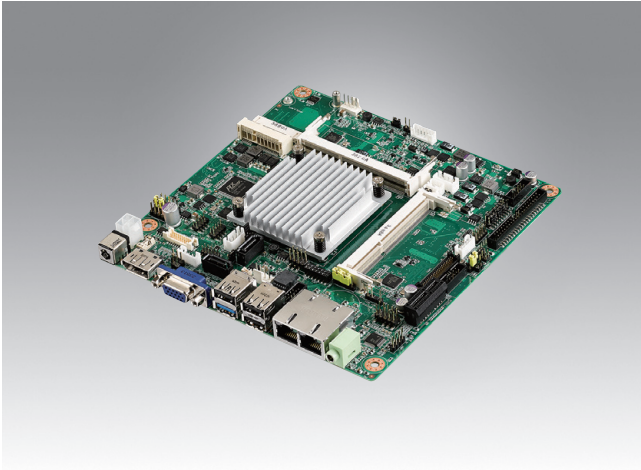


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AIMB-215 B2

**Intel® Celeron® Quad Core J1900/N2930/
 N2807 Mini-ITX with CRT/LVDS/DP++,
 6 COM, and Dual LAN**



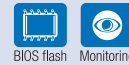
Features

- Supports Intel Celeron Quad Core J1900/N2930/N2807 processor
- Two 204-pin SO-DIMM up to 8 GB DDR3L 1333 MHz SDRAM
- Supports VGA/DP1.2 /24-bit dual channel LVDS
- Supports 1 PCIe x1 and 2 mini-PCIe expansion slot, 6 COMs, 7 USB 2.0, and 1 USB 3.0
- Lower total cost of ownership with DC12V support and onboard TPM1.2(optional)
- Supports WISE-DeviceOn and Embedded Software APIs

Software APIs:



Utilities:



WISE-DeviceOn

Specifications

| | | | | |
|--------------------------|---------------------------|--|----------------------|----------------------------|
| Processor System | CPU (22nm) | Intel J1900 | Intel N2930 | Intel N2807 |
| | Max. Speed | 2.0 GHz (Quad core) | 1.83 GHz (Quad core) | 1.58 GHz (Dual core) |
| | L2 Cache | 2 MB | 2 MB | 1 MB |
| | BIOS | AMI 16 Mbit SPI | AMI 16 Mbit SPI | AMI 16 Mbit SPI |
| Expansion Slot | PCI | - | | |
| | Mini-PCIe | 2 (F/S x 1 support mSATA, H/S x 1 with SIM card holder); H/S MiniPCIe coloy PCIe1 | | |
| | PCIe | PCI Express x1 (Gen2), coloy H/S MiniPCIe | | |
| Memory | Technology | Dual channel DDR3L 1066/1333 MHz SDRAM | | |
| | Max. Capacity | 8 GB/4 GB per SO-DIMM | | |
| | Socket | 2 x 204-pin SO-DIMM (Non-ECC) | | |
| Graphics | Controller | Intel Gen 7 Graphics Engines and media encode/decode engine; GPU Frequency: 688 MHz for J1900; 313 MHz for N2930 | | |
| | VRAM | Shared system memory up to 224 MB SDRAM | | |
| | VGA | Supports up to 2560 x 1600 | | |
| | LVDS | Supports dual channel 48-bit up to 1920 x 1200 | | |
| | Display Port 1.2 | 1, Supports DP++, resolution up to 2560 x 1600 coloy eDP port (optional) | | |
| | Dual Display | VGA+DP1.2, VGA+LVDS, LVDS+DP1.2, VGA+eDP (optional), LVDS+eDP (optional), Supports extended mode and clone mode | | |
| Ethernet | Interface | 10/100/1000 Mbps | | |
| | Controller | GbE LAN1: Realtek RTL8111H GbE LAN2: Realtek RTL8111H | | |
| SATA | Connector | RJ-45 x 2 | | |
| | Max Data Transfer Rate | 300 MB/s | | |
| Rear I/O | Channel | 2, SATA 2 coloy mSATA (optional); SATA 1 support SATA-DOM device | | |
| | CRT | 1 | | |
| | DP1.2 | 1 | | |
| | Ethernet | 2 | | |
| | USB | 4 (3 x USB 2.0/1 x USB 3.0) | | |
| | Audio | 1 (Mic-in or Line out) | | |
| | DC jack | 1 (2.5 mm) | | |
| Internal Connector | LVDS & Inverter | 1/1 | | |
| | eDP | 1 (optional) | | |
| | USB | 4 (USB 2.0 compliant) | | |
| | 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 | | |
| | 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 | Win Idle 10.17 W (Intel Celeron J1900 2.0 GHz / DDR3L 1600 MHz 4GB x 2) | | |
| Environment | Operating | | | Non-Operating |
| | Temperature | 0 ~ 60° C (32 ~ 140° F) with 0.7m/s air flow | | -40 ~ 85° C (-40 ~ 185° F) |
| Physical Characteristics | Dimensions | 170 mm x 170 mm (6.69" x 6.69") | | |

