

# AIMB-205

**Intel® Core™ i7/i5/i3 LGA 1151 Mini-ITX  
with VGA/DP/DVI-D/LVDS(eDP), 8 COM,  
Dual LAN, PCIe x16, M.2, DDR4**



WISE-PaaS/RMM

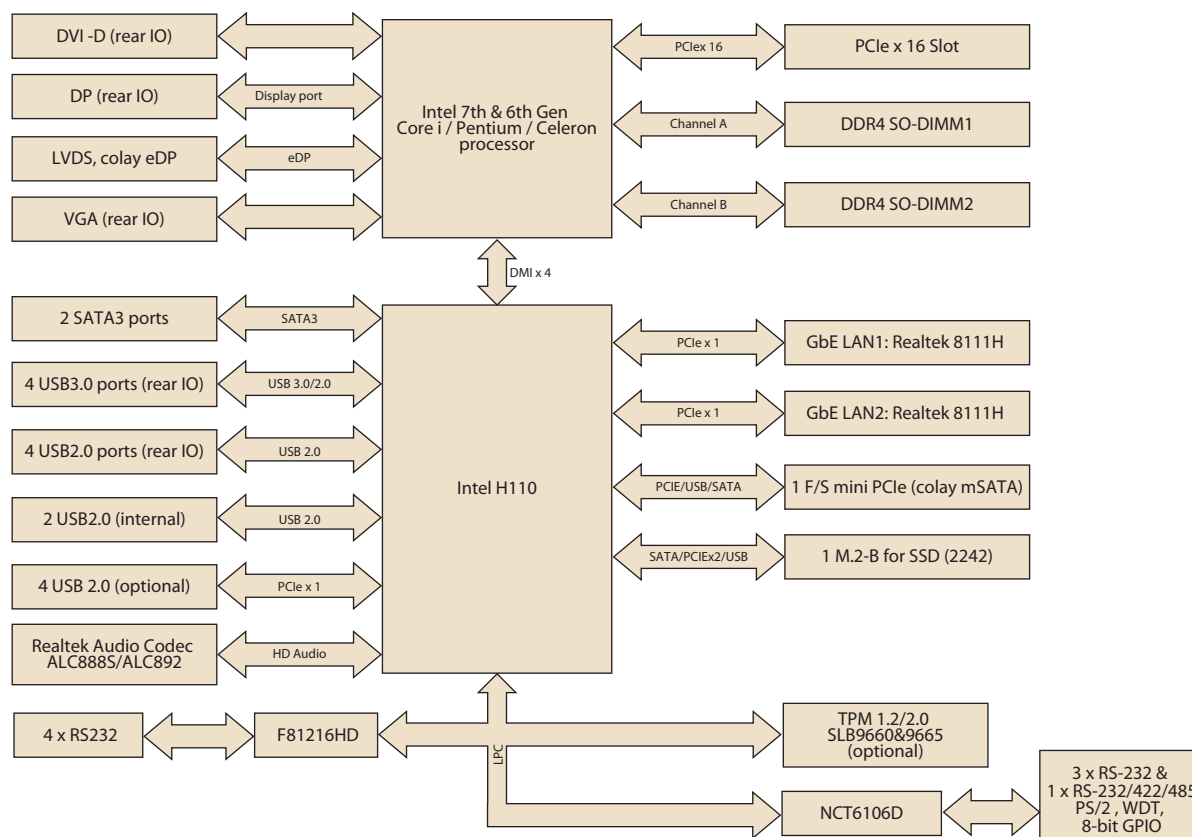
## Specifications

|                          |                           |                                                                                                                                   |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|--------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------|--------------------|------------------|--------------------|
| Processor System         | CPU                       | i7-7700/<br>7700T                                                                                                                 | i7-6700/<br>i7-6700TE | i5-7500/<br>i5-7500T | i5-6500/<br>i5-6500TE | i3-7101/<br>i3-7101TE | i3-6100/<br>i3-6100TE | Pentium<br>G4400 | Pentium<br>G4400TE | Celeron<br>G3900 | Celeron<br>G3900TE |
|                          | Core Number               | 4/4                                                                                                                               | 4/4                   | 4/4                  | 4/4                   | 2/2                   | 2/2                   | 2                | 2                  | 2                | 2                  |
|                          | Max Speed                 | 3.6GHz/<br>2.9GHz                                                                                                                 | 3.4GHz/<br>2.4GHz     | 3.4GHz/<br>2.7GHz    | 3.2GHz/<br>2.3GHz     | 3.9GHz/<br>3.4GHz     | 3.7GHz/<br>2.7GHz     | 3.3G             | 2.4G               | 2.8G             | 2.6G               |
|                          | L3 Cache                  | 8M/8M                                                                                                                             | 8M/8M                 | 6M/6M                | 6M/6M                 | 3M/3M                 | 3M/4M                 | 3M               | 3M                 | 2M               | 2M                 |
|                          | TDP                       | 65W/35W                                                                                                                           | 65W/35W               | 65W/35W              | 65W/35W               | 54W/35W               | 51W/35W               | 54W              | 35W                | 51W              | 35W                |
|                          | Chipset                   | H110                                                                                                                              |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | BIOS                      | AMI EFI 128 Mbit SPI                                                                                                              |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Memory                   | Technology                | Dual channel DDR4 2400/2133 MHz non ECC SDRAM (Only supports DDR4 2133 MHz SDRAM for SKL-S CPU)                                   |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Max. Capacity             | Up to 32GB (16GB per SO-DIMM)                                                                                                     |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Socket                    | 2 x 260-pin SO-DIMM                                                                                                               |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Graphics                 | Controller                | Integrated Intel® HD Graphics 530                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | VRAM                      | Shared system memory, 2 GB and above, total system memory shared 1 GB maximum video memory                                        |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | VGA                       | Max. resolution 1920 x 1200 @ 60 Hz                                                                                               |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | DVI-D                     | Supports max. resolution 1920 x 1200 @ 60Hz                                                                                       |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Display Port              | Max. resolution 4096 x 2304 @ 60Hz                                                                                                |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | LVDS/eDP                  | LVDS: Supports dual channel 24-bit up to 1920 x 1200 / eDP:with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Ethernet                 | Dual Display              | Yes (DP+VGA, DP+LVDS (or eDP), DP+DVI-D, DVI-D+VGA, DVI-D+LVDS (or eDP), VGA+LVDS (or eDP))                                       |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Interface                 | 10/100/1000 Mbps                                                                                                                  |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | LAN 