3

SKY Servers

intel.
partner Titanium
IoT
Solutions

SKY Servers Overview

Extending the Cloud to the IoT Edge

Advantech SKY Servers are highly configurable platforms designed to maximize compute and storage performance in highly virtualized telecom, industrial, and enterprise hybrid cloud environments.

GPU Servers

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, supporting up to 10 NVIDIA® GPUs. The high-density GPU design maximizes the acceleration of highly parallel applications that require artificial intelligence (AI) like medical and automation applications.

Main Features
- High density GPU cards support
- Thermal & acoustic management
- Remote management

Storage Server and Multi-node Servers

Storage servers are high capacity, cost-effective storage solutions with comprehensive fault-tolerant capabilities and come with H/W RAID and online expansion capability. Multi-node servers deliver high performance in a 2U 4-node design — creating the flexibility to deploy independent workloads on a shared chassis resource which 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.
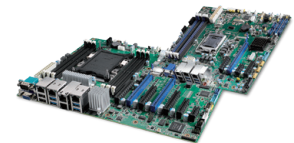
Edge Accelerator Servers

Advantech Edge Accelerator Servers are specially designed for Edge AI applications. They offer space efficiency and short-depth design and use high-performance server board technology. They also offer PCIe expansion slots for GPU Cards, NIC, and Accelerator Cards and are suitable for edge AI applications such factory automation, machine vision, security inspection, medical imaging and much more.

Main Features
- Enriched expansion slots (GPU, AI accelerate)
- Space efficiency with short-depth design
- Remote management

Industrial Server Boards

Advantech industrial server boards are 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, and SCADA applications. Industrial server boards accelerate deployment, ease management, enhance virtualization, and facilitate cloud computing deployment.

Main Features
- Industrial-grade design
- Interoperable and optimized I/O
- High network bandwidth

Industrial Server Chassis

Advantech industrial server chassis provide equipment developers with 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

GPU Server and Multi-node Servers

Model	☞ SKY-6100	☞ SKY-6200	☞ SKY-6400	☞ SKY-6420	☞ SKY-640V2
Key Applications	▪ Cloud Computing ▪ IoT Edge Computing ▪ Big Data Analytics	▪ Cloud Computing ▪ HPC / Data Analytics ▪ DataCenter Applications	▪ Cloud Computing ▪ Big Data Analytics ▪ High End Enterprise Server	▪ Cloud Computing ▪ Big Data Analytics ▪ Research lab/National Lab	▪ Cloud Computing ▪ Big Data Analytics ▪ High End Enterprise Server
Features	▪ 2 2.5" Hot-swap SAS/SATA drive bay ▪ 8 DIMM slots, Intel Optane DCPMM ▪ NVIDIA Tesla P4/T4 Optimized ▪ Unify front bezel design	▪ 8 2.5" Hot-swap SAS/SATA support ▪ 24 DIMM slots, Intel Optane DCPMM ▪ 4 double deck PCI-E cards or 8 single deck PCI-E cards ▪ Unify front bezel design	▪ 8 2.5"/3.5" hot-Swap SAS/SATA support ▪ 12 DIMM slot, Intel Optane DCPMM ▪ 205W CPU support ▪ 6 PCI-E cards support ▪ Unify front bezel design	▪ 12 2.5"/3.5" Hot-swap SAS/SATA support ▪ 24 DIMM slots ▪ Hot-Swappable system fan design ▪ 11 PCI-E cards support ▪ Peer-to-Peer support	▪ 8 2.5"/3.5" hot-Swap SAS/SATA support ▪ 12 DIMM slot, Intel Optane DCPMM ▪ 205W CPU support ▪ 7 PCI-E cards support ▪ Unify front bezel design
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	Dual Intel® Xeon® Scalable/3rd Gen. Scalable Family Processor (Icelake) with UPI up to 11.2 GT/s, TDP up to 205W
Serverboard	SKY-6100	SKY-6200	ASMB-975I	SKY-6420	ASMB-976T2
Chipset	Intel® C622	Intel® C622	Intel® C621	Intel® C622	Intel® C621A
System Memory (Max.)	8 x DDR4 2933 MHz ECC RDIMM/LRDIMM / Intel Optane DCPMM, up to 1TB	24 x DDR4 2933 MHz ECC RDIMM/LRDIMM / Intel Optane™ DCPMM up to 4TB	12 x DDR4 2933 MHz ECC RDIMM/LRDIMM / Intel Optane™ DCPMM, up to 2TB	24 x DDR4 2933 MHz ECC RDIMM/ LRDIMM / Intel Optane™ DCPMM, up to 6TB	16x DDR4 3200 MHz ECC RDIMM/LRDIMM / Intel® Optane™ DCPMM up to 2TB
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)	4 PCIE 4.0 x16 (FH, 10.5"L, double deck); 3 PCIE 4.0 x8 (FHHL, 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	Intel® C621A 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	2 Intel® X550 10GBase-T + 2 Intel® I210 Gigabit Ethernet ports; VGA ports; 2 USB 3.2 Gen1 ports (rear); 2 USB 3.2 Gen 1 port at front; 1 Serial port
Management Controller	Aspeed AST2500 BMC	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	IPMI2.0; KVM with dedicate 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)	8 hot-swap 2.5"/3.5" SAS/SATA3 drive 2 internal 2.5" drive; on board 2 M.2 2280 (PCIe/SATA) for cache and OS mirror
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	2000W 1+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	2 CPU fan; 3 high speed 12038 internal system fan; 2 optional high speed external 8038 system 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 mm (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")	4U chassis; enclosure: 435 x 176 x 660 mm (17.12" x 6.9" x 25.9")
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	0 ~ 35° C (32 ~ 85° F) support NVIDIA A100 / A30

