

# Eagle Eyes-AIH-EP

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



## I/O Comparison Chart

Model Name	DP	DVI	VGA	GbE (RJ45)	GbE / PoE (RJ45)	DIO	USB 3.0	RS-232	RS-232 / 422 / 485	Internal 2.5" Disk Bay	Expansion Slot
AIH-EP1	2	1	1	2	4	16-bit DIO	6	4	2	3	1x PCIe x16, 1x PCI
AIH-EP2	2	1	1	2	4	16-bit DIO	6	4	2	3	1x PCIe x16, 1x PCIe x4
AIH-EP3	2	1	1	2	4	16-bit DIO	6	4	2	3	2x PCI
AIH-EP1-i	2	1	1	2	4	8-bit isolated DI & 8-bit isolated DO	6	4	2	3	1x PCIe x16, 1x PCI
AIH-EP2-i	2	1	1	2	4	8-bit isolated DI & 8-bit isolated DO	6	4	2	3	1x PCIe x16, 1x PCIe x4
AIH-EP3-i	2	1	1	2	4	8-bit isolated DI & 8-bit isolated DO	6	4	2	3	2x PCI

## Specifications

<b>System</b>	
<b>CPU</b>	6th/7th Gen Intel® Xeon® E3/Core™ S (formerly Skylake/Kaby Lake) LGA1151 socket type CPU (supports TDP up to 35W)
<b>Chipset</b>	Intel®C236 Chipset
<b>Memory</b>	2x DDR4 SO-DIMM Max. 64GB (Skylake: DDR4-2133; Kaby Lake: DDR4-2400)
<b>Graphic</b>	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)
<b>BIOS</b>	AMI 128Mbit SPI BIOS
<b>AI Controller (AIC)</b>	AI for system monitoring and predictive analysis
<b>Watchdog Timer</b>	Runtime: 10 – 65535 seconds Powerup: 120 – 65535 seconds
<b>TPM (optional)</b>	SLB9665 (TPM 2.0) / SLB9635 (TPM 1.2)
<b>Power</b>	
<b>DC Input</b>	9–36VDC
<b>Surge Protection</b>	200V/1ms
<b>Power in Protection</b>	Reverse-Voltage, Over-Voltage, Under-Voltage, Over-Current
<b>Remote/Ignition</b>	1x ATX power on/off switch, 5-pin terminal block including 3-pin remote control and 2-pin ignition signals (pitch 3.81 mm)
<b>Power Mode</b>	AT/ATX (BIOS setting)
<b>Mechanical</b>	
<b>Dimensions (W x D x H)</b>	260(W) x 206(D) x 124.4(H) mm (10.24" x 8.11" x 4.90")
<b>Weight (net/gross)</b>	5.3kg
<b>Mounting</b>	Foot stand; wall mount bracket (optional)
<b>Construction</b>	Aluminum and metal chassis with fanless design
<b>Battery</b>	Easily replaceable RTC battery holder
<b>Dynamic Display Module (DDM)</b>	0.96 inch LCM work with AIC to display system status
<b>External IO</b>	
<b>Display Ports / Resolution</b>	2x DP /4096x2304@60Hz 1x DVI/1920x1200@60Hz 1x VGA/1920x1200@60Hz
<b>Triple Display Ports Combinations</b>	2x DP + 1x DVI 2x DP + 1x VGA 1x DP + 1x DVI + 1x VGA
<b>Ethernet</b>	2x RJ45 GbE (Intel®i219 + Intel®i210) / Wake-on-LAN and PXE/i219 supports iAMT 11.0
<b>PoE</b>	4x RJ45 GbE PoE+ (Intel®i210) 802.3at support up to 30W
<b>USB 3.0/2.0</b>	6x USB 3.0 ports via native XHCI controller (0.9A each port)
<b>COM</b>	2x RS-232/422/485 (auto flow control), 4x RS-232 port
<b>Digital I/O</b>	16-bit programmable DIO (AIH-EP) 8-bit isolated DI & 8-bit isolated DO, Sink/Source Mode, 5–48V, 100mA (AIH-EP-i)
<b>Audio</b>	ALC892 HD Audio Codec, Mic in, Line out
<b>SIM</b>	3x SIM push-push slots

## 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/UVP/OC support
  - Surge protection: 200V/1ms
  - Power ignition control
- Easy Expansion & Installation:
  - IOM1/IOM2: various I/O function modules available
  - Remote on/off power switch with LED
  - Easily replaceable RTC battery holder
  - 3x SIM push-push slots

