8 2.5" Hot-swappable NVMe and 16 2.5" hot-swappable SAS3 drive bays</li> <li>Onboard RAID support RAID 0, 1, 5, 10</li> <li>4 Hot-swappable computing node</li> <li>Each Node supports:                             <ul style="list-style-type: none"> <li>Dual 140W CPU</li> <li>24 DDR4 DIMM sockets</li> <li>2 M.2 2280</li> <li>2 PCIe16 (HH/HL) add-on cards</li> </ul> </li> <li>Full system (4 nodes) supports:                             <ul style="list-style-type: none"> <li>8 140 CPU</li> <li>96 DDR4 DIMM sockets</li> <li>8 M.2 2280</li> <li>8 PCIe16 (HH/HL) add-on cards</li> </ul> </li> </ul>
<b>Processor Support</b>	Intel® Haswell-EP/Broadwell-EP Processor (Socket 2011)	Intel® Haswell-EP/Broadwell-EP Processor (Socket 2011)	Dual Intel® Xeon® Scalable/2nd Gen. Scalable Family Processor (Cascadelake/Skylake) with UPI up to 10.4 GT/s per node, total support 8 CPU
<b>Serverboard</b>	SKY-4311	ASR-3100	SKY-5240
<b>Chipset</b>	Intel® C612 chipset	Intel® C612 chipset	Intel® C622 chipset
<b>System Memory (Max.)</b>	16 DIMM DDR4 RDIMM Max. 512 GB	16 DIMM DDR4 RDIMM Max. 512 GB	96 DIMM slots, Up to 3TB ECC 3DS LRDIMM, Up to 2933 MHz
<b>Expansion Slots</b>	2 PCIe x 8 slots, and one slot supports FHHL card, the other one supports HHHL card	2 PCIe x 8 slots, and one slot supports FHHL card, the other one supports HHHL card	8 PCI-E 3.0 x 16, Low Profile
<b>Onboard Storage Controller</b>	Intel® C612 chipset	Intel® C612 chipset	Microsemi PM8222 SASIII 12Gb/s
<b>Connectivity</b>	2 Intel® Gb LAN	2 Intel® Gb LAN	8 10GBase-T Ethernet ports (Intel® X557); 4 VGA ports; 8 USB 3.2 Gen1 ports (Type A); 4 dedicate IPMI LAN
<b>Management Controller</b>	Aspeed AST2400 BMC	Aspeed AST2400 BMC	Aspeed AST2500 BMC
<b>Management</b>	Industry standard BMC, IPMI v2.0 compliant, with web interface, iKVM on request	Industry standard BMC, IPMI v2.0 compliant, with web interface, iKVM on request	IPMI2.0; KVM with dedicated LAN
<b>Drive Bays</b>	8 hot-swap 2.5" NVMe/SATA3 drive	ASR-3100PP: 8 hot-swap 2.5" NVMe drive + 8 hot-swap 2.5" NVMe/SATA3 ASR-3100PT: 8 hot-swap 2.5" NVMe drive + 8 hot-swap 2.5" /SATA3 ASR-3100SS: 16 hot-swap 2.5" SAS/SATA3 drive	24 2.5" drive bays (24 SAS drive or 8 NVMe + 16 SAS drive)
<b>Peripheral Bays</b>	-	-	8 M.2 2280 (4 SATA3 + 4 SATA3/PCIe4)
<b>Power Supply</b>	1100W 1 + 1 Redundant Power Supply	1100W 1 + 1 Redundant Power Supply	1+1 2200W platinum redundant power supply
<b>Cooling System</b>	5 heavy duty fans w/ Optimal Fan Speed Control	7 heavy duty fans w/ optimal fan speed control	4 hot-swappable high speed 8038 fan
<b>Form Factor</b>	1U Chassis; Enclosure: 430 x 44 x 626 mm (16.9" x 1.7" x 24.6")	1U Chassis; Enclosure: 430 x 44 x 806 mm (16.9" x 1.7" x 31.7")	2U chassis; 446 x 88 x 830 mm (17.56" x 3.46" x 32.68")
<b>Operating Temperature</b>	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 35 °C (32 ~ 95 °F)

