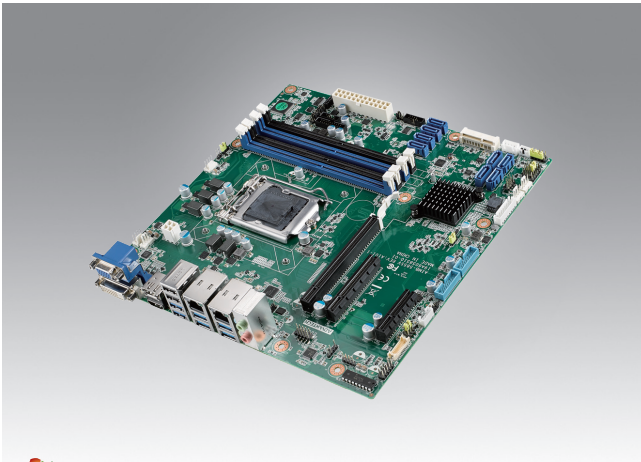


AIMB-585SV

Intel® Xeon® E3/ Core™ i7/i5/i3 LGA1151
MicroATX with DVI-D/HDMI/DP+/eDP/VGA,
2 COM, Dual LAN, 8 SATA III, 10 USB3.0



Features

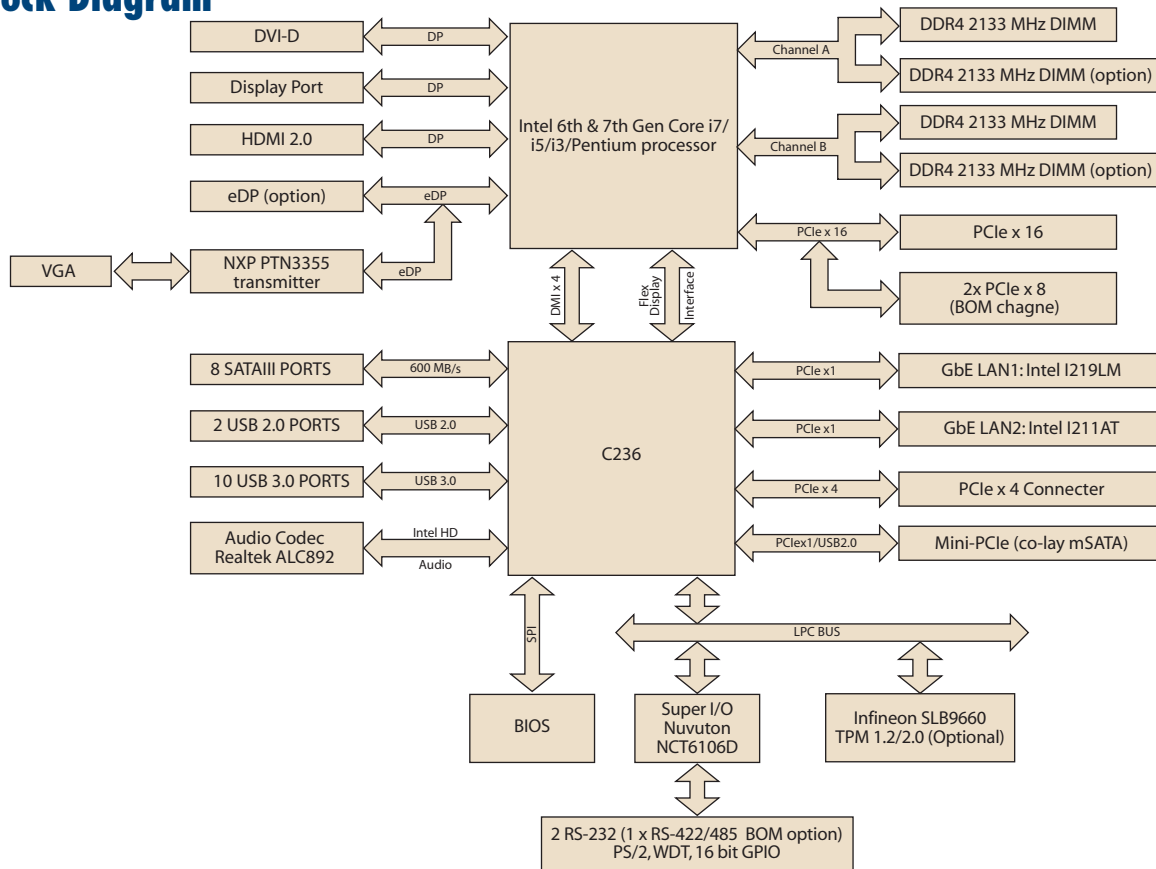
- Supports Intel® Xeon®/ 6th & 7th Gen Core™ i7/i5/i3 processor with C236 chipset
- Up to four DIMM sockets support up to 64 GB DDR4 2133 MHz SDRAM
- Supports DVI-D, HDMI, DP++, eDP, VGA display
- Supports Intel AMT 11.0 and Intel vPro competent
- Supports PCIe Gen3, upto 10 x USB 3.0, 8 x SATAIII and dual GbE LAN, mini-PCIe with mSATA
- Supports Software RAID 0, 1, 5, 10, TPM 1.2/2.0 (optional)
- Supports WISE-PaaS and Embedded Software APIs



