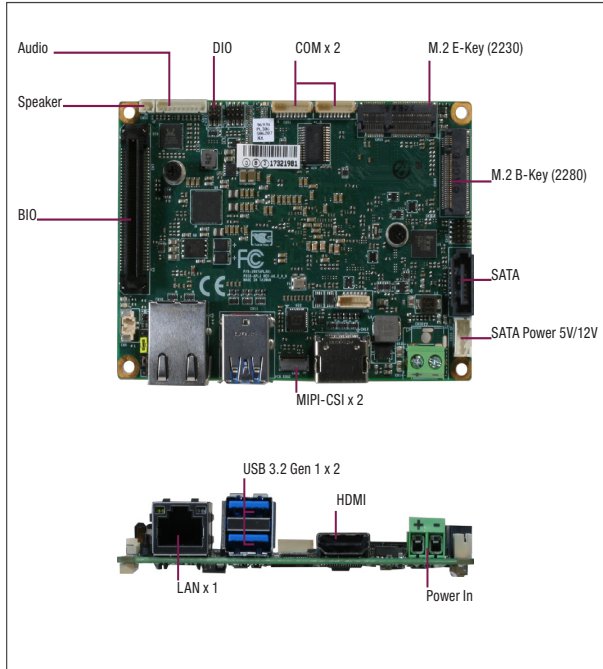


# PICO-APL3

Pico-ITX Board with Intel® Pentium® N4200/ Celeron® N3350/ Atom™ Processor SoC

Pico-ITX Boards



## Features

- Intel® Pentium® N4200/ Celeron® N3350/ Atom™ Processor SoC
- Onboard Storage eMMC 32GB (Optional to 16GB/64GB/128GB)
- Onboard DDR3L 2GB or 4GB
- Single Gigabit Ethernet Support
- HDMI 1.4b, eDP for Display
- BIO Reserved (Optional)
- USB 3.2 Gen 1 x 2, USB 2.0 x 2, SATA 6.0Gb/s x 1
- M.2 B Key (2280) x 1, M.2 E Key (2230) x 1
- Onboard HDA Audio Supports (Line in, Line-out, MIC)
- MIPI-CSI 2 Lanes x 1 for 2M Camera (Optional)
- MIPI-CSI 4 Lanes x 1 for 8M Camera (Optional)



INTERNAL I/O	
USB	USB 2.0 x 2 (Internal, co-use with FAN connector)
SERIAL PORT	COM1, COM2 (RS232)
VIDEO	eDP x 1 (up to 3840x2160@60Hz, Optional)
SATA	SATA III x 1 +5V SATA Power Connector x 1 eMMC 16GB (Optional to 32GB/64GB/128GB)
AUDIO	Audio Header x 1
DIO/GPIO	4-bit
SMBus/I2C	I2C/I2S x 1 (I2C as default)
Touch	—
FAN	—
SIM	—
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	—
M.2	M.2 E-Key 2230 x 1 (PCIe/USB) M.2 B-Key 2280 x 1 (SATA/USB)
Others	MIPI-CSI x 2 Lanes (Optional) MIPI-CSI x 4 Lanes (Optional) BIO (Optional)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 140°F (0°C ~ 60°C)
STORAGE TEMP	-40°F ~ 185°F (-40°C ~ 85°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	110,000
EMC	CE/FCC Class A

## Specifications

SYSTEM	
FORM FACTOR	PICO-ITX
CPU	Intel® Atom™/Celeron®/Pentium® Processor: Pentium N4200 (4C/4T,1.10GHz,up to 2.50GHz, TDP 6W) Celeron N3350 (2C/2T,1.10GHz,up to 2.40GHz, TDP 6W) Atom E3950 (4C/4T,1.60GHz,up to 2.00GHz, TDP 12W) Atom E3940 (4C/4T,1.60GHz,up to 1.80GHz, TDP 9.5W) Atom E3930 (2C/2T,1.30GHz,up to 1.80GHz, TDP 6.5W)
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	Onboard DDR3L 2GB (Optional to 4GB)
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0 (Optional)
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)
POWER	
POWER REQUIREMENT	+12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
POWER CONSUMPTION	Intel® N4200 processor, DDR3L 4GB, 1.1A@12V
DISPLAY	
CONTROLLER	Intel® HD Graphics 500/505
LVDS/eDP	eDP x 1 (up to 3840x2160@60Hz, Optional)
Display Interface	HDMI 1.4b x 1 (up to 3840 x 2160@30Hz) DDI (BIO, Optional)
Multiple Display	Up to 3 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC269
AUDIO INTERFACE	Line-in/Line-out/MIC
Speaker	Amplifier Header
EXTERNAL I/O	
ETHERNET	Realtek 8111 Gigabit Ethernet 10/100/1000Base, RJ-45 x 1
USB	USB 3.2 Gen 1 x 2
SERIAL PORT	—
VIDEO	HDMI 1.4b x 1 (up to 3840 x 2160@30Hz)