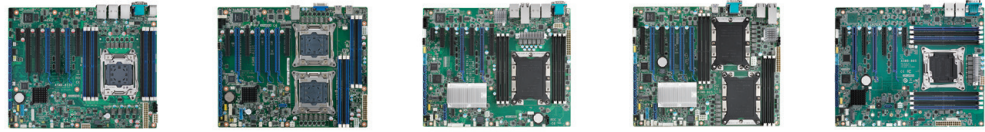
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# Industrial Server Boards



Model Name		ASMB-260	ASMB-585	ASMB-586	ASMB-785	ASMB-786
Form Factor		Mini-ITX	Micro ATX	MicroATX	ATX	ATX
Processor System	CPU	Intel® Atom® C3000 Series	Intel® Xeon® E3 v5/v6 and 6th/7th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E & 8th/9th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E3 v5/v6 and 6th/7th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E & 8th/9th Gen. Core™ i3/i5/i7 Series
	Socket	-	1 x socket LGA 1151	1 x socket LGA1151	1 x socket LGA 1151	1 x socket LGA 1151
	Max. Speed	2.2 GHz	3.9 GHz	3.7 GHz	3.9 GHz	3.7 GHz
	Front Side Bus	-	-	-	-	-
	L3 Cache	2 MB (based on CPU sku)	8 MB	13.5 MB	8 MB	13.5 MB
	Chipset	-	Intel® C236	Intel® C246	Intel® C236	Intel® C246
BIOS		AMI 128 Mbit, SPI	AMI 128Mbit, SPI	AMI 256Mbit, SPI	AMI 128Mbit, SPI	AMI 256Mbit, SPI
Expansion Slot	PCI	-	-	-	3	-
	PCIe x16	-	1 (Gen3 x16 link)	1	1 (switchable to two x 8)	1 (switchable to two x 8)
	PCIe x8	-	-	-	2 (switchable to one x 16)	2 (switchable to one x 16)
	PCIe x4	1 (1 Gen3 x 4 link)	3 (2 Gen3 x 4 link, 1 Gen3 x 1 link)	2	2	2
	PCIe x1	-	-	1	-	3
M.2		-	-	-	-	-
Memory	Technology	DDR4 Reg/unbuffered 2400/2133/1866/1600 Mhz DIMM	DDR4 ECC/non-ECC Unbuffer 1600/1866/2133/2400 MHz	DDR4 ECC/non-ECC Unbuffer 2133/2400/2666 MHz	DDR4 ECC/non-ECC Unbuffer 1600/1866/2133/2400 MHz	DDR4 ECC/non-ECC Unbuffer 2133/2400/2666 MHz
	Max. Capacity	128 GB for RDIMM/64GB for UDIMM	64 GB	64 GB	64 GB	64 GB
	Socket	4 x 288-pin DIMM	4 x 288-pin DIMM	4 x 288-pin DIMM	4 x 288-pin DIMM	4 x 288-pin DIMM
Graphics	Controller	AST2500	Intel® GT2-HD Graphics	Intel® GT2-HD Graphics	Intel® GT2-HD Graphics	Intel® GT2-HD Graphics
	VRAM	DDR3 64MB	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed
Ethernet	Interface	Gigabit & 10GBase-T Ethernet	Gigabit Ethernet	Gigabit Ethernet	Gigabit Ethernet	Gigabit Ethernet
	Controller	2 x Intel® I210AT 1 x Intel® X557-AT2	1 x Intel® I219LM 3 x Intel® I210AT (G4 SKU)	1 x Intel® I219LM 3 x Intel® I210AT (G4 SKU)	1 x Intel® I219LM 3 x Intel® I210AT (G4 SKU)	1 x Intel® I219LM 3 x Intel® I210AT (G4 SKU)
	Connector	RJ-45 x 3 (1 shared with IPMI)	RJ-45 x 4 (G4 SKU)	RJ-45 x 4 (G4 SKU)	RJ-45 x 4 (G4 SKU)	RJ-45 x 4 (G4 SKU)
TPM		Optional	Optional	Optional	Optional	Optional
SATA	Max. Data Transfer Rate	600MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s
	Channel	Up to 8	7	8	6	8
SAS	Max. Data Transfer Rate	-	-	-	-	-
	Channel	-	-	-	-	-
Rear I/O	VGA/DVI/HDMI/DP	1 / - / - / -	1 / 2 / - / -	1 / 1 / 1 / -	1 / 2 / - / -	1 / 1 / 1 / -
	Ethernet	3	4 (G4 SKU)	4 (G4 SKU)	4 (G4 SKU)	4 (G4 SKU)
	USB	2 (USB3.2 Gen1)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen2)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen2)
	Audio	-	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
	Parallel	-	-	-	-	-
	Serial	1 (RS-232)	1 (RS-232)	1 (RS-232 via cable)	1 (RS-232)	1 (RS-232 via cable)
	PS/2	-	-	-	-	-
Onboard I/O	USB	2 (USB 3.2 Gen1)	2 (USB 3.2 Gen1) 6 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 6 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 6 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 6 (USB 2.0) 1 (USB 2.0 Type A)
	Audio	-	1	1	1	1
	Serial	1	6	1	6	1
	Parallel	-	-	-	1	1
	SATA	8	7	8	6	8
SAS		-	-	-	-	-
Watchdog Timer	Output	System reset	System reset	System reset	System reset	System reset
	Interval	Programmable, 1~255 sec	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min





