

AIMB-218

Intel Pentium , Celeron & Atom Mini-ITX with HDMI/DP/eDP or LVDS, 6 COM, and Dual LAN



Features

- Supports Intel Pentium, Celeron, Atom, Quad Core & Dual Core processor
- Two 204-pin SO-DIMM up to 32 GB DDR4 3200 MHz SDRAM
- Supports DP++ 1.2/HDMI 1.4b/eDP (Option)/LVDS(Optional)
- Supports 1 PCIe x1 or 2 M.2 (B+E key), 6 COMs(4 COM option), 3 USB 3.2 Gen2, and 5 USB 2.0
- Lower total cost of ownership with DC12V support and onboard TPM2.0 (optional)
- Supports Device-On and Embedded Software APIs

Software APIs:



Utilities:

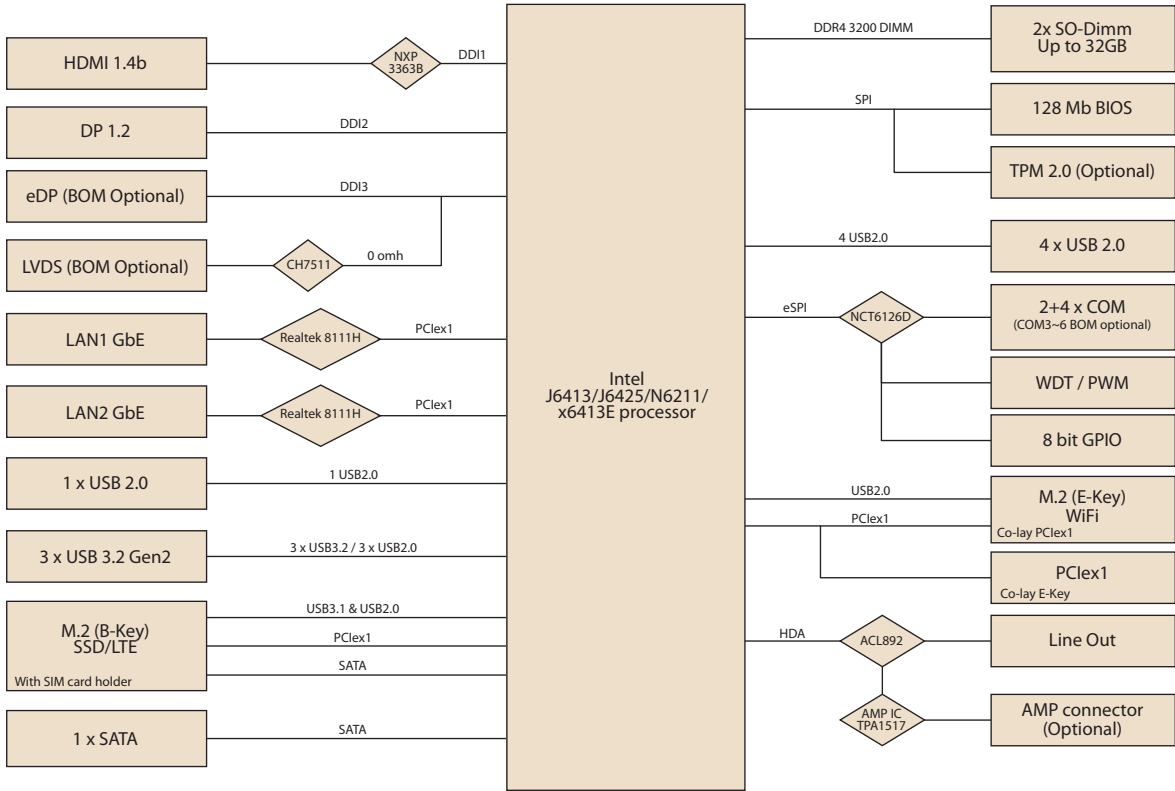


WISE-DeviceOn CE FC RoHS COMPLIANT PRODUCT

Specifications

| | | | | | |
|--------------------------|---------------------------|---|--------|----------------------------|--------|
| Processor System | CPU (10nm) | J6413 | J6425 | N6211 | x6413E |
| | Core Number | 4 | 4 | 2 | 4 |
| | Base Frequency | 1.8GHz | 1.8GHz | 1.2GHz | 1.5GHz |
| | BIOS | AMI 256 Mbit SPI | | | |
| Expansion Slot | M.2 | E key for wireless module (Type: 2230) B key for storage and LTE module, only support PCIe1 signal (Type: 2242/2280) | | | |
| | PCIe | PCI Express x1 | | | |
| Memory | Technology | Dual channel DDR4 3200 MHz SDRAM | | | |
| | Max. Capacity | 32 GB/32 GB per SO-DIMM | | | |
| | Socket | 2 x 260-pin SO-DIMM (Non-ECC) | | | |
| Graphics | Controller | Intel Gen 11 Graphics Engines | | | |
| | LVDS/eDP | 1 (optional) / 1 (optional) | | | |
| | HDMI | 1 HDMI 1.4b | | | |
| | DP++ | 1 DP 1.2 | | | |
| | Triple display | DP + HDMI, DP + HDMI + eDP (optional), DP + HDMI + LVDS(optional) | | | |
| Ethernet | Interface | 10/100/1000 Mbps | | | |
| | Controller | GbE LAN1: Realtek 8111H GbE LAN2: Realtek 8111H | | | |
| | Connector | Max. RJ-45 x 2 | | | |
| SATA | Max Data Transfer Rate | 600 MB/s | | | |
| | Channel | 1 | | | |
| Rear I/O | DP 1.2 | 1 | | | |
| | HDMI 1.4b | 1 | | | |
| | Ethernet | 2 | | | |
| | USB | 4 (3USB 3.2 Gen2 + 1USB2) | | | |
| | 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 (optional) | | | |
| | eDP | 1 (optional) | | | |
| | USB | 4 USB2.0 | | | |
| | Serial | 6 (COM1 support 5V/12V selection; COM2 support RS-232/422/485, set by Jumper; COM3~COM6 support RS-232 (COM3~6 BOM option)) | | | |
| | SATA | 1 | | | |
| | SATA PWR Connector | 1 | | | |
| | M.2 | 2 (B key for storage and LTE module, only support PCIe1 signal; E key for wireless module support) | | | |
