

Eagle Eyes-AIHD-P4E

6th/7th Generation Intel® Xeon® E3/Core™ S Series (FCLGA1151 Socket) DIN Rail Box Computer



Features

- 6th/7th gen Intel® platform (formerly Skylake/Kaby Lake), Xeon® E3/Core™ S i7, i5, i3, Pentium® and Celeron® processor
- Supports LGA1151 socket desktop processor up to 35W
- Intelligent eKit with AI function to monitor system health via DDM
- Special Power Design:
 - Wide voltage 9~36V DC input
 - RVP/OVP/UVI/OCV support
 - Surge protection: 200V/1ms
 - Power ignition control
- Easy Expansion & Installation:
 - One side bezel access and easy cable management
 - Remote on/off power switch with LED
 - Easily replaceable RTC battery holder
 - 3x SIM push-push slots

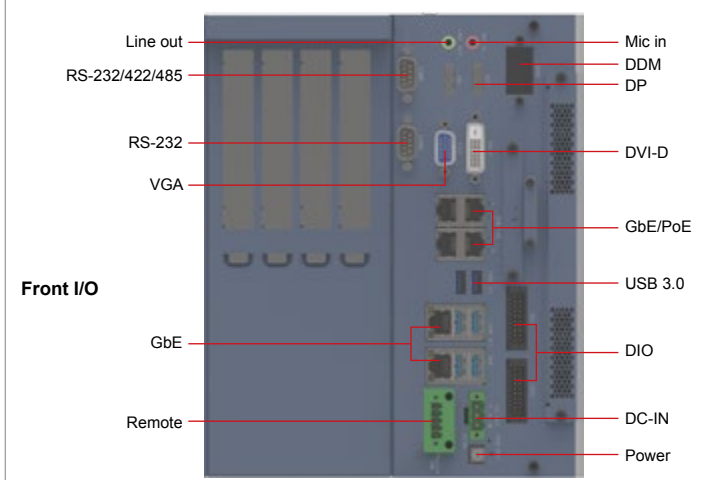


Specifications

System	
CPU	6th/7th gen Intel® Xeon® E3/Core™ S (formerly Skylake/Kaby Lake) LGA1151 socket type CPU (supports TDP up to 35W)
Chipset	Intel®C236 Chipset
Memory	2x DDR4 SO-DIMM Max. 64GB (Skylake: DDR4-2133; Kaby Lake: DDR4-2400)
Graphics	Xeon®: HD Graphics P530 (Skylake)/P630 (Kaby Lake) Core™ i Series: HD Graphics 530 (Skylake)/630 (Kaby Lake) Pentium®/Celeron®: HD Graphics 510 (Skylake)/610 (Kaby Lake)
BIOS	AMI 128Mbit SPI BIOS
AI Controller (AIC)	AI for system monitoring and predictive analysis
Watchdog Timer	Runtime: 10 – 65535 seconds Powerup: 120 – 65535 seconds
TPM (optional)	SLB9665 (TPM 2.0) / SLB9635 (TPM 1.2)
Power	
DC Input	9~36VDC
Surge Protection	200V/1ms
Power in Protection	Reverse-Voltage, Over-Voltage, Under-Voltage, Over-Current
Remote/Ignition	1x ATX power on/off switch, 5-pin terminal block including 3-pin remote control and 2-pin ignition signals (pitch 3.81 mm)
Power Mode	AT/ATX (BIOS setting)
Mechanical	
Dimensions (WxDxH)	199(W) x 206(D) x 243(H) mm (7.83" x 8.11" x 9.57")
Weight (net/gross)	6.8kg
Mounting	DIN rail mount, wall mount bracket and foot stand
Construction	Aluminum and metal chassis with fanless design
Battery	Easily replaceable RTC battery holder
Dynamic Display Module (DDM)	0.96 inch LCM work with AIC to display system status
External IO	
Display Ports / Resolution	2x DP /4096x2304@60Hz 1x DVI-D/1920x1200@60Hz 1x VGA/1920x1200@60Hz
Triple Display	2x DP + 1x DVI-D
Ports Combinations	2x DP + 1x VGA 1x DP + 1x DVI-D + 1x VGA
Ethernet	Wake-on-LAN and PXE/ i219 supports iAMT 11.0 6x RJ45 GbE (1x Intel® i219+ 5x Intel® i210) AIHD(S)-P4E1/P4E2 2x RJ45 GbE (1x Intel® i219+ 1x Intel® i210) AIHDP(S)-P4E1/P4E2
PoE (optional)	802.3at support up to 30W 4x RJ45 GbE PoE+ (Intel® i210) AIHDP(S)-P4E1/P4E2
Digital I/O	32-bit programmable DIO (AIHD(S)-P4E1/P4E2, AIHDP(S)-P4E1/P4E2) 16-bit programmable DIO, isolated 8-bit DI & 8-bit DO, sink/source mode, 5~48V, 100mA (AIHD(S)-P4E1-i/P4E2-i, AIHDP(S)-P4E1-i/P4E2-i) 16-bit isolated DI & 16-bit isolated DO, sink/source mode, 5~48V, 100mA (AIHD(S)-P4E1-i2, AIHDP(S)-P4E1-i2)