Model Name		ASMB-813	ASMB-823	ASMB-815	ASMB-825	ASMB-805
Form Factor		ATX	ATX	ATX	ATX	ATX
Processor System	CPU	Intel® Xeon® E5-1600 v3/v4 and 2600 v3/v4 Series	Intel® Xeon® E5-2600 v3/v4 Series	Intel® Xeon® Scalable/2nd Gen Scalable Series	Intel® Xeon® Scalable/2nd Gen Scalable Series	Intel® Xeon® W-2100/W-2200 Series
	Socket	1 x socket LGA 2011-R3	2 x socket LGA 2011-R3	1 x socket LGA 3647-P0	2 x socket LGA 3647-P0	1 x socket LGA 2066
	Max. Speed	3.7 GHz	3.5 GHz	3.6 GHz	3.6 GHz	4.1 GHz
	Front Side Bus	QPI 9.6GT/s	QPI 9.6GT/s	UPI 10.4 GT/s	UPI 10.4 GT/s	-
	L3 Cache	30 MB	30 MB	38.5 MB	38.5 MB	24.75 MB
	Chipset	Intel® C612	Intel® C612	Intel® C620	Intel® C620	Intel® C422
Expansion Slot	BIOS	AMI 128 Mbit, SPI	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI
	PCI	-	-	-	-	-
	PCIe x16	2 (switchable to four x8)	4	2 (switchable to four x 8)	4	3 (switchable to four x 8 and one x16)
	PCIe x8	1	2	1	2	-
	PCIe x4	1	1 (x 8 slot with x 4 link)	1	-	2
	PCIe x1	1	-	1	-	-
Memory	M.2	-	-	1 x M.2 2280 (PCIe/SATA)	1 x M.2 2280 (PCIe/SATA)	1 x M.2 2210/2280/2242 (PCIe)
	Technology	DDR4 REG 2400/2133/1866/1600 MHz DIMM	DDR4 REG 2400/2133/1866/1600 MHz DIMM	DDR4 2933/2666/2400/2133 MHz RDIMM, Intel Optane DCPMM	DDR4 2933/2666/2400/2133 MHz RDIMM, Intel Optane DCPMM	DDR4 2666/2400/2133 MHz RDIMM
	Max. Capacity	256 GB REG DIMM	192 GB REG DIMM	384 GB REG DIMM	384 GB REG DIMM	512 GB REG DIMM
Graphics	Socket	8 x 288-pin DIMM	6 x 288-pin DIMM	6 x 288-pin DIMM	6 x 288-pin DIMM	8 x 288-pin DIMM
	Controller	AST1400/AST2400	AST1400/AST2400	AST2510/AST2500	AST2510/AST2500	AST2500
	VRAM	DDR3 64MB	DDR3 64MB	DDR3 64MB	DDR3 64MB	DDR3 64MB
	LCD	-	-	-	-	-
	TV-Out	-	-	-	-	-
	HDMI	-	-	-	-	-
	DVI	-	-	-	-	-
Ethernet	Dual Display	-	-	-	-	-
	Interface	Gigabit Ethernet	Gigabit Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit Ethernet
	Controller	2 x Intel® I210AT	2 x Intel® I210AT	2 x Intel® I210AT 1 x Intel® X557-AT2 1 x Realtek 8201EL	2 x Intel® I210AT 1 x Intel® X557-AT2	2 x Intel® I210AT
TPM	Connector	RJ-45 x 3 (1 dedicated for IPMI)	RJ-45 x 3 (1 shared with IPMI)	RJ-45 x 5 (1 dedicated for IPMI)	RJ-45 x 4 (1 shared with IPMI)	RJ-45 x 3 (1 dedicated for IPMI)
	Optional	Optional	Optional	Optional	Optional	Optional
SATA	Max. Data Transfer Rate	600 MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s
	Channel	8	9	9	9	6
SAS	Max. Data Transfer Rate	-	-	-	-	-
	Channel	-	-	-	-	-
Rear I/O	VGA/DVI/HDMI/DP	1 / - / - / -	1 / - / - / -	1 / - / - / -	1 / - / - / -	1
	Ethernet	2	2	4 (T2 SKU)	4 (T2 SKU)	2
	USB	4 (USB 3.2 Gen1) 2 (USB 2.0)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen1) 2 (USB 2.0)	2 (USB 3.2 Gen1)	6 (USB 3.2 Gen1)
	Audio	-	-	-	-	-
	Parallel	-	-	-	-	-
	Serial	1 (RS-232)	-	1 (RS-232)	1 (RS-232)	1 (RS-232)
Onboard I/O	PS/2	2	-	-	-	-
	USB	2 (USB 3.2 Gen1) 2 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 2 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 4 (USB 2.0) 1 (USB 2.0 Type A)	4 (USB 3.2 Gen1) 4 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 4 (USB 2.0) 1 (USB 2.0 Type A)
	Audio	1	1	1	1	1
	Serial	1	1	1	1	1
	Parallel	-	-	-	-	-
	SATA	8	9	8	8	6
Watchdog Timer	SAS	-	-	-	-	-
	Output	System reset	System reset	System reset	System reset	System reset
Interval	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	