✓: supported, − : not supported, △ : optional

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GPU Server and Multi-node Servers

Model	☞ SKY-9232D3	☞ SKY-9240
Description	2U4N Multinode HCI Server	2U4N Multinode HCI Server
Form Factor	2U - Rack Mount	2U - Rack Mount

Processor System	Processor	Single/Dual 3rd Gen Intel® Xeon® Scalable Processors (per node)	Dual 2nd Gen Intel® Xeon® Scalable Processors (per node)
	Core Number	–	Up to 28C
	Frequency	–	–
	Chipset	Intel® C621A	Intel® C620 Series (per node)
Memory	Technology	DDR4 DIMMs, ECC/REG/RDIMM/LRDIMM, (per node, 8pcs/CPU) up to 3200MHz	DDR4 DIMMs, ECC/REG/RDIMM/LRDIMM, up to 2666MHz
	Max. Capacity	2TB (per node)	1024 GB/ 64 GB per DIMM (per node)
	Socket	16 x 288-pin RDIMM/LRDIMM	16 x 288-pin RDIMM/LRDIMM
	ECC Support	ECC/REG	ECC/REG
Networking	Controller	–	–
	1GbE	1 x 10/100/1000Mbps BMC/Share NIC ports (per node)	1 x 10/100/1000Mbps BMC/Share NIC ports (per node)
	10GE	–	–
Expansion	PCIe Slot	1 x HH/HL PCIe Gen4 x16 (per node) 1 x PCIe Gen3 OCP 2.0 x8 (per node)	2 x HH/HL PCIe gen 3 x 16 slots (SKU A) 1 x HH/HL PCIe gen 3 x 16 slots (SKU B) (per node) 1 x PCIe Gen3 OCP x8 slot, supporting KR/SFI x2 (per node)
	M.2 PCIe/SSD	2 x M.2 2280 (NVMe/SATA; per node)	2 x M.2 2280 slot (per node)
	mSATA	–	–
Storage	2.5" HDD/SSD	1x 2.5" NVMe SSD (per node)	1 x 2.5" SAS/SATA/NVMe HDD/SSD drives (per node)
	3.5" HDD	12 x 3.5" SATA HDD drives (3 per node)	12 x 3.5" SATA/SAS HDD drives (3 per node)
I/O	Console port	1xMicroUSB/node	1xMicroUSB/node
	USB2.0/USB3.0	1 x USB3.0/USB2.0 Type A port at rear (per node)	2 x USB3.0/USB2.0 Type A port at rear (per node)
	LED Indicator	Power, UID	Power, UID
	Reset button	–	–
	Others	1 x VGA port (per node)	1 x VGA port (per node)
Power	Power Type	Redundant AC 2000W (Redundant power limitation for 100-127V_AC is up to 1000W)	Redundant AC 2000W (Redundant power limitation for 100-127V_AC is up to 1000W)
	Watts	2000W	2000W
	Input	1000W@100-127V_AC/12-9.5A, 1800W@200-220V_AC/10-9.5A, 1980W@220-230V_AC/10-9.8A, 2000W@230-240V_AC/10-9.8A	1000W@100-127V_AC/12-9.5A, 1800W@200-220V_AC/10-9.5A, 1980W@220-230V_AC/10-9.8A, 2000W@230-240V_AC/10-9.8A
	Power Adaptor	AC redundant	AC redundant
Environment	Operating Temperature (air flow 0.7 m/ sec)	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)
Cooling		4 x 8cm (8076) hot-swappable PWM fans with fan speed control	4 x 8cm (8076) hot-swappable PWM fans with fan speed control
Mechanical	Construction	Iron	Iron
	Mounting	Rack-mounting	Rack-mounting
	Dimensions (W x D x H)	438 x 87.5 x 810 mm	438 x 88 x 774 mm (17.2" x 3.46" x 30.47")
	Weight	50kg	30 Kg (w/o peripherals)
OS Support		–	–
IPMI		Aspeed AST2500 Carrier Grade BMC (IPMI v2.0 compliant) with fail safe updates, Web Interface, KVM, Redfish (Advantech IPMI Core)	Aspeed AST2500 Carrier Grade BMC (IPMI v2.0 compliant) with fail safe updates, Web Interface, KVM, Redfish (Advantech IPMI Core)
Certification		CE/FCC, UL, CB, RoHS, BSMI	CB, UL, FCC, CE, CCC, VCCI, BSMI, RoHS, REACH