| | GPIO | 8-bit | | | |
| | PS/2 KB & MS | 1 | | | |
| Watchdog Timer | Output | System reset | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | |
| Power | Power Type | Single voltage 12V DC input; 1 x External DC jack; 1 x Internal 4-pin (2x2) power connector; Supports AT/ATX mode | | | |
| | Typical Power Consumption | TBD | | | |
| Environment | Temperature | Operating | | Non-Operating | |
| | | 0 ~ 60 °C (32 ~ 140 °F) with 0.7m/s air flow (for D/J/L SKU) -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 | LVDS/eDP | HDMI | DP | GbE LAN | COM | SATA III | USB3.2/2.0 | M.2 | TPM | AMP | PCIex1 | Thermal Solution | Operating Temp. |
|-------------------|--------|--------|----------|------|----|---------|---------------|----------|------------|-----|-----|----------|--------|------------------|-----------------|
| **AIMB-218L-SOA1E | N6211 | 2 | (1)/(1) | 1 | 1 | 1 | 2 | 1 | 3/5 | 2 | (1) | (2 x 6W) | 1 | Passive | 0 ~ 60 °C |
| AIMB-218D-SOA1E | J6425 | 2 | 1/(1) | 1 | 1 | 2 | 6(High Speed) | 1 | 3/5 | 2 | 1 | 2 x 6W | 1 | Passive | 0 ~ 60 °C |
| AIMB-218J-SOA1E | J6413 | 2 | (1)/(1) | 1 | 1 | 2 | 2(+4) | 1 | 3/5 | 2 | (1) | (2 x 6W) | 1 | Passive | 0 ~ 60 °C |
| AIMB-218Z-SOA1E | x6413E | 2 | 1/(1) | 1 | 1 | 2 | 6(High Speed) | 1 | 3/5 | 2 | (1) | (2 x 6W) | 1 | Passive | -20 ~ 70 °C |

Note: Passive = fanless
 * () BOM options available on MP version
 ** Bulk packing(wo/Cables, Startup manual, M.2 Screw)

Packing List

| Part Number | Description | Quantity |
|----------------|--|----------|
| 1700003194-21 | SATA HDD cable | 1 |
| 1700018785-01 | SATA power cable | 1 |
| 1701200220-01 | 1-to-2 serial ports cable kit, 22 cm | 1 |
| 1700029538-01 | 1-to-4 serial port cable, 35cm for AIMB-218D | 1 |
| 1960100026T001 | I/O port bracket | 1 |
| 2046021800 | Startup manual | 1 |
| TBD | Fanless heatsink for AIMB-218L/J/D | 1 |
| 1700023082-11 | ATX 2*10P to 1*3P-2.0 25cm cable | 1 |

Optional Accessories

| Part Number | Description |
|------------------|--------------------------------|
| 96PSA-A60W12V1-1 | Adapter AC100-240V 60W +12V/5A |
| 96PSA-A84W12V1 | Adaptor AC100-240V 84W, 12V/7A |

Optional Chassis

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

Embedded OS/API

| OS/API | Part No. | Description |
|--------|----------|-------------|
| TBD | TBD | TBD |

I/O View