- 1 IoT Software Solutions
- 2 Edge AI and SKY Servers
- 3 Intelligent Systems
- 4 Machine Vision Solutions
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 D4Q and Communication Gateways
- 8 Industrial Communication
- 9 Remote I/O, Wireless Sensing Modules and Converters
- 10 Intelligent Motion Control Solutions
- 11 EtherCAT Solutions and Automation Controllers
- 12 Industrial I/O Solutions
- 13 Intelligent Transportation Platforms
- 14 Utility and Energy Solutions

# Industrial Server Boards



Model Name		ASMB-913	ASMB-923	ASMB-925	ASMB-935	ASMB-975
Form Factor		EATX	EATX	EATX	EATX	Proprietary
Processor System	CPU	Intel® Xeon® E5-2600 v3/v4 Series	Intel® Xeon® E5-2600 v3/v4 Series	Intel® Xeon® Scalable/2nd Gen Scalable Series	Intel® Xeon® Scalable/2nd Gen Scalable Series	Intel® Xeon® Scalable/2nd Gen Scalable Series
	Socket	2 x socket LGA 2011-R3	2 x socket LGA 2011-R3	2 x socket LGA 3647-P0	2 x socket LGA 3647-P0	2 x socket LGA 3647-P0
	Max. Speed	3.5 GHz	3.5 GHz	3.6 GHz	3.6 GHz	3.6 GHz
	Front Side Bus	QPI 9.6GT/s	QPI 9.6GT/s	UPI 10.4 GT/s	UPI 10.4 GT/s	UPI 10.4 GT/s
	L3 Cache	30 MB	30 MB	38.5 MB	38.5 MB	38.5 MB
	Chipset	Intel® C612	Intel® C612	Intel® C620	Intel® C620	Intel® C620
BIOS		AMI 128 Mbit, SPI	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI
Expansion Slot	PCI	-	-	1	-	-
	PCIe x 16	4 (1 for PME)	4	5	5	4
	PCIe x 8	-	2	1	1	1
	PCIe x 4	-	1	-	-	4
	PCIe x 1	-	-	-	-	-
M.2	-	-	-	1 x M.2 2280 (PCIe/SATA)	2 x M.2 2242 (SATA)	
Memory	Technology	DDR4 REG 2400/2133/1866/1600/1333 MHz DIMM	DDR4 REG 2400/2133/1866/1600/1333 MHz DIMM	DDR4 2933/2666/2400/2133 MHz RDIMM, Intel Optane DCPMM	DDR4 2933/2666/2400/2133 MHz RDIMM, Intel Optane DCPMM	DDR4 2933/2666/2400/2133 MHz RDIMM, Intel Optane DCPMM
	Max. Capacity	512 GB REG DIMM	256 GB REG DIMM	768 GB REG DIMM	1.5 TB REG DIMM	768 GB REG DIMM
	Socket	16 x 288-pin DIMM	8 x 288-pin DIMM	12 x 288-pin DIMM	24 x 288-pin DIMM	12 x 288-pin DIMM
Graphics	Controller	AST1400/AST2400	AST1400/AST2400	AST2510/AST2500	AST2510/AST2500	AST2510/AST2500
	VRAM	DDR3 64MB	DDR3 64MB	DDR3 64MB	DDR3 64MB	DDR3 64MB
	LCD	-	-	-	-	-
	TV-Out	-	-	-	-	-
	HDMI	-	-	-	-	-
	DVI	-	-	-	-	-
	Dual Display	-	-	-	-	-
Ethernet	Interface	Gigabit Ethernet	Gigabit Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit & 10GBase-T Ethernet
	Controller	4 x Intel® I210AT	2 x Intel® I210AT	2 x Intel® I210AT 1 x Intel® X557-AT2	2 x Intel® I210AT 1 x Intel® X557-AT2	2 x Intel® I210AT 1 x Intel® X557-AT2