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Industrial Inference Servers

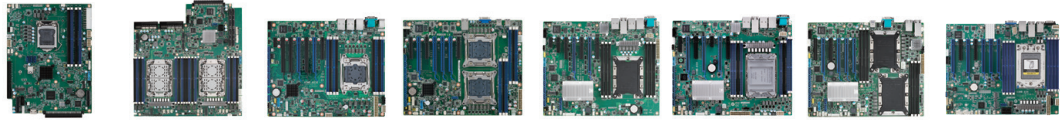| Category	1U	2U	4U
Model	☞ HPC-6120 ASMB-610	☞ HPC-6240 ASMB-622	☞ HPC-7420 ASMB-976
Key Applications	Edge Computing	Edge Computing	Edge Computing
	AOI +AI	Traffic Management +AI	Warehouse Management +AI
Features	18" short-depth with 4x FH PCIe expansion slots	20" short-depth with 8x FH PCIe expansion slots	Front Access Design,17" short-depth with 11 FH PCIe expansion slots
	Support double-deck GPU Card with active Fan	Support two double-deck GPU Card with active Fan	Support two double-deck GPU Card with active Fan
	2 x 2.5" Hot-swap SAS/SATA/SSD drive bay	4 x 2.5" Hot-swap SAS/SATA/SSD drive bay	2 x 3.5" SATA drive, 2 x 2.5" SAS/SATA/SSD Hot-swap drive bay in option
	Unify front bezel support	Unify front bezel support	–
Processor Support	Single Intel® Xeon® W & 10th Gen. Core™ i9/i7/i5/i3 processors (Comet Lake), TDP up to 95W	Dual Intel® Xeon® Scalable/3rd Gen. Scalable Family Processor (Ice Lake) with UPI up to 11.2 GT/s, TDP up to 165W	Dual Intel® Xeon® Scalable/3rd Gen. Scalable Family Processor (Ice Lake) with UPI up to 11.2 GT/s, TDP up to 165W
Serverboard	ASMB-610	ASMB-622	ASMB-976
Chipset	Intel® W480E chipset	Intel® C621 chipset	Intel® C621 chipset
System Memory (Max.)	4 DIMM slots, Up to 128GB ECC/non-ECC UDIMM, Up to 2933 MHz	16 DIMM slots, Up to 1TB RDIMM, Up to 3200 MHz, Intel Optane DCPMM support	16 DIMM slots, Up to 2TB RDIMM/LRDIMM, Up to 3200 MHz, Intel Optane DCPMM support
Expansion Slots	1 PCIe Gen3 X16 or 2 PCIe Gen3 X8 (FH/10.5"L) 2 PCIe Gen3 X4 (FH/HL)	4 PCIe Gen4 X16 (FH/10.5"L) 3 PCIe Gen4 X8 (FH/HL) 1 PCIe Gen3 X8 slot with X4 signal (FH/HL)	4 PCIe Gen4 X16 (FH/FL) 7 PCIe Gen4 X8 (FHFL)
Connectivity (Front)	2 USB3.2 Gen1 LEDs: power, information, LAN1~ LAN4	2 USB3.2 Gen1 LEDs: power, information, LAN1~ LAN4	2 Gigabit Ethernet RJ-45 2 10GBase-T RJ-45 (in T2 version) 1 dedicated IPMI RJ-45 2 USB3.0 1 VGA 1 COM LEDs: HDD, power, information, LAN1, LAN2
Connectivity (Rear)	4 Gigabit Ethernet RJ-45 1 dedicated IPMI RJ-45 2 USB3.2 Gen2 1 VGA 1 COM	4 Gigabit Ethernet RJ-45 1 dedicated IPMI RJ-45 2 USB3.2 Gen1 1 VGA 1 COM	NA
Management Controller	Aspeed AST2600 BMC	Aspeed AST2500 BMC	Aspeed AST2500 BMC
Management	1 RJ-45 support IPMI function with dedicated NIC	1 RJ-45 support IPMI function with dedicated NIC	1 RJ-45 support IPMI function with dedicated NIC
Peripheral Bays	4 x hot-swap 2.5" SATA/SAS 6Gb drive bays 1 M.2 2280/2242 (PCIe/SATA)	4 x hot-swap 2.5" SATA/SAS 6Gb drive bays 2 x hot-swap 2.5" NVMe drive bays in option 1 M.2 2280 (PCIe/SATA)	2 x 3.5" internal SATA drive (1 x internal 3.5" drive bay can change to 2 x 2.5" SAS/SATA 6Gb Hot-swap drive bay in option) 1 M.2 2280 (PCIe/SATA) 1 M.2 2280 (PCIe)
Power Supply	500W Single Flex ATX PSU 650W 1+0 non-redundancy PSU	1200W 1+1 redundancy PSU	1200W 1+0 non-redundancy PSU
Cooling System	3 x 4056 system fan 2 x 4028 system fan	3 x 8038 system fan 1 x 6038 system fan	3 x 12038 system fan
Physical Characteristics (W x H x D)	438 x 44 x 480 mm (17.24" x 1.73" x 18.9")	438 x 88 x 523 mm (17.24" x 3.46" x 20.59")	438 x 177 x 450mm (17.24" x 6.97" x 17.7")
Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 50 °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)
Humidity	10 ~ 95%, non-condensing	10 ~ 95%, non-condensing	10 ~ 95%, non-condensing

