

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
- 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



DDM



Multi-LAN



Multi-USB



RS-232/422/485



4K Support



4K Support



Wide Range DC Input 9~36V



Wide Range DC Input 9~36V



Wide Range DC Input 9~36V



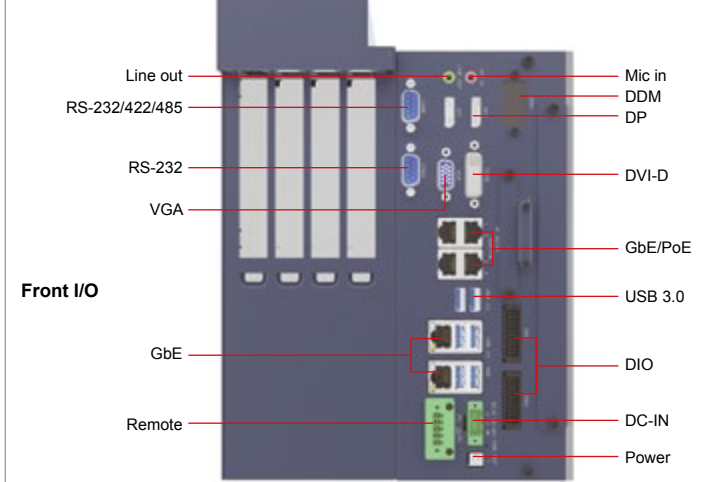
Wide Range Operating

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) | 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 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) |

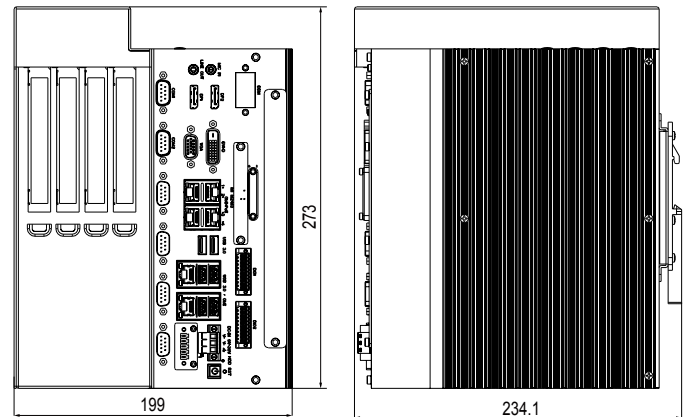
| | |
|-----------------------------------|---|
| USB 3.0/2.0 | 6x USB 3.0 ports via native XHCI controller (0.9A each port) |
| COM | 1x RS-232/422/485 (auto flow control), 1x RS-232 port |
| Audio | ALC892 HD audio codec, Mic in, Line out |
| SIM | 3x SIM push-push slots |
| Storage | |
| Internal 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)-GP4E1 | | | | 6 | 0 | 32-bit DIO | | | | | |
| 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 | | | | | 1x PCIe x16, 3x PCI |
| AIHDP(S)-GP4E1 | 2 | 1 | 1 | 2 | 4 | 32-bit DIO | 6 | 1 | 1 | 3 | |
| AIHDP(S)-GP4E1-i | | | | | | 16-bit DIO, isolated 8-bit DI & 8-bit DO | | | | | |
| AIHDP(S)-GP4E1-i2 | | | | | | isolated 16-bit DI & 16-bit DO | | | | | |
| AIHD(S)-GP4E2 | | | | 6 | 0 | 32-bit DIO | | | | | |
| 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 | | | | | 1x PCIe x16, 1x PCIe x4 |
| 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 0.75mm 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 |

Packing List

| Item No. | |
|----------|---|
| 1 | Eagle Eyes Embedded Box PC AIHD-GP4E x1 |