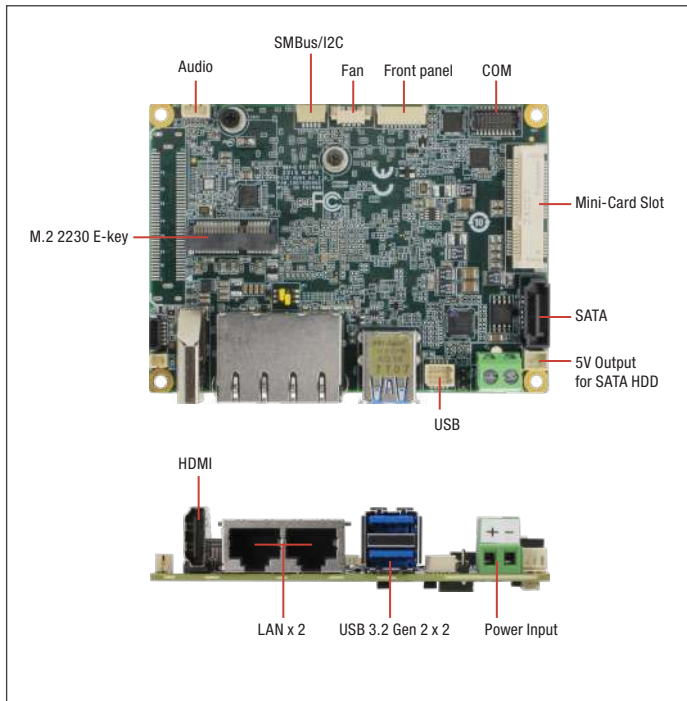


Intel Atom® x7000E Series, N-series, Core™ i3-N305 Processor (formerly Alder Lake N)



Specifications

| SYSTEM | |
|-------------------|---|
| FORM FACTOR | PICO-ITX |
| CPU | Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3 Processor N-series Processors: Intel® Processor N50 (2C, 1.00 GHz, 6W) Intel® Processor N97 (4C, 2.00 GHz, 12W) Intel® Core™ i3-N305 (8C, 1.80 GHz, 15W) Intel Atom® x7425E (4C, 1.50 GHz, 12W) |
| CHIPSET | Integrated with Intel® SoC |
| MEMORY TYPE | Onboard LPDDR5, Single Channel (Max. 16GB) |
| BIOS | UEFI |
| WAKE ON LAN | Yes |
| WATCHDOG TIMER | 255 Levels |
| SECURITY | TPM 2.0 |
| RTC Battery | Lithium Battery 3V/240mAh |
| DIMENSION | 3.94" x 2.84" (100mm x 72mm) |
| Gross Weight | 0.18 lbs (0.08 kg) |
| OS Support | Windows 10 (64 bit) Ubuntu 22.04.2/Kernel 5.19 |
| POWER | |
| POWER REQUIREMENT | +12V |
| POWER SUPPLY TYPE | AT/ATX |
| CONNECTOR | 2-pin Phoenix Connector (Default) Lockable DC Jack Connector (colay) |
| POWER CONSUMPTION | Intel® Core™ i3-N305, LPDDR5 16GB x1, 2.97A@ +12V (TYPICAL) Intel® Core™ i3-N305, LPDDR5 16GB x1, 4.46A@ +12V (MAX) |
| DISPLAY | |
| CONTROLLER | Intel® Gen 12 UHD Graphics |
| LVDS/eDP | LVDS x 1 (18/24bit 2CH) 1920 x 1200 @60Hz eDP 1.4 x 1, 7680 x 4320 (Optional) |
| Display Interface | HDMI 1.4 x 1, 3840 x 2160 @30Hz DDI (Via BIO, Optional) |
| Multiple Display | Up to 3 Simultaneous Displays |
| AUDIO | |
| CODEC | Realtek ALC256 (Optional) |
| AUDIO INTERFACE | Line-out (Optional) |
| Speaker | — |
| EXTERNAL I/O | |
| ETHERNET | Intel® i226 2.5GbE, RJ-45 x 1 Realtek RTL8111H-CG, 1GbE, RJ-45 x 1 |
| USB | USB 3.2 Gen 2 x 2 |

Features

- Onboard LPDDR5 4800, Single Channel (Max.16GB)
- HDMI1.4 x 1, eDP1.4/LVDS x 1
- Intel® i226v 2.5GbE, RJ-45 x 1
- REALTEK.RTL8111H-CG 1GbE, RJ-45 x 1
- Full-Size mSATA/mPCIe x 1, M.2 2230 E-key x1
- USB 3.2 Gen2 x 2port, USB2.0 x 2, RS-232/422/485 x 2
- TPM2.0, SATA 6.0Gbps x 1, GPIO 4-bit, SMBUS/I2C x 1
- BIO support (Optional), Audio: Line out (Optional)
- DC 9~36V input (Optional, support by power adapter card)



