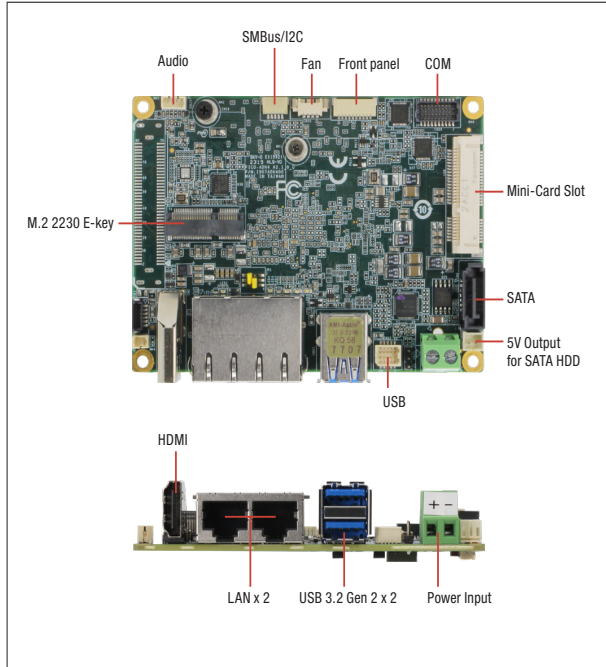


# PICO-ADN4

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

Pico-ITX Boards



## Features

- Onboard LPDDR5 4800, Single Channel (Max.16GB)
- HDMI1.4 x 1, eDP1.4b/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 x 1
- USB 3.2 Gen2[x1] 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
<b>INTERNAL I/O</b>	
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	—
<b>EXPANSION</b>	
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)
<b>ENVIRONMENT &amp; CERTIFICATION</b>	
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

## Specifications

<b>SYSTEM</b>	
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
<b>POWER</b>	
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, DDR5 32GB x1, 2.97A@ +12V (TYPICAL) Intel® Core™ i3-N305, DDR5 32GB x1, 4.46A@ +12V (MAX)
<b>DISPLAY</b>	
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
<b>AUDIO</b>	
CODEC	Realtek ALC256 (Optional)
AUDIO INTERFACE	Line-out (Optional)
Speaker	—
<b>EXTERNAL I/O</b>	
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

## Packing List

- PICO-ADN4

## Optional Accessories

Part Number	Description	Qty.
170X000287	Front Panel cable.10cm	1
170X000231	Dual COM cable.30cm	1
1700100100	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.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

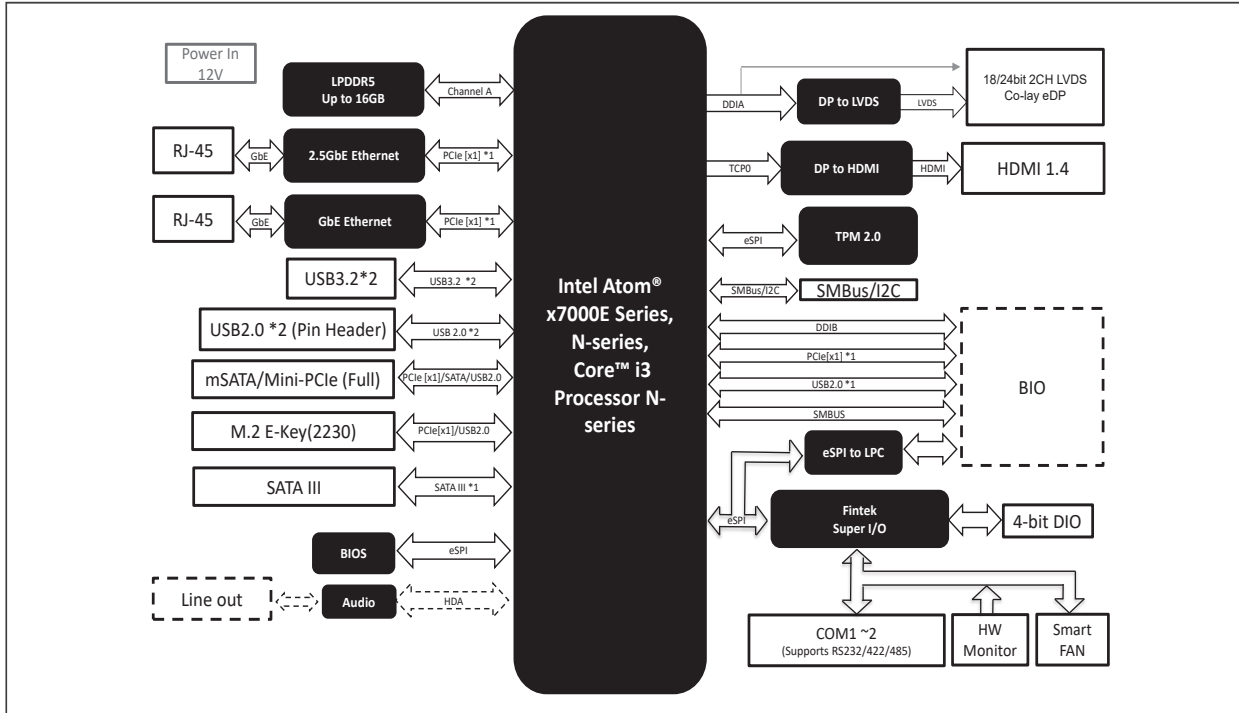
Note: All specifications are subject to change without notice.