1 Controller          | Realtek RTL8111H GbE LAN                                                                                                          |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | LAN 2 Controller          | Realtek RTL8111H GbE LAN                                                                                                          |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Expansion Slot           | Connector                 | 2 x RJ-45                                                                                                                         |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | M.2                       | 1 M.2 2242 (B key for SSD)                                                                                                        |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Mini PCIe                 | 1 F/S miniPCIe slot support mSATA                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | PCIe x16 (Gen2/3)         | 1 (16GB/s per direction)                                                                                                          |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Storage                  | SATA 3.0                  | 2 (600MB/s per port)                                                                                                              |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Rear I/O Connector       | DVI-D                     | 1                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | VGA                       | 1                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | DisplayPort               | 1                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | RJ-45                     | 2                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | USB 3.0                   | 4                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | USB 2.0                   | 4                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Audio                     | 3 (line-in, line-out, mic-in)                                                                                                     |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Internal Connector       | USB 2.0                   | 6 (USB11-14 is BOM optional)                                                                                                      |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Serial                    | 7 x RS232, 1 x RS232/422/485<br>COM1: supports 5V/12V by jumper selection, COM2: supports RS-232/422/485 by BIOS selection        |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | SATA 3.0                  | 2                                                                                                                                 |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | TPM                       | (optional SLB9660 TPM 1.2/ SLB9665 TPM 2.0)                                                                                       |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | GPIO                      | 1 (8-bit)                                                                                                                         |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Watchdog Timer           | Output                    | System reset                                                                                                                      |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Interval                  | Programmable 1-255 sec/min                                                                                                        |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Power Requirements       | Input Power               | ATX<br>Win Idle 10.43W (Intel core i7-7700 3.6GHz / DDR4 2133MHz 16GB x 2)                                                        |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Environment              | Operation Temperature     | 0 ~ 60° C (32 ~ 140° F)                                                                                                           |                       |                      |                       |                       |                       |                  |                    |                  |                    |
|                          | Non-Operation Temperature | -40 ~ 85° C (-40 ~ 185° F)                                                                                                        |                       |                      |                       |                       |                       |                  |                    |                  |                    |
| Physical Characteristics | Dimensions                | 170 x 170 mm (6.7" x 6.7")                                                                                                        |                       |                      |                       |                       |                       |                  |                    |                  |                    |