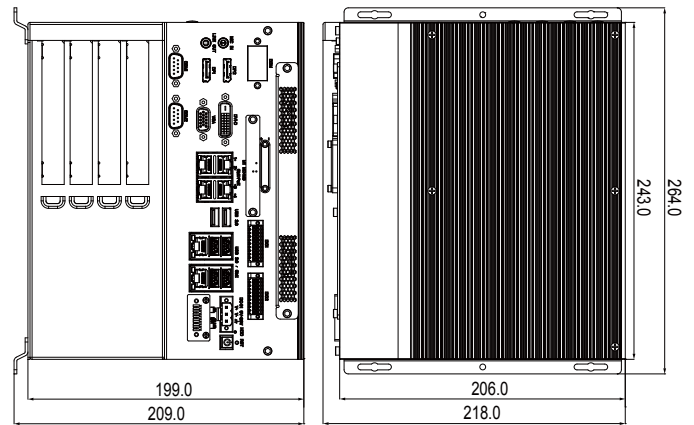
USB 3.0/2.0	6x USB 3.0 ports via native XHCI controller (0.9A each port)
COM	1x RS-232/422/485 (auto flow control), 1x RS-232 port
Audio	ALC892 HD audio codec, Mic in, Line out
SIM	3x SIM push-push slots
Storage	
Internal Drive Bay	3x internal SATA port for 2.5" HDD/SSD
mSATA	3x full length mSATA (muxed with Mini-PCIe)
Removable Drive Bay	NA
RAID Mode	RAID 0/1/5
Expansion Slot	
Mini-PCIe	3x full length Mini-PCIe (muxed with mSATA, auto detection)
PCI / PCIe	1x PCIe x16 + 3x PCI (AIHD(S)-GP4E1/GP4E1-i/GP4E1-i2, AIHDP(S)-GP4E1/GP4E1-i/GP4E1-i2) 1x PCIe x16 + 1x PCIe x4 (AIHD(S)-GP4E2/GP4E2-i/GP4E2-i2, AIHDP(S)-GP4E2/GP4E2-i/GP4E2-i2)
Other	
USB 2.0 Dongle	Internal 1x USB 2.0 for dongle security key
Antenna	4x antenna openings
LED	Power status, HDD status, IO status
Environment	
Operating Temperature	Standard: -20°C to 50°C (-4°F~122°F), supports 35W TDP CPU Extended temperature: -25°C to 70°C (-13°F~158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	95% @ 40°C (104°F), non-condensing
Vibration During Operation	5Grms with SSD (IEC60068-2-64: random 5~500Hz)
Shock During Operation	50Grms with SSD (IEC60068-2-27: Half Sine, 11ms duration)
Certification	
EMC	CE/FCC Class A
Safety Certifications	CB
OS Support	
Windows	Windows 7 32-bit/64-bit (Skylake only) Windows 8.1 32-bit/64-bit (Skylake only) Windows Embedded Standard 7 (Skylake only) Windows Embedded 8 Standard (Skylake only) Windows 10 64-bit Windows 10 IoT
Linux	Linux

I/O Interfaces



Dimensions

Units: mm



I/O Comparison Chart

Model Name	DP	DVI-D	VGA	GbE (RJ45)	GbE / PoE (RJ45)	DIO	USB 3.0	RS-232	RS-232 / 422 / 485	Internal 2.5" Disk Bay	Expansion Slot
AIHD(S)-P4E1				6	0	32-bit DIO					1x PCIe x16, 3x PCI
AIHD(S)-P4E1-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					
AIHD(S)-P4E1-i2						isolated 16-bit DI & 16-bit DO					1x PCIe x16, 1x PCIe x4
AIHDP(S)-P4E1				2	4	32-bit DIO					
AIHDP(S)-P4E1-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					3
AIHDP(S)-P4E1-i2	2	1	1			isolated 16-bit DI & 16-bit DO	6	1	1		
AIHD(S)-P4E2				6	0	32-bit DIO					3
AIHD(S)-P4E2-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					
AIHD(S)-P4E2-i2						isolated 16-bit DI & 16-bit DO					1x PCIe x16, 1x PCIe x4
AIHDP(S)-P4E2				2	4	32-bit DIO					
AIHDP(S)-P4E2-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					3
AIHDP(S)-P4E2-i2						isolated 16-bit DI & 16-bit DO					

