

# AIMB-217

Intel Pentium , Celeron & Atom x7  
Mini-ITX with HDMI/DP/VGA, 6 COM, and  
Dual LAN

NEW



WISE-PaaS/RMM

## Features

- Supports Intel Pentium, Celeron Quad Core & Dual Core processor
- Two 204-pin SO-DIMM up to 8 GB DDR3L 1866 MHz SDRAM
- Supports DP 1.2/HDMI 1.4b/VGA
- Supports 1 PCIe x1 and 1 M.2 (E key) + 1 MiniPCIe, 6 COMs, 4 USB 3.0, and 4 USB 2.0
- Lower total cost of ownership with DC12V support and onboard TPM1.2/2.0 (optional)
- Supports WISE-PaaS/RMM and Embedded Software APIs

### Software APIs:



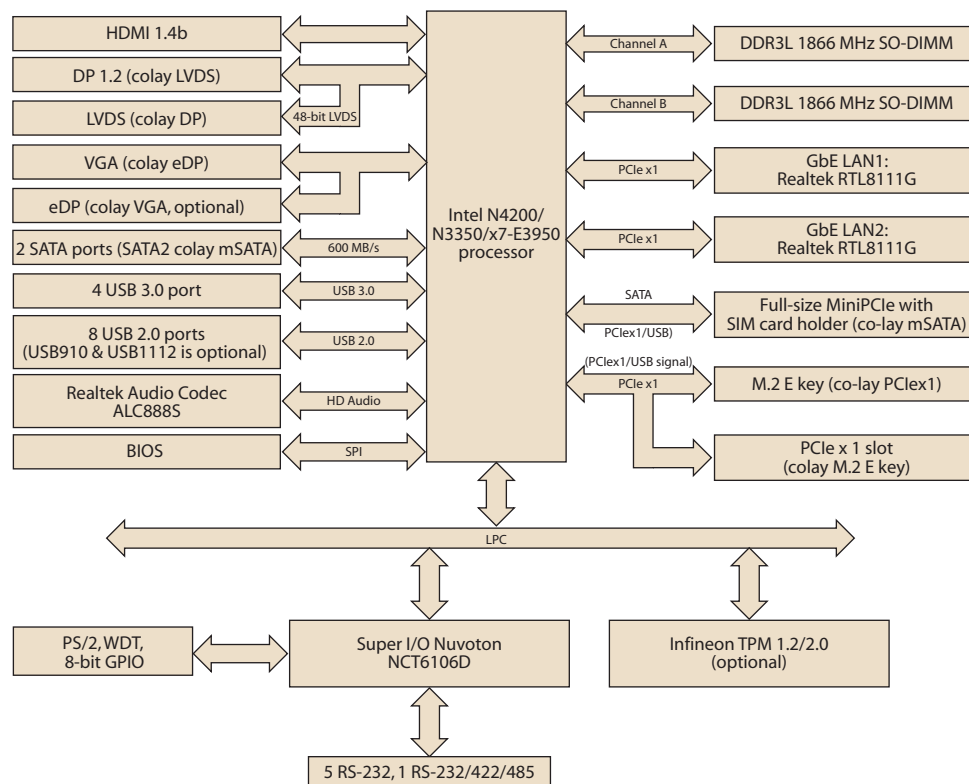
### Utilities:



## Specifications

|                          |                           |                                                                                                                              |                            |          |
|--------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| Processor System         | CPU (14nm)                | N4200                                                                                                                        | N3350                      | x7-E3950 |
|                          | Core Number               | 4                                                                                                                            | 2                          | 4        |
|                          | Max. Speed                | 1.1 GHz                                                                                                                      | 1.1 GHz                    | 1.6 GHz  |
|                          | BIOS                      | AMI 128 Mbit SPI                                                                                                             |                            |          |
| Expansion Slot           | M.2                       | E key for wireless module (Type: 2230)                                                                                       |                            |          |
|                          | Mini-PCIe                 | 1 (F/S with SIM card holder)                                                                                                 |                            |          |
|                          | PCIe                      | PCI Express x1 (Gen2), colay M.2 E key                                                                                       |                            |          |
| Memory                   | Technology                | Dual channel DDR3L 1866 MHz SDRAM                                                                                            |                            |          |
|                          | Max. Capacity             | 8 GB/8 GB per SO-DIMM                                                                                                        |                            |          |
|                          | Socket                    | 2 x 204-pin SO-DIMM (Non-ECC)                                                                                                |                            |          |
| Graphics                 | Controller                | Intel Gen 9 Graphics Engines and media encode/decode engine                                                                  |                            |          |
|                          | VGA/eDP                   | 1 VGA supports up to 1920 x 1200 @ 60Hz co-lay eDP. eDP is BOM optional which supports up to 4096 x 2160 @ 60 Hz             |                            |          |
|                          | HDMI                      | 1 HDMI 1.4b supports up to 3840 x 2160 @ 30 Hz                                                                               |                            |          |
|                          | DP++/LVDS                 | 1 DP 1.2 supports up to 4096 x 2160 @ 60 Hz; co-lay with LVDS supports dual channel 48-bit up to 1920 x 1200                 |                            |          |
|                          | Triple display            | VGA (or EDP) + DP (or LVDS) + HDMI                                                                                           |                            |          |
| Ethernet                 | Interface                 | 10/100/1000 Mbps                                                                                                             |                            |          |
|                          | Controller                | GbE LAN1: Realtek 8111G<br>GbE LAN2: Realtek 8111G                                                                           |                            |          |
|                          | Connector                 | RJ-45 x 2                                                                                                                    |                            |          |
| SATA                     | Max Data Transfer Rate    | 600 MB/s                                                                                                                     |                            |          |
|                          | Channel                   | 2, SATA 2 colay mSATA                                                                                                        |                            |          |
| Rear I/O                 | VGA                       | 1                                                                                                                            |                            |          |
|                          | DP 1.2                    | 1                                                                                                                            |                            |          |
|                          | HDMI 1.4b                 | 1                                                                                                                            |                            |          |
|                          | Ethernet                  | 2                                                                                                                            |                            |          |
|                          | USB                       | 4 (USB 3.0)                                                                                                                  |                            |          |
|                          | Audio                     | 1 (supports Line-out by default, converts to Mic in or Line in)                                                              |                            |          |
|                          | DC jack                   | 1 (2.5 mm)                                                                                                                   |                            |          |
| Internal Connector       | LVDS & Inverter           | 1/1                                                                                                                          |                            |          |
|                          | eDP                       | 1 (optional)                                                                                                                 |                            |          |
|                          | USB                       | 4 (USB 2.0)                                                                                                                  |                            |          |
|                          | Serial                    | 6 (5 x RS-232, 1 x RS-232/422/485; COM 3 support RS-232/422/485 auto flow control; COM 6 support 5V/12V by jumper selection) |                            |          |
|                          | IDE                       | None                                                                                                                         |                            |          |
|                          | SATA                      | 2                                                                                                                            |                            |          |
|                          | SATA PWR Connector        | 2                                                                                                                            |                            |          |
|                          | Parallel                  | None                                                                                                                         |                            |          |
|                          | Mini-PCIe                 | 1 (F/S with SIM card holder), co-lay mSATA                                                                                   |                            |          |
|                          | M.2                       | 1 (E key for wireless module support)                                                                                        |                            |          |
|                          | GPIO                      | 8-bit                                                                                                                        |                            |          |
| Watchdog Timer           | PS/2 KB & MS              | 1                                                                                                                            |                            |          |
|                          | Output                    | System reset                                                                                                                 |                            |          |
| Power                    | Interval                  | Programmable 1 ~ 255 sec/min                                                                                                 |                            |          |
|                          | Power Type                | Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode            |                            |          |
| Environment              | Typical Power Consumption | Windows Idle mode: 7.546W (Intel N4200 1.1GHz /DDR3L 1866MHz 4GB x 2pcs)                                                     |                            |          |
|                          | Temperature               | Operating                                                                                                                    | Non-Operating              |          |
|                          |                           | 0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow<br>(for D/N SKU)<br>-20 ~ 70° C (-4 ~ 158° F) with 0.7m/s air flow (for Z SKU)  | -40 ~ 85° C (-40 ~ 185° F) |          |
| Physical Characteristics | Dimensions                | 170 x 170 mm (6.69" x 6.69")                                                                                                 |                            |          |