| SERIAL PORT | — |
|-----------------------------|--|
| VIDEO | HDMI 1.4 x 1 |
| INTERNAL I/O | |
| USB | USB 2.0 x 2 |
| SERIAL PORT | COM 1~2 (RS-232/422/485, supports 5V/12V/RI) |
| VIDEO | LVDS/eDP x 1 (Default: LVDS) Inverter x 1 (12V/2A) |
| SATA | SATA 6Gb/s x 1 +5V SATA Power Connector x 1 |
| AUDIO | Line-out header x 1 (Optional) |
| DIO/GPIO | GPIO 4-bit |
| SMBus/I2C | SMBus/I2C x 1 (Default: SMBus) |
| FAN | 4pins Smart Fan x1 |
| Front Panel | HDD LED, PWR LED, Power Button, Buzzer, Reset |
| Others | — |
| EXPANSION | |
| Mini PCI-E/mSATA | Full-Size mSATA/mPCIe x 1 (default: mSATA, select with BIOS) |
| M.2 | M.2 2230 E-Key x 1 (PCIe 3.0 [x1] + USB 2.0) |
| Others | BIO (Optional, need customized BIOS, USB2.0, SMBUS, DDI, LPC, PCIe [x1] x 1) |
| ENVIRONMENT & CERTIFICATION | |
| OPERATING TEMP | 32°F ~ 140°F (0°C ~ 60°C) WITAS 2: -40°F ~ 185°F (-40°C ~ 85°C) |
| STORAGE TEMP | -40°F ~ 185°F (-40°C ~ 85°C) |
| OPERATING HUMIDITY | 0% ~ 90% relative humidity, non-condensing |
| MTBF (HOURS) | 1,087,822 |
| EMC | CE/FCC Class A |