✓: supported, – : not supported, △ : optional

Industrial Server Boards

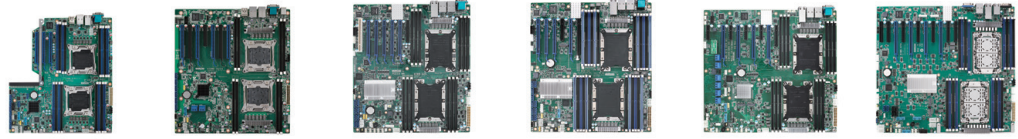|	Model	☞ ASMB-260	☞ ASMB-585	☞ ASMB-586	☞ ASMB-587	☞ ASMB-785	☞ ASMB-786	☞ ASMB-787
	Form Factor	Mini-ITX	Micro ATX	MicroATX	MicroATX	ATX	ATX	ATX
Processor System	CPU	Intel® Atom® C3000 Series	Intel® Xeon® E3 v5/v6 and 6th/7th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E & 8th/9th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® W and 10th Gen. Core™ i9/i7/i5/i3 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® W and 10th Gen. Core™ i9/i7/i5/i3 series
	Socket	–	1 x socket LGA 1151	1 x socket LGA 1151	1 x socket LGA 1200	1 x socket LGA 1151	1 x socket LGA 1151	1 x socket LGA 1200
	Max. Speed	2.2 GHz	3.9 GHz	3.7 GHz	3.7 GHz	3.9 GHz	3.7 GHz	3.7 GHz
	L3 Cache	2 MB (based on CPU sku)	8 MB	13.5 MB	20MB	8 MB	13.5 MB	20MB
	Chipset	-	Intel® C236	Intel® C246	Intel® W480E	Intel® C236	Intel® C246	Intel® W480E
	BIOS	AMI 128 Mbit, SPI	AMI 128Mbit, SPI	AMI 256Mbit, SPI	AMI 128Mbit, SPI	AMI 128Mbit, SPI	AMI 256Mbit, SPI	AMI 256Mbit, SPI
Expansion Slot	PCI	–	–	–	–	3	–	2
	PCIe x16	–	1 (Gen3 x16 link)	1 (Gen3 x16 link)	1 (Gen3 x16 link)	1 (switchable to two x 8)	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)	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	2	2
	PCIe x1	–	–	1	–	–	3	1
	M.2	–	–	–	1 x M.2 22110/2280 (PCIe/SATA)	–	–	1 x M.2 2280/2242 (PCIe/SATA)
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 2400/2666 2933 MHz	DDR4 ECC/non-ECC Unbuffer 1600/1866/2133/2400 MHz	DDR4 ECC/non-ECC Unbuffer 2133/2400/2666 MHz	DDR4 ECC/non-ECC Unbuffer 2400/2666 2933 MHz
	Max. Capacity	128 GB for RDIMM/64GB for UDIMM	64 GB	64 GB	128 GB	64 GB	64 GB	128 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	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	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 maxium shared memory with 2GB 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 maxium shared memory with 2GB and above system memory installed
Ethernet	Interface	Gigabit & 10GBase-T Ethernet	Gigabit Ethernet	Gigabit 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)	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)	RJ-45 x 4 (G4 SKU)	RJ-45 x 4 (G4 SKU)
	TPM	Optional	Optional	Optional	Optional	Optional	Optional	Optional
SATA	Max. Data Transfer Rate	600MB/s	600 MB/s	600 MB/s	600MB/s	600 MB/s	600 MB/s	600MB/s
	Channel	Up to 8	7	8	5	6	8	5
Rear I/O	VGA/DVI/HDMI/DP	1 / – / – / –	1 / 2 / – / –	1 / 1 / 1 / –	1 / 1 / 1 / –	1 / 2 / – / –	1 / 1 / 1 / –	1 / 1 / 1 / –
	Ethernet	3	4 (G4 SKU)	4 (G4 SKU)	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 Gen 2)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen2)	4 (USB 3.2 Gen 2)
	Audio	–	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
	Serial	1 (RS-232)	1 (RS-232)	1 (RS-232 via cable)	1 (RS-232 via cable)	1 (RS-232)	1 (RS-232 via cable)	1 (RS-232 via cable)
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)	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	1	1
	Serial	1	6	1	1	6	1	1
	Parallel	–	–	–	–	1	1	1
	SATA	8	7	8	5	6	8	5
Watchdog Timer	Output	System reset	System reset	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	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min