## Block Diagram



## Ordering Information

| Part Number     | CPU      | Memory | VGA/eDP | HDMI | DP/LVDS | GbE LAN | COM | SATA III | USB3.0/2.0 | MiniPCle | M.2 | TPM | AMP      | PCIex1 | Thermal Solution | Operating Temp. |
|-----------------|----------|--------|---------|------|---------|---------|-----|----------|------------|----------|-----|-----|----------|--------|------------------|-----------------|
| AIMB-217D-S6A1E | N4200    | 2      | 1 / (1) | 1    | 1       | 2       | 6   | 2        | 4/4        | 1 (F/S)  | 1   | (1) | (2 x 6W) | 1      | Passive          | 0 ~ 60° C       |
| AIMB-217N-S6A1E | N3350    | 2      | 1 / (1) | 1    | 1       | 2       | 6   | 2        | 4/4        | 1 (F/S)  | 1   | (1) | (2 x 6W) | 1      | Passive          | 0 ~ 60° C       |
| AIMB-217Z-S6A1E | x7-E3950 | 2      | 1 / (1) | 1    | 1       | 2       | 6   | 2        | 4/4        | 1 (F/S)  | 1   | (1) | (2 x 6W) | 1      | Passive          | -20 ~ 70° C     |

Note: Passive = fanless

\* ( ) BOM options available on MP version

## Packing List

| Part Number    | Description                          | Quantity |
|----------------|--------------------------------------|----------|
| 1700003194     | SATA HDD cable                       | 1        |
| 1700018785     | SATA power cable                     | 1        |
| 1700008876     | 1-to-4 serial ports cable kit, 35 cm | 1        |
| 1700100250     | 1-to-1 serial port cable, 25 cm      | 2        |
| 1960079933T000 | I/O port bracket                     | 1        |
| 2006B21701     | Startup manual                       | 1        |
| 1960064228N001 | Fanless heatsink for AIMB-217D/N     | 1        |
| 1960071473T011 | Fanless heatsink for AIMB-217Z       | 1        |

## I/O View



## Optional Accessories

| Part Number      | Description                                |
|------------------|--------------------------------------------|
| 96PSA-A60W12V1-1 | Adapter AC100-240V 60W +12V/5A             |
| 96PSA-A84W12V1   | Adapter AC100-240V 84W, 12V/7A             |
| 1703060191       | KBMS cable 1*6P-2.5/DIN-6P(F)*2, 25 cm     |
| 1700023082-11    | ATX 2*10P to 1*3P-2.0 15cm cable           |
| 1700024790-01    | A Cable USB-A 4P(F)*2/2*5P-2.0 20CM F/10   |
| 1700023474-01    | A Cable USB-A 4P(F)*2/2*5P-2.0 34.5CM F/10 |

## Optional Chassis

| Part Number     | Description                               |
|-----------------|-------------------------------------------|
| AIMB-B2000-00YE | Mini-ITX chassis with optional DC Adaptor |

## Embedded OS/API

| OS/API     | Part No.   | Description                          |
|------------|------------|--------------------------------------|
| Win 10 IoT | 2070014970 | img W10 16EL AIMB-217 64bit 1701 Eng |