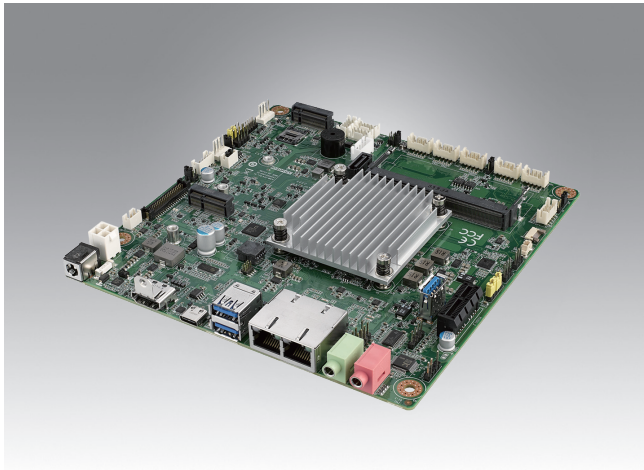


# AIMB-219

## Mini-ITX Motherboard Intel® Core™ i3 and Processor N-series (codename: Alder Lake-N)



### Features

- Supports Intel Alder Lake-N processor
- Up to 16GB DDR4 3200MT/s with one SO-DIMM
- Triple independent display with 1 DP, 1 HDMI, 1 LVDS(or eDP)
- Abundant I/O expansion: 1 M.2 B-key & 1 M.2 E-key, 3 USB 3.2 Gen2x1, 5 USB 2.0, 1 USB Type-C and 6 COM
- Mini-ITX low profile motherboard, fanless design
- Supports Device-On and Embedded Software APIs

#### Software APIs:



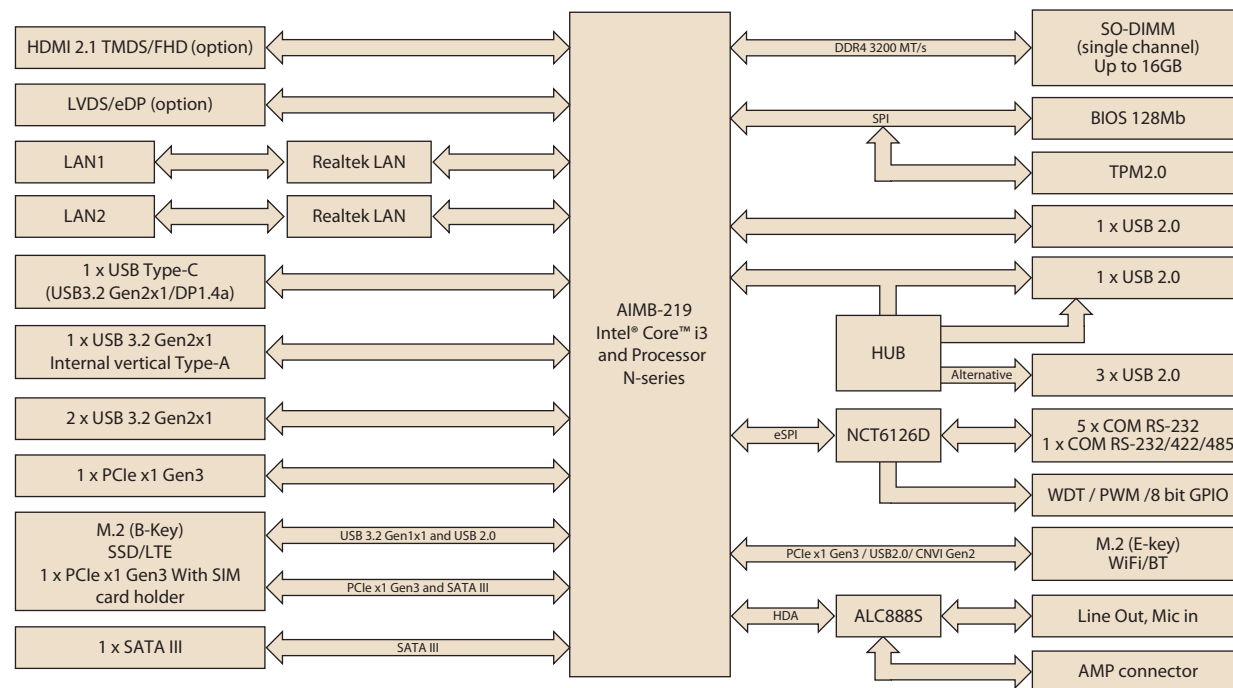
#### Utilities:



### Specifications

|                          |                        |   |  |     |     |
|--------------------------|------------------------|---|--|-----|-----|
| Processor System         | CPU (10nm)             | i3-N305   | N200   | N97 | N50 |
|                          | Core Number            | 8   | 4  | 4   | 2   |
|                          | Base frequency (GHz)   | 1.8   | 1.0  | 2.0 | 1.0 |
|                          | TDP (W)                | 15  | 6  | 12  | 6   |
|                          | BIOS                   | AMI EFI 256Mb SPI   |  |     |     |
| Expansion Slot           | M.2                    | 1 x E-Key for wireless module (WiFi/BT), 1 x B-key for storage (SSD/LTE)  |  |     |     |
|                          | PCIe                   | 1 PCIe x1 Gen3 (8GT/s)  |  |     |     |
| Memory                   | Technology             | Single channel DDR4 3200 MT/s (non-ECC)   |  |     |     |
|                          | Max. Capacity          | 16 GB   |  |     |     |
|                          | Socket                 | 1 x 260pin SO-DIMM  |  |     |     |
| Graphics                 | Controller             | Intel® UHD Graphics   |  |     |     |
|                          | HDMI                   | 1 x HDMI 2.1 TMDS, up to 4Kx2K @ 60 Hz (refer to Ordering Information)  |  |     |     |
|                          | DP                     | 1 x DP 1.4a, up to 4096x2304 @ 60 Hz (via USB Type-C)   |  |     |     |
|                          | LVDS                   | 1 (default, pin header, supports dual channel 18/24-bit, up to 1920 x 1200 @ 60 Hz)   |  |     |     |
|                          | eDP                    | 1 (option, pin header, up to 4096 x 2304 @ 60 Hz)   |  |     |     |
|                          | Multi Displays         | Triple displays   |  |     |     |
| Network                  | Ethernet               | 10/100/1000/2500 Mbps   |  |     |     |
|                          | Controller             | RTL8111K (1GbE) or RTL8125BG (2.5GbE), refer to Ordering Information  |  |     |     |
|                          | Connector              | 2 x RJ45  |  |     |     |
| Audio                    | Codec                  | Realtek ALC888S, High Definition Audio (HD), Line out, Mic-in   |  |     |     |
|                          | Amplifier              | Yes, 6W   |  |     |     |
| SATA                     | Max data transfer rate | 6.0 Gb/s  |  |     |     |
|                          | Channel                | 1 x SATAIII   |  |     |     |
| Rear I/O                 | DP (via USB Type-C)    | 1   |  |     |     |
|                          | HDMI                   | 1   |  |     |     |
|                          | Ethernet               | 2   |  |     |     |
|                          | USB                    | 2 x USB3.2 Gen2x1 + 1 x USB3.2 Gen2x1 Type-C  |  |     |     |
|                          | Audio                  | 1 (Line-Out, Mic-In)  |  |     |     |
| Internal Connector       | USB                    | 5 x USB2.0 + 1 x USB3.2 Gen2x1 (Internal vertical Type-A)   |  |     |     |
|                          | LVDS/eDP               | 1 (eDP colay with LVDS)   |  |     |     |
|                          | Serial                 | 6,<br>COM1~COM2: Support RS-232 by default<br>COM3: Support RS-232/422/485(BOM option), auto flow control by BIOS<br>COM4: Support RS-232 by default; CTalk by BOM option<br>COM5: Support RS-232 by default; TTL by BOM option<br>COM6: Support RS-232 by default; Ring-in 5V/12V select by jumper |  |     |     |
|                          | SATA                   | 1 x SATAIII 6.0 Gb/s  |  |     |     |
|                          | M.2                    | 1 x B-key (dimension: 2242/2280/3042)   |  |     |     |
|                          |                        | 1 x E-key (dimension: 2230)   |  |     |     |
|                          | GPIO                   | 8-bit   |  |     |     |
| Watchdog Timer           | Output                 | System reset  |  |     |     |
|                          | Interval               | Programmable 1 ~ 255 (second or minute)   |  |     |     |
| Power Requirements       | Input voltage          | 12V DC-in   |  |     |     |
|                          | Connector              | DC Jack, Internal 4-pin ATX   |  |     |     |
|                          | Power consumption      | Configuration   | Intel Core i3-N305, 1pcs 16 GB DDR4 3200MT/s SO-DIMM |     |     |
|                          |                        | Max.  | 39.7 W   |     |     |
|                          | Typical                | 26.4 W  |  |     |     |
| Environment              | Temperature            | Operating: 0 ~ 60 °C (32 ~ 140 °F)  |  |     |     |
|                          | Storage                | Non-Operating: -40 ~ 85 °C (-40 ~ 185 °F)   |  |     |     |
| Physical Characteristics | Dimensions             | 170 mm x 170 mm (6.69" x 6.69")   |  |     |     |