✓: supported, – : not supported, △ : optional

Model		☞ ASMB-610	☞ ASMB-622	☞ ASMB-813	☞ ASMB-823	☞ ASMB-815	☞ ASMB-816	☞ ASMB-825	☞ ASMB-830
Form Factor		Proprietary	Proprietary	ATX	ATX	ATX	ATX	ATX	ATX
Processor System	CPU	Intel® Xeon® W & 10th Gen. Core™ i9/i7/i5/i3 processors	Intel® Xeon® 3rd Gen Scalable Series	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® 3rd Gen Scalable Series	Intel® Xeon® Scalable/2nd Gen Scalable Series	AMD EPYC™ 7003 Series
	Socket	1 x socket LGA 1200	2 x socket LGA 4189-P+	1 x socket LGA 2011-R3	2 x socket LGA 2011-R3	1 x socket LGA 3647-P0	1 x socket LGA 4189-P+	2 x socket LGA 3647-P0	1 x socket LGA 4094
	Max. Speed	3.5 GHz	3.6 GHz	3.7 GHz	3.5 GHz	3.6 GHz	3.6 GHz	3.6 GHz	3.6 GHz
	Front Side Bus	–	UPI 11.2 GT/s	QPI 9.6GT/s	QPI 9.6GT/s	UPI 10.4 GT/s	UPI 11.2 GT/s	UPI 10.4 GT/s	–
	L3 Cache	20MB	42MB	30 MB	30 MB	38.5 MB	42MB	38.5 MB	Max 256MB
	Chipset	W480E	Intel® C621A	Intel® C612	Intel® C612	Intel® C620	Intel® C621A	Intel® C620	N/A
	BIOS	AMI SPI 256 Mbit	AMI SPI 256 Mbit	AMI 128 Mbit, SPI	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI	AMI SPI 256 Mbit	AMI 256 Mbit, SPI	AMI SPI 256 Mbit
Expansion Slot	PCIe x16	1 (switchable to two x 8)	4	2 (switchable to four x8)	4	2 (switchable to four x 8)	3	4	5
	PCIe x8	–	4	1	2	1	1	2	2
	PCIe x4	2	–	1	1 (x 8 slot with x 4 link)	1	2	–	–
	PCIe x1	–	–	1	–	1	1	–	–
	M.2	1 x M.2 2280	1 x M.2 2280	–	–	1 x M.2 2280 (PCIe/SATA)	1 x M.2 2280/22110 (PCIe/ SATA)	1 x M.2 2280 (PCIe/SATA)	2 x M.2 2280/22110 1 x (PCIe/SATA) 1 x (PCIe only)
Memory	Technology	DDR4 ECC/ non-ECC Unbuffer 2400/ 2666/2933 MHz	DDR4 3200/2933/ 2666 MHz RDIMM, Intel Optane DCPMM	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 3200/2933/ 2666 MHz RDIMM, Intel Optane DCPMM	DDR4 2933/2666/ 2400/2133 MHz RDIMM, Intel Optane DCPMM	DDR4 3200/ 2933/2666 MHz RDIMM
	Max. Capacity	128 GB REG DIMM	1 TB REG DIMM	256 GB REG DIMM	192 GB REG DIMM	768 GB REG DIMM	1 TB REG RDIMM	768 GB REG DIMM	512GB REG DIMM
	Socket	4 x 288-pin DIMM	16 x 288-pin DIMM	8 x 288-pin DIMM	6 x 288-pin DIMM	6 x 288-pin DIMM	8 x 288-pin DIMM	6 x 288-pin DIMM	8 x 288-pin DIMM