Specifications

| | CPU | E3-1275 v6 | E3-1275 v5 | E3-1225 v5 | E3-1268L v5 | i7-7700 / i7-7700T | i7-6700 / i7-6700TE | i5-7500 / i5-7500T | i5-6500 / i5-6500TE | i3-7101 / i3-7101TE | i3-6100 / i3-6100TE | Pentium G4400 / G4400TE | Celeron G3900 / G3900TE | |
|--------------------------|---|---|------------------------------|------------|-------------|--------------------|---------------------|--------------------|---------------------|---------------------|---------------------|-------------------------|-------------------------|--|
| Processor System | Core Number | 4 | 4 | 4 | 4 | 4/4 | 4 / 4 | 4/4 | 4 / 4 | 2/2 | 2/2 | 2/2 | 2/2 | |
| | Max. Speed | 3.8GHz | 3.6GHz | 3.3GHz | 2.4GHz | 3.6GHz / 2.9GHz | 3.4GHz / 2.4GHz | 3.4GHz / 2.7GHz | 3.2GHz / 2.3GHz | 3.9GHz / 3.4GHz | 3.7 GHz / 2.7GHz | 3.3GHz / 2.9GHz | 2.8GHz / 2.6GHz | |
| | Integrated Graphics | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | |
| | L3 Cache | 8M | 8M | 6M | 8M | 8M/8M | 8M / 8M | 6M/6M | 6M / 6M | 3M/3M | 4M / 4M | 3M / 3M | 2M / 2M | |
| | TDP (W) | 80W | 80W | 80W | 35W | 65W/35W | 65W / 35W | 65W/35W | 65W / 35W | 54W/35W | 51W / 35W | 54W / 35W | 47W / 35W | |
| | Chipset | C236 | | | | | | | | | | | | |
| | BIOS | AMI EFI 128 Mbit SPI | | | | | | | | | | | | |
| | Expansion Slot | PCIe x4 (Gen3) | 4 GB/s per direction, 1 slot | | | | | | | | | | | |
| | PCIe x16 (Gen3) | 16 GB/s per direction, 1 slot (BOM change to 2 PCIe x8) | | | | | | | | | | | | |
| Memory | Technology | Dual Channel DDR4 2133 MHz SDRAM | | | | | | | | | | | | |
| | Max. Capacity | 64 GB/16 GB per DIMM | | | | | | | | | | | | |
| | Socket | 2 x 288-pin DIMM (can up to 4 DIMM) | | | | | | | | | | | | |
| Graphics | Controller | Intel HD Graphics Supports DirectX11.1, OpenGL 5.0 and OpenCL 2.1 | | | | | | | | | | | | |
| | VRAM | 1 GB maximum shared memory with 2 GB and above system memory installed | | | | | | | | | | | | |
| | HDMI | Supports max resolution HDMI 2.0, 4096 x 2160 @ 60 Hz | | | | | | | | | | | | |
| | VGA | Max resolution 1920 x 1200 @ 60 Hz | | | | | | | | | | | | |
| | DVI-D | Supports max. resolution 1920 x 1200 @ 60 Hz | | | | | | | | | | | | |
| | eDP | Internal pin header, supports max. resolution 3840 x 2160 @ 60 Hz (on board, option) | | | | | | | | | | | | |
| | Display Port | Supports max resolution 4096 x 2304 @ 60 Hz | | | | | | | | | | | | |
| | Triple Display | eDP/ VGA + DP++ + HDMI, eDP/ VGA + HDMI + DVI-D, DP++ + eDP/ VGA + DVI-D, DVI-D + DP++ + HDMI | | | | | | | | | | | | |
| Dual Display | DP++ + HDMI, DP++ + DVI-D, DP++ + eDP/ VGA, HDMI + DVI-D, HDMI + eDP/ VGA, eDP, VGA + DVI-D | | | | | | | | | | | | | |
| Ethernet | Interface | 10/100/1000 Mbps | | | | | | | | | | | | |
| | Controller | GbE LAN1: Intel i219LM, GbE LAN2: Intel i211 | | | | | | | | | | | | |
| SATA | Connector | RJ-45 x 2 | | | | | | | | | | | | |
| | Max Data Transfer Rate | 600 MB/s (SATA 3.0) | | | | | | | | | | | | |
| Rear I/O | Channel | 8 | | | | | | | | | | | | |
| | DVI-D | 1 | | | | | | | | | | | | |
| | Display Port | 1 | | | | | | | | | | | | |
| | HDMI | 1 | | | | | | | | | | | | |
| | VGA | 1 | | | | | | | | | | | | |
| | Ethernet | 2 | | | | | | | | | | | | |
| | USB | 8 (6 x USB 3.0, 2 x USB 2.0) | | | | | | | | | | | | |
| | Audio | 2 (Mic-in/ Line-out) (Mic-in could be configured as "Line-in" under Win OS.) | | | | | | | | | | | | |
| | USB 3.0 | 4 | | | | | | | | | | | | |
| | Serial | 2 (2 x RS-232, 1 x RS-422/485 BOM change) | | | | | | | | | | | | |
| Internal Connector | SATA | 8 (SATA 3.0) | | | | | | | | | | | | |
| | Extended Display Port (eDP) | 0 (option) | | | | | | | | | | | | |
| | JTAG | 1 | | | | | | | | | | | | |
| | mini-PCIe | 1 Full-size colay mSATA | | | | | | | | | | | | |
| | GPIO | 16-bit GPIO | | | | | | | | | | | | |
| Watchdog Timer | Output | System reset | | | | | | | | | | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | | | | | | | | | | |
| Power Requirements | | Intel Core i7-6700 3.4 GHz, 16 GB DDR4 2133 MHz x 4pcs | | | | | | | | | | | | |
| | Power On | +5 V | 3.3 V | 12 V | | 5 Vsb | | | | | | | -12 V | |
| | | 1.31A | 0.35A | 4.52A | | 0.06A | | | | | | | 0A | |
| Environment | Operating | Normal | | | | | | | | | | | | |
| | Temperature | 0 ~ 60° C (14 ~ 158° F), depends on CPU speed and cooler solution | | | | | | | | | | | | |
| Physical Characteristics | Dimensions | 244 mm x 244 mm (9.6" x 9.6") | | | | | | | | | | | | |
| | Power | -40 ~ 85° C (-40 ~ 185° F) | | | | | | | | | | | | |
| Power | Input Mode | ATX input (Default) | | | | | | | | | | | | |