Ordering Information

	Model Name	Article Number (A/N)
Barebone System with Fan Kit	AIHD-P4E1	04071
	AIHD-P4E1-i	04072
	AIHD-P4E1-i2	04073
	AIHDP-P4E1	04281
	AIHDP-P4E1-i	04282
	AIHDP-P4E1-i2	04283
	AIHD-P4E2	04141
	AIHD-P4E2-i	04142
	AIHD-P4E2-i2	04143
	AIHDP-P4E2	04351
	AIHDP-P4E2-i	04352
	AIHDP-P4E2-i2	04353
Barebone System without Fan Kit	AIHDS-P4E1	04106
	AIHDS-P4E1-i	04107
	AIHDS-P4E1-i2	04108
	AIHDS-P4E2	04176
	AIHDS-P4E2-i	04177
	AIHDS-P4E2-i2	04178
	AIHDS-P4E1	04316
	AIHDS-P4E1-i	04317
	AIHDS-P4E1-i2	04318
	AIHDS-P4E2	04386
	AIHDS-P4E2-i	04387
	AIHDS-P4E2-i2	04388

CPU (Optional)

6th Gen Skylake

E3-1268Lv5	Xeon® E3-1268L v5 (4 cores/8 threads, 2.4 GHz/3.4 GHz, 8MB cache, 35W TDP)
i7-6700TE	Core™ i7-6700TE (4 cores/8 threads, 2.4 GHz/3.4 GHz, 8MB cache, 35W TDP)
i5-6500TE	Core™ i5-6500TE (4 cores/4 threads, 2.3 GHz/3.3 GHz, 6MB cache, 35 W TDP)
i3-6100TE	Core™ i3-6100TE (2 cores/4 threads, 2.7 GHz, 4MB cache, 35 W TDP)
G4400TE	Pentium® G4400TE (2 cores/2 threads, 2.4 GHz, 3MB cache, 35 W TDP)
G3900TE	Celeron® G3900TE (2 cores/2 threads, 2.3 GHz, 2MB cache, 35 W TDP)

7th Gen Kaby Lake

i7-7700T	Core™ i7-7700T (4 cores/8 threads, 2.9 GHz/3.8 GHz, 8MB cache, 35W TDP)
i5-7500T	Core™ i5-7500T (4 cores/4 threads, 2.7 GHz/3.3 GHz, 6MB cache, 35W TDP)
i3-7101TE	Core™ i3-7101TE (2 cores/4 threads, 3.4 GHz, 3MB cache, 35W TDP)

Optional Accessories

Isolated Module

iDIO-8I8O	8-bit isolated DI & 8-bit isolated DO module
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Other Accessories

AC-DC Power Adapter	AC-DC power adapter with pitch 5.0mm 3-pin terminal block plug
ADT-24V60-T3A	24V/60W
ADT-24V90-T3A	24V/90W
ADT-24V120-T3A	24V/120W
ADT-24V160-T3A	24V/160W
ADT-24V220-T3A	24V/220W
ADT-24V280-T3A	24V/280W
AC Power Cord	H05VV-F 3G 0.75mm ² , 1.8m, 250V, 10A
PCBL-B12	YP12-YC12: category B type plug, TW/JP/US/CA/TH/PH/Central America
PCBL-D03	YP03-YC12: category D type plug, CN
PCBL-D35	YP35-YC12: category D type plug, AU/NZ
PCBL-G22	YP22-YC12: category G type plug, DE
PCBL-I61	YP61-YC12: category I type plug, UK/HK/MO/SG/MY
SO-DIMM Memory	DDR4-2133/2400 2GB/4GB/8GB/16GB/32GB
SSD	mSATA SSD: 16GB/32GB/64GB/128GB/256GB/512GB/1TB
	2.5 inch SSD: 16GB/32GB/64GB/128GB/256GB/512GB/1TB
	2.5 inch HDD: 500GB/1TB/1.5TB/2TB
Wireless Module	Mini-PCIe wireless module for 3G/4G LTE/Wi-Fi/BT/NB-IoT/GPS/BDS
Cable & Connector	
CBL-S01	SATA (Data + Power) cable x1
TBP5-S03	3-Pin, pitch5.0mm Female Terminal Block Plug for DC input x1
TBP3-S05	5-Pin, pitch3.81mm Female Terminal Block Plug for remote connector x1
TBP3-D20	2x10-Pin, pitch2.54mm Female Terminal Block Plug for DIO connector x1
Mounting Kit	
WBK-AIH	Wall mount bracket x2 with M3x6 screws x6
UTA-159	Phoenix Contact DIN Rail Clip with M3x6 screws x6

Cable & Connector

CBL-S01	SATA (Data + Power) cable x1
TBP5-S03	3-Pin, pitch5.0mm Female Terminal Block Plug for DC input x1
TBP3-S05	5-Pin, pitch3.81mm Female Terminal Block Plug for remote connector x1
TBP3-D20	2x10-Pin, pitch2.54mm Female Terminal Block Plug for DIO connector x1

Mounting Kit

WBK-AIH	Wall mount bracket x2 with M3x6 screws x6
UTA-159	Phoenix Contact DIN Rail Clip with M3x6 screws x6

Packing List

Item No.

1	Eagle Eyes Embedded Box PC AIHD-P4E x1
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