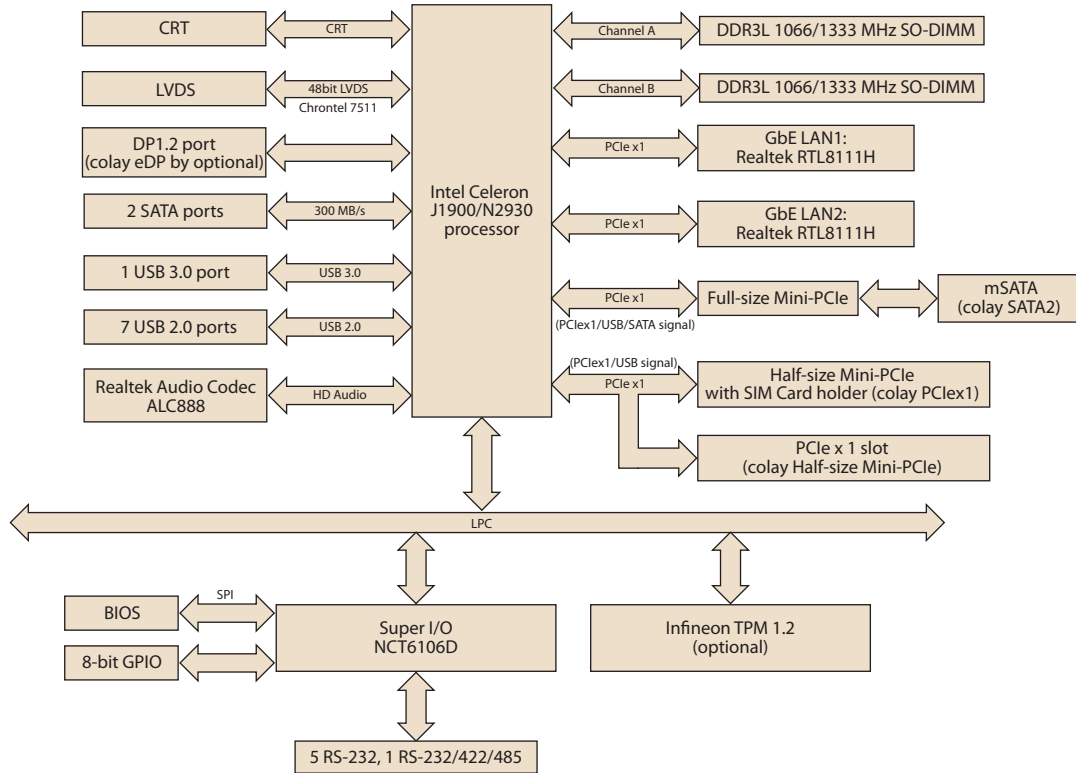


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AIMB-215 B2

Block Diagram



Ordering Information

| Part Number | CPU | Memory | DP++/eDP | CRT | LVDS | GbE LAN | COM | SATA II | USB3.0/2.0 | MiniPCle | TPM | AMP | PClex1 | Thermal Solution | Operating Temp. |
|-----------------|-------|--------|----------|-----|------|---------|-----|---------|------------|----------------------|-----|----------|--------|------------------|-----------------|
| AIMB-215D-S6B2 | J1900 | 2 | 1 / (1) | 1 | 1 | 2 | 6 | 2 | 1/7 | 2 (1 x F/S; 1 x H/S) | (1) | (2 x 6W) | 1 | Passive | 0 - 60° C |
| AIMB-215N-S6B2 | N2930 | 2 | 1 / (1) | 1 | 1 | 2 | 6 | 2 | 1/7 | 2 (1 x F/S; 1 x H/S) | (1) | (2 x 6W) | 1 | Passive | 0 - 60° C |
| AIMB-215U-S6B2 | N2807 | 1 | 1 / (1) | 1 | 0 | 1 | 2 | 1 | 1/3 | 1 x F/S | (1) | (2 x 6W) | 1 | Passive | 0 - 60° C |
| AIMB-215L-S6B2 | J1900 | 2 | 1 / (1) | 1 | 0 | 1 | 2 | 1 | 1/3 | 1 x F/S | (1) | (2 x 6W) | 1 | Passive | 0 - 60° C |
| AIMB-215DZ-S6B2 | J1900 | 2 | 1 / (1) | 1 | 1 | 2 | 6 | 2 | 1/7 | 2 (1 x F/S; 1 x H/S) | (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 |
| 19Z0000569T000 | I/O port bracket | 1 |
| 2006021531 | Startup manual | 1 |
| 1960064228N001 | Fanless heatsink | 1 |

Optional Chassis

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

I/O View



Optional Accessories

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

Optional LVDS module

| Part Number | Description |
|------------------|---|
| AIMB-LVDS2-00A1E | AIMB LVDS module to support 2nd LVDS for AIMB-215 |

Note: Requires customized BIOS and AIMB-215 BOM change to support

Embedded OS/API

| OS/API | Part No. | Description |
|---------------|------------|---|
| WES8 | 2070013818 | img WES8 AIMB-215B1 x64 V6.5.2 10MUI |
| WES7 | 2070013815 | img WES7E AIMB-215B1 x64 V5.6.8 Ent/Jp/TC/SC |
| Win10 IoT Ent | 2070014093 | img Win10 IoT Ent AIMB-215D x32 V10.0.0 10MUI |
| Win10 IoT Ent | 2070014894 | img W10 16EL AIMB-215D B1 64bit 1609 Eng |