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | USB 3.0 | USB 2.0 | VGA | DP | HDMI | DVI-D | eDP | SATAIII | PCIe x16/ PClex8 | PCIe x4 | COM | TPM | GbE LAN | AMP |
|-------------------|---------|-------------|---------|---------|-----|----|------|-------|-----|---------|---------------------|---------|-----|-----|---------|-----|
| AIMB-585WG2-SVA1E | C236 | ECC/Non-ECC | 10 | 2 | 1 | 1 | 1 | 1 | (1) | 8 | 1/(2) | 1 | 2 | (1) | 2 | (1) |

*() BOM options available on MP version.

Riser Card

| Part Number | Description |
|------------------|---|
| AIMB-RF10F-01A1E | 1U riser card with 1 PCIe x16 expansion |
| AIMB-RF20F-02A1E | 2U PCIe x16 to 2 PCIe x8 |
| AIMB-R43PF-21A1E | 2U PCIe x16/PCIe x4 to 1 PCIe x16 + 2 PCI |

Packing List

| Part Number | Description | Quantity |
|---------------|------------------|----------|
| 1700003194 | SATA HDD cable | 2 |
| 1700022749-13 | SATA power cable | 2 |
| TBD | I/O port bracket | 1 |
| 2006058510 | Startup manual | 1 |

I/O View



Optional Accessories

| Part Number | Description |
|----------------|--|
| 1700020277-01 | Dual port USB 3.0 cable 30cm with IO bracket |
| 1960047669N001 | LGA1156 CPU cooler for 4U and wallmount chassis, for CPU TDP ≤ 84W, 4.72" (W) x 4.72" (L) x 3.03" (H) |
| 1960047831N001 | LGA1156 CPU cooler for 2U and backplane version of chassis, for CPU TDP ≤ 65W, 3.27" (W) x 3.27" (L) x 2.17" (H) |
| 1960053207N001 | LGA1155 CPU cooler for 2U and wallmount chassis, for CPU TDP ≤ 45W, D=3.66" (W) x 3.66" (L) x 1.81" (H) |
| 1703060191 | KBMS cable 1*6P-2.0/DIN-6P(F)*2, 22 cm |
| 1700025715-01 | KBMS cable 1*6P WAFER/PS2*2 w/ BRAKET 35CM |
| 1700026163-01 | COM2,1 to 1 COM cable 60cm (IDE 10P-2.0) w/ Bracket |

Note: Purchasing AIMB-585's proprietary CPU cooler from Advantech is a must, other CPU cooler are NOT compatible with AIMB-585. The complete thermal solution is composed of CPU cooler and system fans for the CPU TDP as above.

Embedded OS/API

| OS/API | Part No. |
|---------------|------------|
| WES7P | 2070014308 |
| WEB.1 | 2070014247 |
| win10 IoT Ent | 2070014621 |