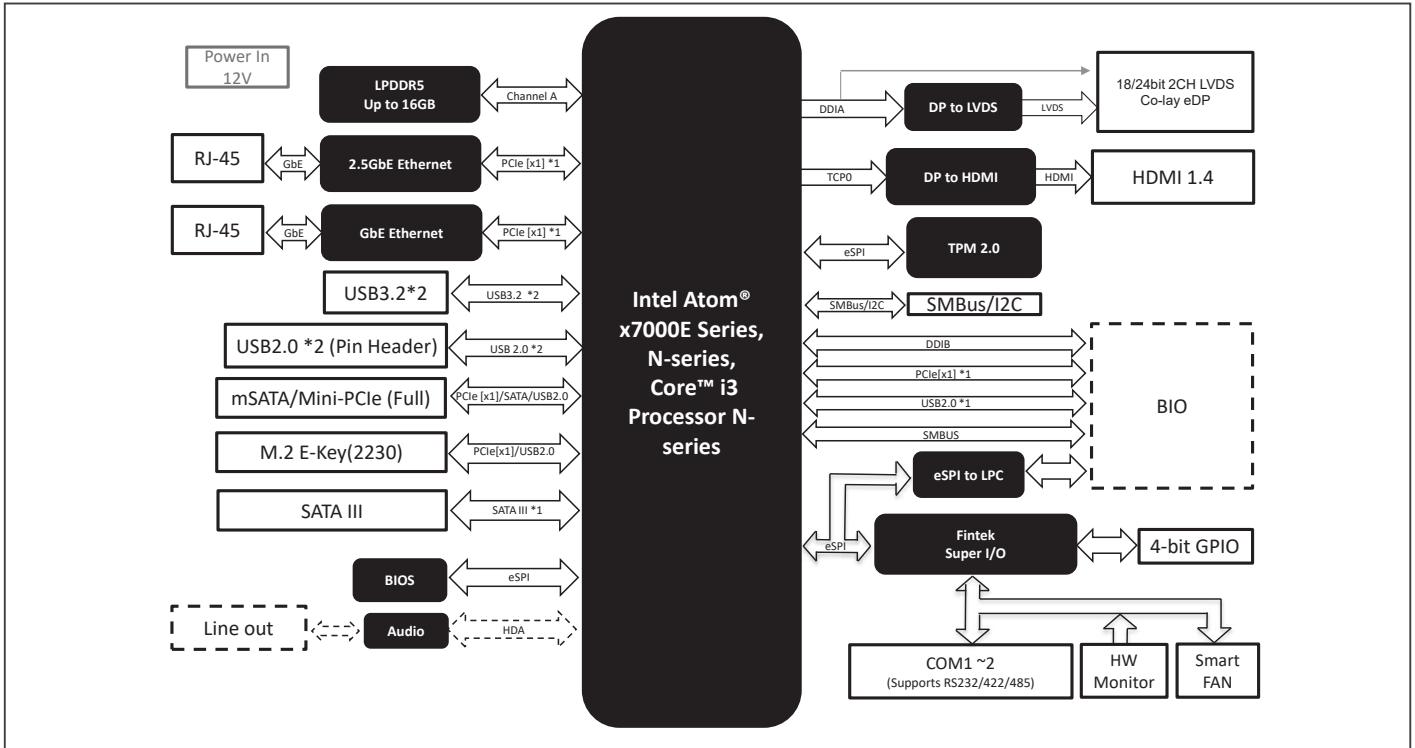
Packing List

- PICO-ADN4

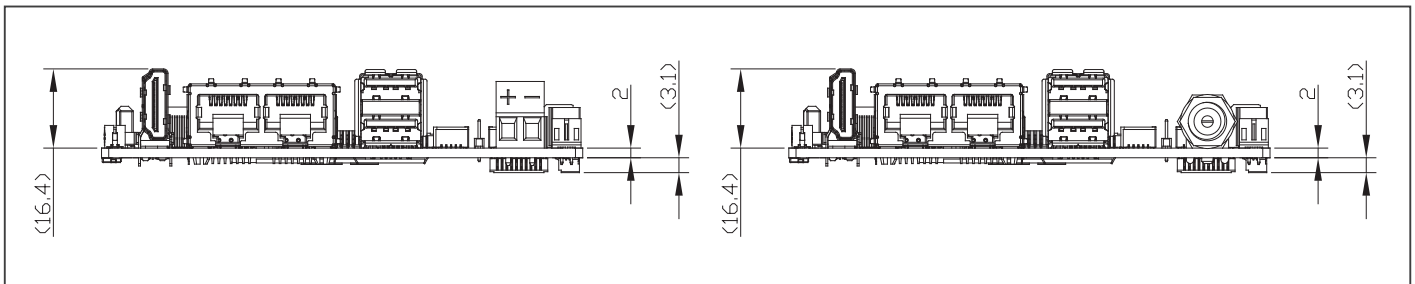
Optional Accessories

| Part Number | Description | Qty. |
|-------------------|---|------|
| 170X000287 | Front Panel cable.10cm | 1 |
| 170X000231 | Dual COM cable.30cm | 1 |
| 170010010D | USB2.0 cable.10cm | 1 |
| 170X000593 | SATA CABLE.15cm | 1 |
| 1702150155 | SATA power cable.15cm | 1 |
| 170X000779 | Audio cable.25cm | 1 |
| 1702030200 | Power cable (Phoenix type to DC Jack).20cm | 1 |
| PICO-ADN4-HSP01 | Heat Spreader.AL.100*72*10.5mm | 1 |
| PICO-ADN4-HSK01 | Heat Sink.100*72*15.5mm.Silver.To be used with HSP | 1 |
| PICO-ADN4-FAN01 | Cooler.100*72*20.3mm.for PICO-ADN4 | 1 |
| PER-P30D-A10-0001 | 120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.0, 30 x 72mm | 1 |

Block Diagram



Dimension Unit: mm



Ordering Information

| Part number | CPU | Memory | Display | Storage | LAN | USB | COM | Expansion slot | Power | Operating Temp | Audio | Others |
|----------------------|----------------------|-------------|---------------------|----------------|-----------------------|---------------------------------|-----|---|-----------------------|----------------|-------|------------------|
| PICO-ADN4-A10-0001 | Intel® Processor N50 | LPDDR5 8GB | HDMI x1 LVDS x 1 | SATA 6Gb/s x 1 | GbE x 1 2.5GbE x 1 | USB 2.0 x 2 USB3.2 Gen 2 x 2 | 2 | M.2 2230 E-key x 1 miniCard (Full) x 1 | +12V (Terminal block) | 0°C ~ 60°C | — | GPIO, SMBUS, TPM |
| PICO-ADN4-A10-0002 | Intel® Processor N97 | LPDDR5 8GB | HDMI x1 LVDS x 1 | SATA 6Gb/s x 1 | GbE x 1 2.5GbE x 1 | USB 2.0 x 2 USB3.2 Gen 2 x 2 | 2 | M.2 2230 E-key x 1 miniCard (Full) x 1 | +12V (Terminal block) | 0°C ~ 60°C | — | GPIO, SMBUS, TPM |
| PICO-ADN4-A10-0003 | Intel Atom® x7425E | LPDDR5 8GB | HDMI x1 LVDS x 1 | SATA 6Gb/s x 1 | GbE x 1 2.5GbE x 1 | USB 2.0 x 2 USB3.2 Gen 2 x 2 | 2 | M.2 2230 E-key x 1 miniCard (Full) x 1 | +12V (Terminal block) | 0°C ~ 60°C | — | GPIO, SMBUS, TPM |
| PICO-ADN4-A10-0004 | Intel® Core™ i3-N305 | LPDDR5 16GB | HDMI x1 LVDS x 1 | SATA 6Gb/s x 1 | GbE x 1 2.5GbE x 1 | USB 2.0 x 2 USB3.2 Gen 2 x 2 | 2 | M.2 2230 E-key x 1 miniCard (Full) x 1 | +12V (Terminal block) | 0°C ~ 60°C | — | GPIO, SMBUS, TPM |
| PICO-ADN4W2-A10-0002 | Intel® Processor N97 | LPDDR5 8GB | HDMI x1 LVDS x 1 | SATA 6Gb/s x 1 | GbE x 1 2.5GbE x 1 | USB 2.0 x 2 USB3.2 Gen 2 x 2 | 2 | M.2 2230 E-key x 1 miniCard (Full) x 1 | +12V (Terminal block) | -40~85°C | — | GPIO, SMBUS, TPM |