Graphics	Controller	AST 2600	AST2510/ AST2500	AST1400/ AST2400	AST1400/ AST2400	AST2510/ AST2500	AST2510/ AST2500	AST2510/ AST2500	AST2500
	VRAM	DDR4 4Gb	DDR4 4Gb	DDR3 64MB	DDR3 64MB	DDR4 4Gb	DDR4 4Gb	DDR4 4Gb	DDR4 4Gb
Ethernet	Interface	Gigabit Ethernet	Gigabit Ethernet	Gigabit Ethernet	Gigabit Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit & 10GBase-T Ethernet	Gigabit & 10GBase-T Ethernet
	Controller	1 x Intel® I350AM4	1 x Intel® I350AM4	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® X550-AT2 1 x Realtek 8201F	2 x Intel® I210AT 1 x Intel® X557-AT2	2 x Intel® I210AT 1 x Intel® X550-AT2 1 x Realtek 8201F
	Connector	RJ-45 x 5 (1 dedicated for IPMI)	RJ-45 x 5 (1 dedicated for IPMI)	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 5 (1 dedicated for IPMI)	RJ-45 x 4 (1 shared with IPMI)	RJ-45 x 5 (1 dedicated for IPMI)
TPM		Optional	Optional	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	600 MB/s	600 MB/s	600 MB/s
	Channel	3	4	8	9	9	8	9	9
Rear I/O	VGA/DVI/ HDMI/DP	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –
	Ethernet	4	4	2	2	4 (T2 SKU)	4 (T2 SKU)	4 (T2 SKU)	4 (T2 SKU)
	USB	2 (USB 3.2 Gen2)	2 (USB 3.2 Gen1)	4 (USB 3.2 Gen1) 2 (USB 2.0)	4 (USB 3.2 Gen1)	4 (USB 3.2 Gen1) 2 (USB 2.0)	4 (USB 3.2 Gen1) 2 (USB 2.0)	2 (USB 3.2 Gen1)	2 (USB 3.2 Gen1)
	Serial	1 (RS-232)	1 (RS-232)	1 (RS-232)	–	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)
	PS/2	–	–	2	–	–	–	–	–
Onboard I/O	USB	2 (USB 3.2 Gen1) 1 (USB 3.2 Gen2 Type A)	2 (USB 3.2 Gen1) 2 (USB 3.0 Gen1 Type A)	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) 4 (USB 2.0) 1 (USB 2.0 Type A)	2 (USB 3.2 Gen1) 1 (USB 3.2 Gen1 Type A)
	Audio	–	–	1	1	1	1	1	–
	Serial	1	1	1	1	1	1	1	1
	SATA	3	4 (in 1 x SFF-8643)	8	9	8	8	8	9
Watchdog Timer	Output	System reset	System reset	System reset	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/ min	Programmable, 1 ~ 255 sec/ min	Programmable, 1 ~ 255 sec/ min	Programmable, 1 ~ 255 sec/ min	Programmable, 1 ~ 255 sec/ min	Programmable, 1 ~ 255 sec