## Features

- Supports Intel® 7th Gen Core™ & 6th Gen Core™ i processor /Pentium / Celeron (LGA1151) with Intel H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2400/2133 MHz SDRAM
- Supports Dual display configuration by multiple interface: DP/DVI-D/VGA/ LVDS(eDP)
- Supports DirectX 12, OpenGL 4.4, OpenCL 2.0 and outstanding 3D graphics performance
- Supports 1 F/S MiniPCIe and 1 M.2 2242 (B key for SSD)

## Block Diagram



## Ordering Information

| P/N              | Chipset | DP | DVI-D | VGA | LVDS | GbE LAN | COM | SATA | USB 3.0/2.0 | M.2              | Mini PCIe | TPM | AMP | PCIe x 16 |
|------------------|---------|----|-------|-----|------|---------|-----|------|-------------|------------------|-----------|-----|-----|-----------|
| AIMB-205G2-00A1E | H110    | 1  | 1     | 1   | 1    | 2       | 8   | 2    | 4/6         | 1 (1 M.2-B 2242) | 1 F/S     | (1) | 1   | 1         |

\*) BOM options available on MP version.

## Packing List

| Part Number    | Description                | Quantity |
|----------------|----------------------------|----------|
| 1700003194     | SATA HDD cable             | 1        |
| 1700008876     | 1-to-4 serial ports, 35 cm | 2        |
| 1960082356T000 | I/O port bracket           | 1        |
| 2006B20500     | Startup manual             | 1        |

## Optional Chassis

| Part Number     | Description                    |
|-----------------|--------------------------------|
| AIMB-B2000-15ZE | Mini-ITX chassis (w/ 150W PSU) |

## Rear I/O



## Optional Accessories

| Part Number    | Description                                                         |
|----------------|---------------------------------------------------------------------|
| 1700026162-01  | USB 2.0 cable with two ports, 30 cm with bracket                    |
| 1960053207N001 | LGA1150 CPU cooler for CPU TDP 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm |
| 1960060732N001 | LGA1150 CPU cooler for CPU TDP 45W, 80 (W) x 80 (L) x 32.2 (H) mm   |
| 1703060191     | KB/MS cable 1*6P-2.0/M-DIN 6P(F)*2, 19cm                            |

## Embedded OS/API

| OS/API        | Part No.       | Description                            |
|---------------|----------------|----------------------------------------|
| Win10 IoT Ent | 2070015197     | img W10 16HL AIMB-205 64b 1701 ENU     |
| Win10 IoT Ent | 2070015198     | img W10 16VL AIMB-205 64b 1701 ENU     |
| WE8.1         | 2070015281     | img W81 IP AIMB-205 64b 1609 ENU       |
| WES7E         | 2070015407     | img WES7E AIMB-205 64b 1709 ASIA 4 MUI |
| WES7P         | 20706WE7PS0003 | img WES7P AIMB-205 64b 1709 10 MUI     |

\*\*KBL-S CPU only support windows 10