	Connector	RJ-45 x 4 (1 shared with IPMI)	RJ-45 x 3 (1 dedicated for IPMI)	RJ-45 x 4 (1 shared with IPMI)	RJ-45 x 4 (1 shared with IPMI)	RJ-45 x 4 (1 shared with IPMI)
TPM		Optional	Optional	Optional	Optional	Optional
SATA	Max. Data Transfer Rate	600 MB/s	600 MB/s	600 MB/s	600 MB/s	600 MB/s
	Channel	8	10	8	10	14
SAS	Max. Data Transfer Rate	-	-	-	-	-
	Channel	-	-	-	-	-
Rear I/O	VGA/DVI/HDMI/DP	1 / - / - / -	1 / - / - / -	1 / - / - / -	1 / - / - / -	1 / - / - / -
	Ethernet	4	2	4 (T2 SKU)	4 (T2 SKU)	4 (T2 SKU)
	USB	2 (USB 3.2 Gen1)	2 (USB 3.2 Gen1) 2 (USB 2.0)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen1)
	Audio	-	-	-	-	-
	Parallel	-	-	-	-	-
	Serial	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)
Onboard I/O	PS/2	-	2	-	-	-
	USB	2 (USB 3.2 Gen1) 2 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 2 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 4 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 4 (USB 2.0) 1 (USB 2.0 Type A)	4 (USB 3.2 Gen1) 2 (USB 2.0) 1 (USB 2.0 Type A)
	Audio	1	1	1	1	1
	Serial	1	1	1	1	1
	Parallel	-	-	-	-	-
	SATA	8	10	8	10	12
Watchdog Timer	Output	System reset	System reset	System reset	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec

# Industrial Server Chassis



Height (1U = 1.75")		Tower		
Model Name		HPC-2040	HPC-5000	HPC-7000
Form Factor Support		Mini iTX	Micro ATX	Micro ATX, ATX, EATX
No. of slots / No. of full-height cards		1/0	4/2 (11.73" Length)	7/6
Drive Bay	Slim ODD Bay	1	1	1
	5.25" (front-accessible)	-	-	-
	3.5" (hot-swappable)	4 (3.5" / 2.5")	-	-
	3.5" (internal)	-	2 x 3.5" or 1 x 3.5" + 1 x 2.5"	3 (External)
	2.5" (hot-swappable)	-	-	-
	2.5" (internal)	1	-	-
Cooling	Chassis Fan	1 (12cm / 57.2CFM)	1 (12cm / 82CFM)	2 (12cm/150CFM)
	Air Filter	-	Yes	-
Front I/O Interface	USB 3.0	2	2	2
	USB 2.0	-	2	-
Power Supply	Single Power Supply	250W	300W/500W	500W/1200W
	Redundant Power Supply	-	-	-
Miscellaneous	LED Indicators	Power, LAN 1, LAN 2, HDD, System Information	System: Power	System: Power
	Rear Panel	One reserved DB-9 ports	Two reserved DB-9 ports	Two USB reserved ports
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)
	Non-Operating Temperature	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Operating Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Non-operating Humidity	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
Physical Characteristics	Dimensions (W x H x D)	210 x 230 x 275 mm (8.3" x 9.1" x 10.8")	192 x 376.7 x 338.5 mm (7.56" x 14.83" x 13.33")	267.1 x 458 x 500 mm (10.52" x 18.03" x 19.69")