## Block Diagram



## Ordering Information

| P/N               | CPU     | HDMI 2.1 TMDS | HDMI FHD | LVDS/eDP | USB Type-C | GbE   | COM   | SATAIII | USB3.2 | USB2.0 | M.2 B key | M.2 E key | PClex1 | TPM | AMP |
|-------------------|---------|---------------|----------|----------|------------|-------|-------|---------|--------|--------|-----------|-----------|--------|-----|-----|
| AIMB-219NC3F-LDA1 | i3-N305 | 1             | 0        | 1/(1)    | 1          | 2*    | 6     | 1       | 3      | 5      | 1         | 1         | 1      | 1   | 1   |
| AIMB-219N2F-LDA1  | N200    | 0             | 1        | 1/(1)    | (1)        | 2     | 4/(2) | 1       | 3      | 5      | 1         | 1         | 1      | 1   | (1) |
| AIMB-219N9F-LDA1  | N97     | 0             | 1        | 1/(1)    | 1          | 2     | 4/(2) | 1       | 3      | 5      | 1         | 1         | 1      | 1   | (1) |
| AIMB-219N5L-LDA1  | N50     | 0             | 1        | 0        | 0          | 1/(1) | 2/(4) | 1       | 3      | 2/(3)  | 1         | 1         | 1      | (1) | (1) |

\* (1) Supports by BOM options

\* AIMB-219NC3F-LDA1: default 2.5 GbE x2; the other SKU support 2.5GbE by option.

## Packing List

| Part Number    | Description                             | Quantity |
|----------------|---|----------|
| AIMB-219 Board | AIMB-219 motherboard                    | 1        |
| 170003194-21   | SATA HDD cable                          | 1        |
| 1700034404-01  | 1-to-1 serial port cable, 50cm          | 1        |
| 1960115632T001 | I/O port bracket                        | 1        |
| 2046021900     | Startup manual for AIMB-219             | 1        |
| 1970005854T001 | Fanless heatsink for CPU i3-N305 or N97 | 1        |
| 1960064228T011 | Fanless heatsink for CPU N200 or N50    | 1        |
| 19350304A0     | M.2 Screw, M3x4L R/S D=5.3 H=2 (2+)     | 2        |
| 1910003418-01  | M.2 Post, F=M3x4L M=M3x3L B=5 H=5.2     | 1        |
| 1700018785-01  | SATA power cable                        | 1        |

## I/O View



## Optional Chassis

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

## Optional Accessories

| Part Number       | Description                 |
|-------------------|-----------------------------|
| 1700034405-01     | 1-to-1 USB cable, 50cm      |
| 96PSA-A120W12V1-3 | Adapter AC100-240V 120W 12V |

## Embedded OS/API

| OS         | Part No.       | Description                        |
|------------|----------------|------------------------------------|
| Ubuntu     | 20706U22DS0039 | img UbuntuD AIMB-219 64b 22.04 ENU |
| Windows 10 | 20706WX1ES0083 | img W10 21EL AIMB-219 64b 21H2 ENU |
| Windows 10 | 20706WX1HS0083 | img W10 21HL AIMB-219 64b 21H2 ENU |
| Windows 10 | 20706WX1VS0083 | img W10 21VL AIMB-219 64b 21H2 ENU |

# Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



## AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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### PRŮMYSLOVÉ POČÍTAČE

*fanless embedded PC, do racku, ...*



### POČÍTAČE S DISPLEJEM

*panelové PC, terminály, do vozidel, ...*



### AUTOMATIZACE A SBĚR DAT

*převodníky, karty, moduly, switche, ...*



### PERIFERIE A KOMPONENTY

*monitory, klávesnice, desky, skříně, ...*



### NOTEBOOKY A TABLETY

*odolné, windows, android, IP65, ...*



### INFORMAČNÍ KIOSKY

*interiérové, venkovní, ...*



### MEDICÍNSKÁ TECHNIKA

*počítače, tablety, LCD, klávesnice, ...*



### SOFTWAREVÁ ŘEŠENÍ

*pro výrobu, zaměstnance, kiosky, ...*



### PŘEJÍT DO E-SHOPU

[eshop.autocont-ipc.cz](http://eshop.autocont-ipc.cz)



### DOPRAVA ZDARMA

Doprava zdarma v ČR a SR při objednávce nad 10 000 Kč bez DPH nebo nad 400 EUR.



### PRODLOUŽENÁ ZÁRUKA

Záruka 2 roky na vyráběné počítače s možností jejího prodloužení až na 5 let.



### ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



### SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.