✓: supported, – : not supported, △ : optional

Industrial Server Boards

Model	☞ ASMB-913	☞ ASMB-923	☞ ASMB-925	☞ ASMB-935	☞ ASMB-975	☞ ASMB-976
Form Factor	EATX	EATX	EATX	EATX	Proprietary	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	Intel® Xeon® 3rd 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	2 x socket LGA 4189-P+
Max. Speed	3.5 GHz	3.5 GHz	3.6 GHz	3.6 GHz	3.6 GHz	3.7 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	UPI 11.2 GT/s
L3 Cache	30 MB	30 MB	38.5 MB	38.5 MB	38.5 MB	42MB
Chipset	Intel® C612	Intel® C612	Intel® C620	Intel® C620	Intel® C620	Intel® C621A
BIOS	AMI 128 Mbit, SPI	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI	AMI SPI 256 Mbit
Expansion Slot – PCI	–	–	1	–	–	–
PCIe x 16	4 (1 for PME)	4	5	5	4	4
PCIe x 8	–	2	1	1	1	7
PCIe x 4	–	1	–	–	4	–
M.2	–	–	–	1 x M.2 2280 (PCIe/SATA)	2 x M.2 2242 (SATA)	1 x M.2 2280 (PCIe/SATA) 1 x M.2 2280 (PCIe)
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	DDR4 3200/2933/2666 MHz RDIMM, Intel Optane DCPMM
Max. Capacity	512 GB REG DIMM	256 GB REG DIMM	1.5 TB REG DIMM	3 TB REG DIMM	1.5 TB REG DIMM	2 TB 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	16 x 288-pin DIMM
Graphics – Controller	AST1400/AST2400	AST1400/AST2400	AST2510/AST2500	AST2510/AST2500	AST2510/AST2500	AST2510/AST2500
VRAM	DDR3 64MB	DDR3 64MB	DDR4 4Gb	DDR4 4Gb	DDR4 4Gb	DDR4 4Gb
Ethernet – Interface	Gigabit Ethernet	Gigabit Ethernet	Gigabit & 10GBase-T 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	2 x Intel® I210AT 1 x Intel® X550-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)	RJ-45 x 5 1 x Realtek 8201F (1 dedicated for IPMI)
TPM	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	600 MB/s
Channel	8	10	8	10	14	10
Rear I/O – VGA/DVI/HDMI/DP	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –	1 / – / – / –
Ethernet	4	2	4 (T2 SKU)	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)	2 (USB 3.2 Gen1)
Serial	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)
PS/2	–	2	–	–	–	–
Onboard I/O – 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)	4 (USB 3.2 Gen1) 1 (USB 3.2 Gen1 Type A) 1 (USB 2.0 Type A)
Audio	1	1	1	1	1	1
Serial	1	1	1	1	1	1
SATA	8	10	8	10	12	10
Watchdog Timer – Output	System reset	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/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min	Programmable, 1 ~ 255 sec/min

✓: supported, – : not supported, △ : optional

Industrial Server Chassis

Height (1 U = 1.75")		Tower		
Model		☞ 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	USB 3.0	2	2	2
Interface	USB 2.0	–	2	–
Power Supply	Single Power Supply	250W	300W/500W	500W/1200W
	Redudant Power Supply	–	–	–
Miscellaneous	LED Indicators	System: Power, HDD, LAN1, LAN2, System Information	System: Power	System: Power
	Rear Panel	One DB-9 ports openings	Two DB-9 ports openings	Two USB ports 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)	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")

✓: supported, – : not supported, △ : optional

Industrial Server Chassis

Height (1U = 1.75")		1U			2U		
Model		☞ HPC-6120	☞ HPC-7120S	☞ HPC-7140	☞ HPC-6240	☞ HPC-7242	☞ HPC-7282
Form Factor Support		Proprietary	Micro ATX, ATX	Micro ATX, ATX	Proprietary	Micro ATX, ATX	Micro ATX, ATX
No. of slots / No. of full-height cards		4/2	1/1	1/1	8/8	3/3	7/0
Drive Bay	Slim ODD Bay	–	–	1	1 (Ultra Slim)	1	1
	5.25" (front-accessible)	–	–	–	–	–	–
	3.5" (hot-swappable)	–	–	4 (3.5" / 2.5")	–	4 (3.5" / 2.5")	8
	3.5" (internal)	–	–	–	–	–	2
	2.5" (hot-swappable)	2	2 (HPC-7120S-35ZXE only)	–	4	–	Optional
	2.5" (internal)	–	2	–	–	2	–
Cooling	Chassis Fan	3 (4cm/34CFM) 2 (4cm/23CFM)	3 (4 cm/23.1 CFM)	4 (4cm / 23 CFM)	3 (8cm/ 132CFM) 1 (6cm/ 75CFM)	1 (8 cm/47CFM) 2 (6 cm/28CFM)	3 (8cm / 52.6 CFM)
	Air Filter	–	–	–	–	Yes	–
Front I/O	USB 3.0	2	2	-	2	2	–
	USB 2.0	-	-	2	–	–	2
Power Supply	Single Power Supply	500W/650W	350W/850W	350W/500W	–	350W/500W	500W/850W
	Redudant Power Supply	650W (optional)	–	–	1200W	550W	550W/800W
Miscellaneous	LED Indicators	System: Power, Information, LAN1, LAN2, LAN3, LAN4 HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, System Information. HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, System Information. HDD Tray: HDD Power and Activity LED	System: Power, Information, LAN1, LAN2, LAN3, LAN4 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, System Information. HDD Tray: HDD Power and Activity LED
	Rear Panel	–	–	–	–	Two DB-9 ports openings	–
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °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)	-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	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	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 44 x 480 mm (17.24" x 1.73" x 18.9")	438 x 43 x 381 mm (17.24" x 1.7" x 15")	437 x 43 x 504mm (17.2" x 1.7" x 19.85")	438 x 88 x 523 mm (17.24" x 3.46" x 20.59")	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")