- 1 IoT Software Solutions
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- 7 DAO and Communication Gateways
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- 9 Remote I/O, Wireless Sensing Modules and Converters
- 10 Intelligent Motion Control Solutions
- 11 EtherCAT Solutions and Automation Controllers
- 12 Industrial I/O Solutions
- 13 Intelligent Transportation Platforms
- 14 Utility and Energy Solutions

# Industrial Server Chassis



Height (1U = 1.75")		1U	2U		3U/Tower
Model Name		<a href="#">HPC-7120S</a>	<a href="#">HPC-7242</a>	<a href="#">HPC-7282</a>	<a href="#">HPC-7320</a>
Form Factor Support		Micro ATX, ATX	Micro ATX, ATX	Micro ATX, ATX	Micro ATX, ATX, EATX
No. of slots / No. of full-height cards		1/0	3/3	7/0	7/6
Drive Bay	Slim ODD Bay	-	1	1	1
	5.25" (front-accessible)	-	-	-	-
	3.5" (hot-swappable)	-	4 (3.5" / 2.5")	8	2 (3.5" / 2.5")
	3.5" (internal)	-	-	2	2
	2.5" (hot-swappable)	2 (HPC-7120S-35ZXE only)	-	Optional	-
	2.5" (internal)	2	2	-	-
Cooling	Chassis Fan	3 (4 cm/23.1 CFM)	1 (8 cm/47CFM) + 2 (6 cm/28CFM)	3 (8cm / 52.6 CFM)	2 (8cm/57CFM) + 1 (6cm/27.72CFM)
	Air Filter	-	Yes	-	Yes
Front I/O Interface	USB 3.0	2	2	-	2
	USB 2.0	-	-	2	-
Power Supply	Single Power Supply	350W/850W	350W/500W	500W/850W	500W/850W
	Redundant Power Supply	-	550W	550W/800W	550W/800W
Miscellaneous	LED Indicators	System: Power, HDD, LAN1, LAN2, System Information. HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, temperature, fan. HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, temperature, fan. HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, temperature, fan. HDD Tray: HDD Power and Activity LED
	Rear Panel	-	Two reserved DB-9 ports	-	Two reserved DB-9 ports
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)
	Non-Operating Temperature	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Operating Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Non-operating Humidity	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
Physical Characteristics	Dimensions (W x H x D)	438 x 43 x 381 mm (17.24" x 1.7" x 15")	426.4 x 88 x 525 mm (16.79" x 3.46" x 20.67")	437 x 88.9 x 533.4 mm (17.2" x 3.5" x 21")	426.4 x 132.2 x 480 mm (16.79" x 5.2" x 18.9")



Height (1U = 1.75")		4U/Tower		
Model Name		<a href="#">HPC-7442</a>	<a href="#">HPC-7483</a>	<a href="#">HPC-7484</a>
Form Factor Support		Micro ATX, ATX, EATX	Micro ATX, ATX, EATX	Micro ATX, ATX, EATX
No. of slots / No. of full-height cards		7/7	10/10	7/7
Drive Bay	Slim ODD Bay	1	-	1
	5.25" (front-accessible)	-	3	-
	3.5" (hot-swappable)	4 can upgrade to 8 (3.5" / 2.5")	8 (3.5" / 2.5")	8 (3.5" / 2.5")
	3.5" (internal)	1	-	-
	2.5" (hot-swappable)	-	-	-
	2.5" (internal)	-	2	1
Cooling	Chassis Fan	1 (12cm /114 CFM) + 1 (8cm/55 CFM)	3 (12cm /226.5 CFM)	2 (12cm /150.33 CFM)
	Air Filter	Yes	-	Yes
Front I/O Interface	USB 3.0	2	2	2
	USB 2.0	-	-	-
Power Supply	Single Power Supply	500W/700W/1200W	-	700W/1200W
	Redundant Power Supply	500W	1200W/2000W	-
Miscellaneous	LED Indicators	System: Power, HDD, LAN1, LAN2, temperature, fan. HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, temperature, fan. HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, temperature, fan. HDD Tray: HDD Power and Activity LED
	Rear Panel	Five DB-9 ports and one 68-pin SCSI openings	Two DB-9 ports and two PS2 and two USB	Five DB-9 ports and one 68-pin SCSI openings
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 122 °F)
	Non-Operating Temperature	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Operating Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Non-operating Humidity	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
Physical Characteristics	Dimensions (W x H x D)	426 x 177 x 600 mm (16.7" x 7.0" x 23.6")	435 x 177 x 658 mm (19" x 7.0" x 26.5")	426 x 177 x 630mm (16.7" x 7.0" x 24.8")

