

Eagle Eyes-AIHD-GP4E

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
- Wi-Fi and Wireless Communication: 4G, WLAN, GPS, GSM/GPRS, and Bluetooth
- Special Power Design:
 - Wide voltage 9~36V DC input
 - RVP/OVP/UV/OC/PC 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 sockets



DDM



Multi-LAN



Multi-USB



RS-232/422/485



4K Support



4K Support



Wide Range DC Input 9~36V



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Wide Range DC Input 9~36V



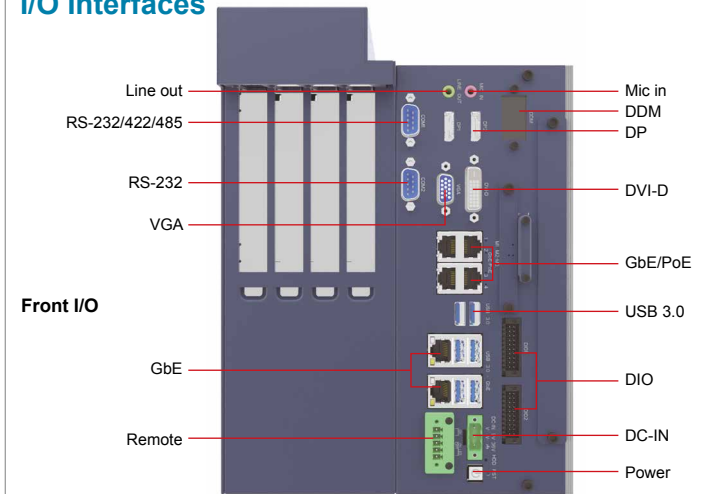
Wide Range Operating

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)	Infineon OPTIGA™ 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 273(H) mm (7.83" x 8.11" x 10.75")
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 Ports Combinations	2x DP + 1x DVI-D 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)-GP4E1/GP4E2 2x RJ45 GbE (1x Intel® i219+ 1x Intel® i210) AIHDP(S)-GP4E1/GP4E2
PoE (optional)	802.3at support up to 30W 4x RJ45 GbE PoE+ (Intel® i210) AIHDP(S)-GP4E1/GP4E2
Digital I/O	32-bit programmable DIO (AIHD(S)-GP4E1/GP4E2, AIHDP(S)-GP4E1/GP4E2) 16-bit programmable DIO, isolated 8-bit DI & 8-bit DO, sink/source mode, 5~48V, 100mA (AIHD(S)-GP4E1-i/GP4E2-i, AIHDP(S)-GP4E1-i/GP4E2-i) 16-bit isolated DI & 16-bit isolated DO, sink/source mode, 5~48V, 100mA (AIHD(S)-GP4E1-i2, AIHDP(S)-GP4E1-i2)

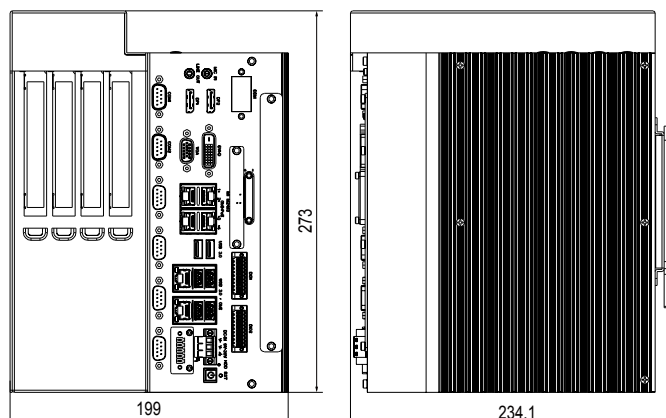
USB 3.0/2.0	6x USB 3.0 ports via native XHCI controller (0.9A each port)
COM	1x RS-232/422/485 (auto flow control), 1x RS-232 port
Audio	ALC892 HD audio codec, Mic in, Line out
SIM and USIM Socket	3x SIM Push-Push sockets—SIM supports 2G USIM supports 3 & 4G
Wi-Fi/Cellular	Supports Wi-Fi/LTE modules via 3x Mini PCIe interfaces
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)-GP4E1				6	0	32-bit DIO					1x PCIe x16, 3x PCI
AIHD(S)-GP4E1-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					
AIHD(S)-GP4E1-i2						isolated 16-bit DI & 16-bit DO					
AIHDP(S)-GP4E1				2	4	32-bit DIO					
AIHDP(S)-GP4E1-i	2	1	1			16-bit DIO, isolated 8-bit DI & 8-bit DO	6	1	1	3	
AIHDP(S)-GP4E1-i2											
AIHD(S)-GP4E2				6	0	32-bit DIO					1x PCIe x16, 1x PCIe x4
AIHD(S)-GP4E2-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					
AIHD(S)-GP4E2-i2						isolated 16-bit DI & 16-bit DO					
AIHDP(S)-GP4E2				2	4	32-bit DIO					
AIHDP(S)-GP4E2-i						16-bit DIO, isolated 8-bit DI & 8-bit DO					
AIHDP(S)-GP4E2-i2						isolated 16-bit DI & 16-bit DO					

Ordering Information

	Model Name	Article Number (A/N)
Barebone System with FAN kit	AIHD-GP4E1	04421
	AIHD-GP4E1-i	04422
	AIHD-GP4E1-i2	04423
	AIHD-GP4E2	04491
	AIHD-GP4E2-i	04492
Barebone System without FAN kit	AIHD-GP4E2-i2	04493
	AIHDS-GP4E1	04456
	AIHDS-GP4E1-i	04457
	AIHDS-GP4E1-i2	04458
	AIHDS-GP4E2	04526
	AIHDS-GP4E2-i	04527
	AIHDS-GP4E2-i2	04528

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)

PCIe x16GPU Card (Optional)

	Model Name	Article Number (A/N)
nVIDIA series	GeForce GTX 1050-3G	9981-1050
	GeForce GTX 1050Ti -4G	9981-1050Ti
	GeForce GTX 1060-6G	9981-1060
	GeForce GTX 1070-8G	9981-1070
	GeForce GTX 1080-8G	9981-1080
	GeForce GTX 1650-4G	9981-1650
	GeForce GTX 1660-6G	9981-1660
	GeForce GTX 1660Ti-6G	9981-1660Ti
	GeForce RTX 2060-6G	9981-2060
	GeForce RTX 2070-8G	9981-2070

Optional Accessories

Isolated Module

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

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 0.75mm², 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	1x SATA (Data + Power) cable
TBP5-S03	1x 3-Pin, pitch5.0mm Female Terminal Block Plug for DC input
TBP3-S05	1x 5-Pin, pitch3.81mm Female Terminal Block Plug for remote connector
TBP3-D20	1x 2x10-Pin, pitch2.54mm Female Terminal Block Plug for DIO connector

Mounting Kit

WBK-AIHD-GP4E	2x Wall mount bracket with 6x M3x6 screws
UTA-159	Phoenix Contact DIN Rail Clip with 6x M3x6 screws

Packing List

Item No.	
1	1x Eagle Eyes Embedded Box PC AIHD-GP4E