## Storage

<b>Internal Drive Bay</b>	3x internal SATA port for 2.5" HDD/SSD
<b>mSATA</b>	3x full length mSATA (muxed with Mini-PCIe)
<b>Removable Drive Bay</b>	NA
<b>RAID Mode</b>	RAID 0/1/5

## Expansion slot

<b>Mini-PCIe</b>	3x full length Mini-PCIe (muxed with mSATA, auto detection)
<b>IOM1/IOM2 (optional)</b>	Supports IOM1/IOM2 module
<b>PCI / PCIe</b>	AIH-EP1: 1x PCIe x16 + 1x PCI (PCI slot can't concurrent with IOM2) AIH-EP2: 1x PCIe x16 + 1x PCI x4 (PCIe x4 slot can't concurrent with IOM2) AIH-EP3: 2x PCI

## Other

<b>USB 2.0 Dongle</b>	Internal 1x USB 2.0 for dongle security key
<b>Antenna</b>	4x antenna openings
<b>LED</b>	Power status, HDD status, IO status

## Environment

<b>Operating Temperature</b>	Standard: -20°C to 50°C (-4°F~122°F), supports CPU TDP up to 35W Extended temperature: -25°C to 70°C (-13°F~158°F) (For more information, please contact your representative)
<b>Storage Temperature</b>	-40°C to 85°C (-40°F to 185°F)
<b>Relative Humidity</b>	95% @ 40°C (104°F), non-condensing
<b>Vibration During Operation (IEC60068-2-64: Random 5~500Hz)</b>	5Grms with SSD; 1Grms with HDD
<b>Shock During Operation (IEC60068-2-27: Half Sine, 11ms Duration)</b>	50Grms with SSD; 20Grms with HDD

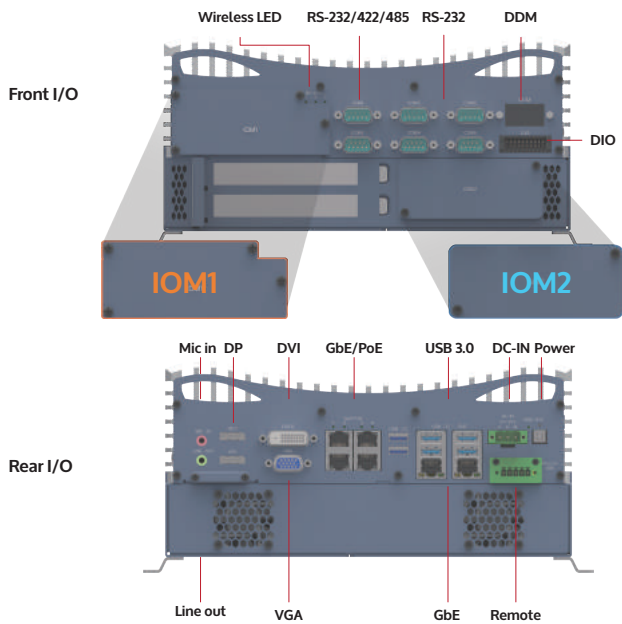
## Certification

<b>EMC</b>	CE/FCC Class A
<b>Safety Certifications</b>	CB

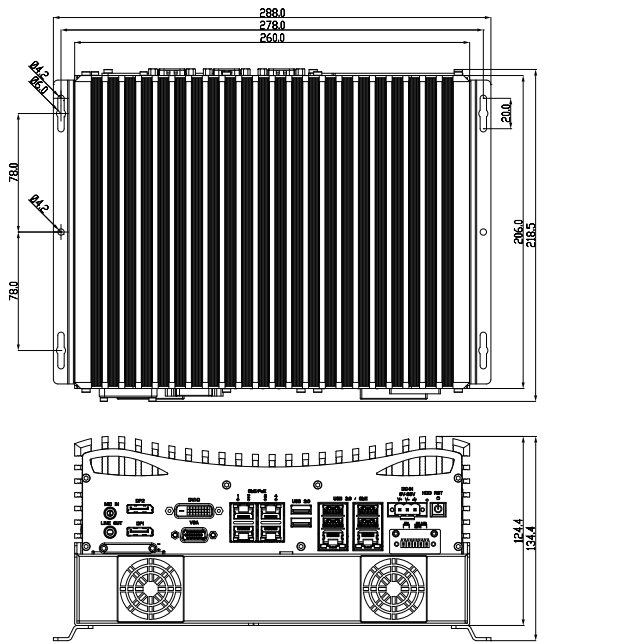
## OS Support

<b>Optional OS Installation</b>	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
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### I/O Interfaces