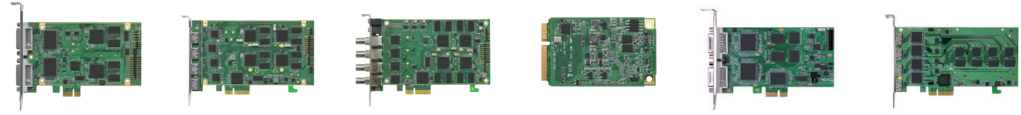
- 1 IoT Software Solutions
- 2 Edge AI and SKY Servers
- 3 Intelligent Systems
- 4 Machine Vision Solutions
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 DAO and Communication Gateways
- 8 Industrial Communication
- 9 Remote I/O, Wireless Sensing Modules and Converters
- 10 Intelligent Motion Control Solutions
- 11 EtherCAT Solutions and Automation Controllers
- 12 Industrial I/O Solutions
- 13 Intelligent Transportation Platforms
- 14 Utility and Energy Solutions

# Industrial Server Chassis



Height (1U = 1.75")		1U		2U		3U	4U
Model Name		<a href="#">HPC-8104</a>	<a href="#">HPC-8108</a>	<a href="#">HPC-8212</a>	<a href="#">HPC-8224</a>	<a href="#">HPC-8316</a>	<a href="#">HPC-8424</a>
Form Factor Support		Mico ATX, ATX	ATX, EATX	Mico ATX, ATX, EATX	ATX, EATX	Mico ATX, ATX	ATX, EATX
No. of slots / No. of full-height cards		1/0	1/0	7/0, 3/3 (1 for Raid Card)	7/0, 3/3 (1 for Raid Card)	7/7 (1 for Raid Card)	7/7 (1 for Raid Card)
Drive Bay	Slim ODD Bay	1 (Ultra Slim)	1	-	-	-	-
	5.25" (front-accessible)	-	-	-	-	-	-
	3.5" (hot-swappable)	4 x SAS3 or SATA	-	12 x SAS3/SATA	-	16 x SAS3 or SATA	24 x SAS3/SATA
	3.5" (internal)	-	-	-	-	-	-
	2.5" (hot-swappable)	-	8 x SAS3 or SATA	2 (Rear) only HPC-8212SE-R6A1E	24 x SAS3/SATA	2 (Rear)	2 (Rear)
	2.5" (internal)	2 or 3(optional)	-	-	-	-	-
	NVMe Support	-	-	4 in 12 Hot-Swappable Drive Bays	4 in 24 Hot-Swappable Drive Bays	-	4 in 24 Hot-Swappable Drive Bays
Cooling	Chassis Fan	4 (4cm)	4 (4cm)	4 (8cm)	4 (8cm)	4 (8cm)	4 (8cm)
	Air Filter	-	-	-	-	-	-
Front I/O Interface	USB 3.0	2	-	-	-	2	-
	USB 2.0	-	1	2	2	-	2
Power Supply	Single Power Supply	500W	800W	-	-	-	-
	Redundant Power Supply	650W	650W	550W, 650W, 800W	800W	550W	800W
Miscellaneous	LED Indicators	LAN1, LAN2,HDD, Power and Information LED	LAN1, LAN2,HDD, Power and Information LED	LAN1, LAN2,HDD, Power and Information LED	LAN1, LAN2,HDD, Power and Information LED	LAN1, LAN2,HDD, Power and Information LED	LAN1, LAN2,HDD, Power and Information LED
	Rear Panel	-	-	-	-	-	-
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 35 °C (32 ~ 95 °F)
	Non-Operating Temperature	-40 ~ 60 °C (-40 ~ 140 °F)	-40 ~ 60 °C (-40 ~ 140 °F)	-40 ~ 60 °C (-40 ~ 140 °F)	-40 ~ 60 °C (-40 ~ 140 °F)	-40 ~ 60 °C (-40 ~ 140 °F)	-40 ~ 60 °C (-40 ~ 140 °F)
	Operating Humidity	10 ~ 95% @ 40 °C non-condensing	10 ~ 95% @ 35 °C non-condensing	10 ~ 95% @ 35 °C non-condensing	10 ~ 95% @ 35 °C non-condensing	10 ~ 95% @ 35 °C non-condensing	10 ~ 95% @ 35 °C non-condensing
	Non-operating Humidity	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing
Physical Characteristics	Dimensions (W x H x D)	438 x 43.9 x 530mm (17.24" x 1.73" x 20.9")	438 x 43.9 x 597mm (17.24" x 1.73" x 23.5")	438 x 88.4 x 540 mm (17.24" x 3.48" x 21.26") / 438 x 88.4 x 620 mm (17.24" x 3.48" x 24.41")	438 x 88.4 x 620 mm (17.24" x 3.48" x 24.41")	435 x 132 x 540 mm (17.13 x 5.2 x 21.26")	438 x 176 x 620 mm (17.24" x 6.93" x 24.41")