✓: supported, – : not supported, △ : optional

Height (1U = 1.75")		3U/Tower	4U			
Model		☞ HPC-7320	☞ HPC-7420	☞ HPC-7442	☞ HPC-7484	☞ HPC-7485
Form Factor Support		Micro ATX, ATX, EATX	ATX, EATX, EE-ATX	Micro ATX, ATX, EATX	Micro ATX, ATX, EATX	ATX, EATX, EE-ATX
No. of slots / No. of full-height cards		7/6	11/11	7/7	7/7	11/11
Drive Bay	Slim ODD Bay	1	1	1	1	1
	5.25" (front-accessible)	–	–	–	–	–
	3.5" (hot-swappable)	2 (3.5" / 2.5")	–	4 can upgrade to 8 (3.5" / 2.5")	8 (3.5" / 2.5")	8 (3.5" / 2.5")
	3.5" (internal)	2	2	1	–	–
	2.5" (hot-swappable)	–	2 (optional)	–	–	–
	2.5" (internal)	–	2 (optional)	–	1	2
Cooling	Chassis Fan	2 (8cm/57CFM) 1 (6cm/27.72CFM)	3 (12cm /238 CFM) for HPC-7420-12ZX 3 (8cm /57 CFM) for HPC-7420-85ZX	1 (12cm /114 CFM) 1 (8cm/55 CFM)	2 (12cm /150.33 CFM)	3 (12cm /238 CFM) for HPC-7485-20RX 3 (12cm /232 CFM) for HPC-7485-12RX
	Air Filter	Yes	Yes	Yes	Yes	–
Front I/O	USB 3.0	2	–	2	2	2
	USB 2.0	–	–	–	–	–
Power Supply	Single Power Supply	500W/850W	850W/1200W	500W/700W	700W/1200W	–
	Redudant Power Supply	550W/800W	1200W (optional)	500W	–	1200W/2000W
Miscellaneous	LED Indicators	System: Power, HDD, LAN1, LAN2 HDD Tray: HDD Power and Activity LED	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, System Information HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, System Information HDD Tray: HDD Power and Activity LED
	Rear Panel	Two DB-9 ports openings	LED panel and two USB openings	Five DB-9 ports and one 68-pin SCSI openings	Five DB-9 ports and one 68-pin SCSI openings	Two DB-9 ports, two PS/2 and two USB openings
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 50 °C (32 ~ 122 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °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)	-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	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	10 ~ 95% @ 60 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
Physical Characteristics	Dimensions (W x H x D)	426.4 x 132.2 x 480 mm (16.79" x 5.2" x 18.9")	438 x 177 x 450mm (17.24" x 6.97" x 17.7")	426 x 177 x 600 mm (16.7" x 7.0" x 23.6")	426 x 177 x 630mm (16.7" x 7.0" x 24.8")	435 x 176 x 660mm (17.1" x 6.9" x 25.9")

✓: supported, – : not supported, △ : optional

Industrial Server Chassis

Height (1U = 1.75")		1U		2U			3U	4U
Model		☞ HPC-8104	☞ HPC-8108	☞ HPC-8208	☞ HPC-8212	☞ HPC-8224	☞ HPC-8316	☞ HPC-8424
Form Factor Support		Micro ATX, ATX	ATX, EATX	ATX, EATX	Micro ATX, ATX, EATX	ATX, EATX	Micro ATX, ATX	ATX, EATX
No. of slots / No. of full-height cards		1/0	1/0	7/0, 3/3	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	1	–	–	–	–
	5.25" (front-accessible)	–	–	–	–	–	–	–
	3.5" (hot-swappable)	4 x SAS3 or SATA	–	8 x SAS3/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)	–	2	–	–	–	–
	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)	3 (8cm)	4 (8cm)	4 (8cm)	4 (8cm)	4 (8cm)
	Air Filter	–	–	–	–	–	–	–
Front I/O Interface	USB 3.0	2	–	2	–	–	2	–
	USB 2.0	–	1	–	2	2	–	2
Power Supply	Single Power Supply	500W	800W	850W	–	–	–	–
	Redudant Power Supply	650W	650W	550W, 800W	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	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 ~ 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)
	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)	-40 ~ 60 °C (-40 ~140 °F)
	Operating Humidity	10 ~ 95% @ 40 °C non-condensing	10 ~ 95% @ 35 °C non-condensing	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
	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	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 x 620mm (17.25" x 3.46" x 24.4")	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")

✓: supported, – : not supported, △ : optional