### Dimensions



### Ordering Information

**Remark: Following models include 6th/7th Gen Intel® Skylake S/Kaby Lake S (SKL-S/KBL-S) platform, LGA 1151 socket desktop CPU, 2x DP, 1x DVI, 1x VGA, 2x GbE (RJ45), 4x GbE/PoE (RJ45), 6x USB 3.0, 2x RS-232/422/485, 4x RS-232, 3x internal SATA port for 2.5" HDD/SSD**

Model Name		
AIH-EP1	Barebone System	16-bit DIO, 1x PCIe x16, 1x PCI
AIH-EP2	Barebone System	16-bit DIO, 1x PCIe x16, 1x PCIe x4
AIH-EP3	Barebone System	16-bit DIO, 2x PCI
AIH-EP1-i	Barebone System	8-bit isolated DI & 8-bit isolated DO, 1x PCIe x16, 1x PCI
AIH-EP2-i	Barebone System	8-bit isolated DI & 8-bit isolated DO, 1x PCIe x16, 1x PCIe x4
AIH-EP3-i	Barebone System	8-bit isolated DI & 8-bit isolated DO, 2x PCI

#### CPU (Optional)

6th Gen Skylake	
E3-1268Lv5	Xeon® E3-1268Lv5 (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

IOM1 Module		
	IOM1-4GR	4x RJ45 GbE
	IOM1-4GRP	4x RJ45 GbE with PoE (30.4W each port)
	IOM1-4GM	4x M12 GbE
	IOM1-4GMP	4x M12 GbE with PoE (30.4W each port)
	IOM1-4U3	4x USB 3.0
	IOM1-2SFP+	2x 10GbE Fiber ethernet
IOM2 Module		
	IOM2-4GR	4x RJ45 GbE
	IOM2-4GRP	4x RJ45 GbE with PoE (30.4W each port)
	IOM2-4GM	4x M12 GbE
	IOM2-4GMP	4x M12 GbE with PoE (30.4W each port)
	IOM2-2SFP+	2x 10GbE Fiber ethernet
Isolated Module		
iDIO-8I8O	8-bit isolated DI & 8-bit isolated DO module	

### Other Accessories

AC-DC Power Adapter	
ADT-24V60-T3A	24V/60W AC-DC power adapter with pitch 5.08mm 3-pin terminal block plug
ADT-24V90-T3A	24V/90W AC-DC power adapter with pitch 5.08mm 3-pin terminal block plug
ADT-24V120-T3A	24V/120W AC-DC power adapter with pitch 5.08mm 3-pin terminal block plug
ADT-24V160-T3A	24V/160W AC-DC power adapter with pitch 5.08mm 3-pin terminal block plug
ADT-24V220-T3A	24V/220W AC-DC power adapter with pitch 5.08mm 3-pin terminal block plug
ADT-24V280-T3A	24V/280W AC-DC power adapter with pitch 5.08mm 3-pin terminal block plug
AC Power Cord	
PCBL-B12	YP12-YC12:category B type plug, H05VV-F 3G 0.75mm2, 1.8m, 250V, 10A, TW/JP/US/CA/TH/PH/Central America
PCBL-D03	YP03-YC12:category D type plug, H05VV-F 3G 0.75mm2, 1.8m, 250V, 10A, CN
PCBL-D35	YP35-YC12:category D type plug, H05VV-F 3G 0.75mm2, 1.8m, 250V, 10A, AU/NZ
PCBL-G22	YP22-YC12:category G type plug, H05VV-F 3G 0.75mm2, 1.8m, 250V, 10A, DE
PCBL-I61	YP61-YC12:category I type plug, H05VV-F 3G 0.75mm2, 1.8m, 250V, 10A, 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	
CBL-S01	SATA (Data + Power) cable x1
TBP5-S03	3-Pin, pitch5.08mm 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, pitch3.5mm Female Terminal Block Plug for DIO Connector x1
Mounting Kit	
WBK-AIH	Wall Mount Bracket x2 with M3x6 screws x6

### Packing List

Item No.	
1	Eagle Eyes Embedded Box PC AIH-EP x1
2	Rubber Foot x4 with M3x6 screws x6

\* Please contact sales representative