# DVP Video Capture Cards



Model Name		DVP-7621HE	DVP-7637HE	DVP-7636HE	DVP-7612HE	DVP-7021HE	DVP-7031HE
Video	Compression	H/W H.264 / MPEG4	H/W H.264	H/W H.264	H/W H.264	S/W H.264	SW H.264
	Channels	2	4	4	1	2	4
	Host Interface	PCIe x1	PCIe x4	PCIe x4	Mini PCIe x1 (Gen 2)	PCIe x1 (Gen2)	PCIex4 (Gen2)
	Input Interface	2 x HDMI/DVI/VGA/S-Video/YPbPr	-	-	HDMI/DVI/VGA	SDI/DVI/VGA/HDMI/Composite/YPbPr/S-video/VGA	HDMI
	Max. Display Resolution	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080 @60/50
	Max. Recording Resolution	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080p @60/50	1920 x 1080 @60/50
	Max. Display Rate	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	60/50 fps	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)
	Max. Recording Rate	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	60/50 fps	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)
	Video Outputs	-	-	-	-	-	-
Audio	Audio Inputs	2 x HDMI/ 2 x RCA	HDMI	SDI	HDMI Embedded Audio/ Audio L/R	2 x HDMI / Audio (L/R)	4 x HDMI
	Format	STEREO/16 bits/32000 ~ 48000 Hz	STEREO/16 bits/48000 Hz	STEREO/16 bits/48000 Hz	Stereo / 16-bit / 32000 ~ 48000Hz	Stereo, 16-bit, 32 ~ 48 kHz	Stereo, 16-bit, 32 ~ 48 kHz
Watchdog		Yes	No	No	No	-	Yes
Physical Characteristic	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-20 ~ 70 °C (-4 ~ 158 °F)	-20 ~ 70° C (-4 ~ 158° F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)
	Storing Temperature	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85° C (-40 ~ 185° F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimensions (W x H x D)	132.22 x 84.5 mm	167.65 x 101.03 mm	157 x 101.01 mm	30 x 51 mm	108 x 85 mm (4.25" x 3.34") PCIe Full Height	168 x 93 mm (6.64" x 3.66")
	Safety	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Operating System	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/Vista/7/8/8.1; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/Vista/7/8/8.1; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/Vista/7/Win8/Win8.1/Win10; Linux 2.6.14 or higher; 32/64-bit	Windows XP/XPe/Vista/7/Win8/Win8.1/Win10; Linux 2.6.14 or higher; 32/64-bit

- 1 IoT Software Solutions
- 2 Edge AI and SKY Servers
- 3 Intelligent Systems
- 4 Machine Vision Solutions
- 5 Intelligent HMI and Monitors
- 6 Automation Computers
- 7 DAO and Communication Gateways
- 8 Industrial Communication
- 9 Remote I/O, Wireless Sensing Modules and Converters
- 10 Intelligent Motion Control Solutions
- 11 EtherCAT Solutions and Automation Controllers
- 12 Industrial I/O Solutions
- 13 Intelligent Transportation Platforms
- 14 Utility and Energy Solutions