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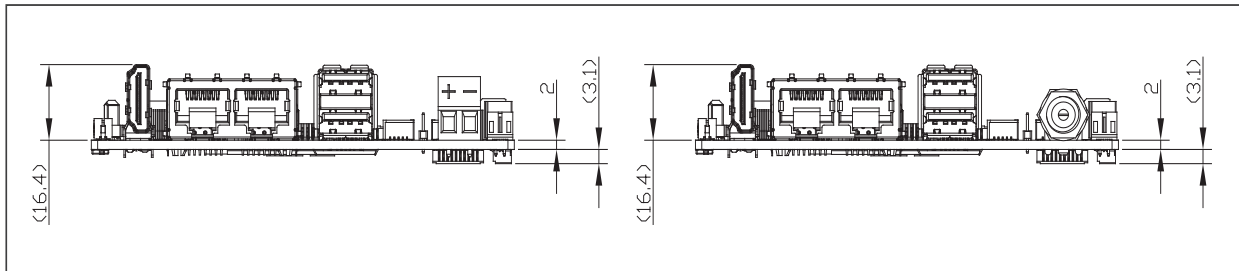
Pico-ITX Boards

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part number	CPU	Display	Storage	LAN	USB	RS-232/422/485	Expansion slot	Power	Operating Temp	Others
PICO-ADN4-A10-0001	Intel® Processor N50	HDMI x1 LVDS x1	SATA 6Gb/s x1	GbE x1 2.5GbE x1	USB 2.0 x2 USB3.2 Gen 2 x2	2	M.2 2230 E-key x1 miniCard (Full) x1	+12V (Terminal block)	0~60°C	SMBus x1, TPM2.0, DIO
PICO-ADN4-A10-0002	Intel® Processor N97	HDMI x1 LVDS x1	SATA 6Gb/s x1	GbE x1 2.5GbE x1	USB 2.0 x2 USB3.2 Gen 2 x2	2	M.2 2230 E-key x1 miniCard (Full) x1	+12V (Terminal block)	0~60°C	SMBus x1, TPM2.0, DIO
PICO-ADN4-A10-0003	Intel Atom® x7425E	HDMI x1 LVDS x1	SATA 6Gb/s x1	GbE x1 2.5GbE x1	USB 2.0 x2 USB3.2 Gen 2 x2	2	M.2 2230 E-key x1 miniCard (Full) x1	+12V (Terminal block)	0~60°C	SMBus x1, TPM2.0, DIO
PICO-ADN4-A10-0004	Intel® Core™ i3-N305	HDMI x1 LVDS x1	SATA 6Gb/s x1	GbE x1 2.5GbE x1	USB 2.0 x2 USB3.2 Gen 2 x2	2	M.2 2230 E-key x1 miniCard (Full) x1	+12V (Terminal block)	0~60°C	SMBus x1, TPM2.0, DIO
PICO-ADN4W2-A10-0002	Intel® Processor N97	HDMI x1 LVDS x1	SATA 6Gb/s x1	GbE x1 2.5GbE x1	USB 2.0 x2 USB3.2 Gen 2 x2	2	M.2 2230 E-key x1 miniCard (Full) x1	+12V (Terminal block)	-40~85°C	SMBus x1, TPM2.0, DIO

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