## Packing List

### • PICO-APL3

## Optional Accessories

Part Number	Description	Qty
1709070500	(TF) SATA Cable, 50cm	1
1702150121	(TF) SATA Power Cable, 15cm	1
PICO-APL3-HSK01	Heatsink, used with heat spreader	1
PICO-APL3-HSP01	Heat Spreader	1
1700040151	(TF) USB Cable, 15cm	2
1701090122	(TF) Flat Cable, D-Sub 9P(M), 9P 1.0mm Housing, 12cm	2
1709100254	(TF) Phone Jack Cable, 25cm	1
1255300408	(TF) Power Adapter, 12V, 40W, FSP, FSP040-RHAN2.9NA0404990, ESD	1
1702030176	(TF) Power Cable, 3P DC Jack, TERMINAL*2.17cm, TKS-G21-LN05	1

\*Please refer to PICO-APL3-SEMI page for further option.

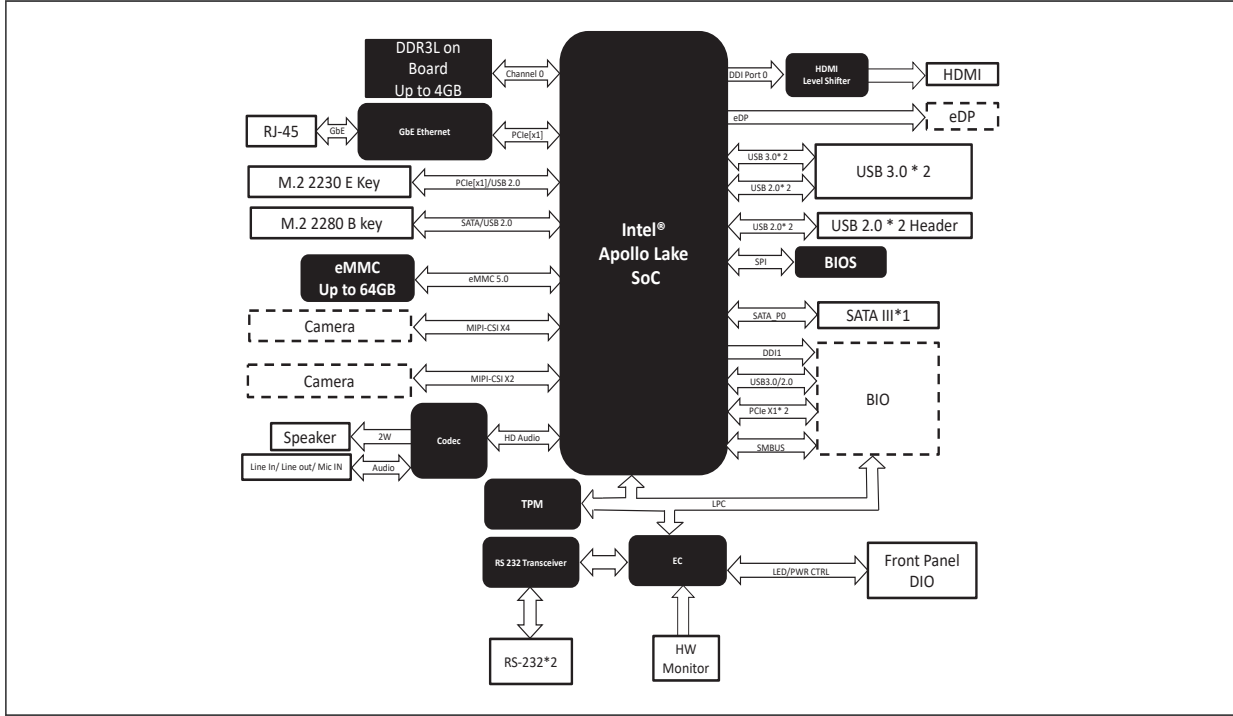
\*eDP cable custom by required.

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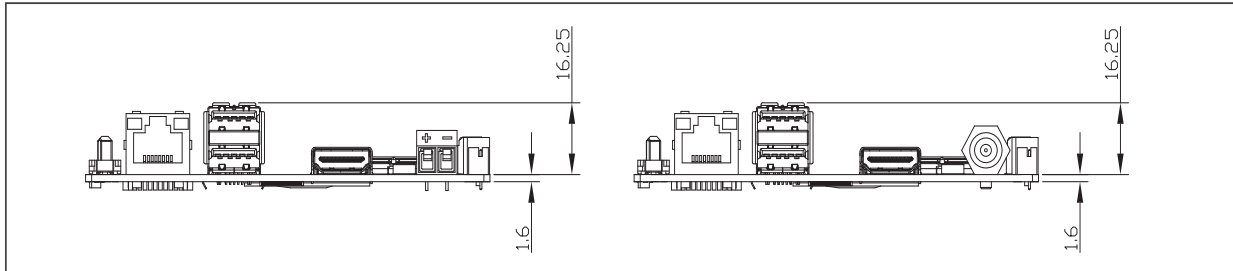
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PICO-ITX Boards

## Block Diagram



## Dimension Unit: mm



## Ordering Information

Part Number	CPU	Memory	Thermal	Display	Storage	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	Temp.	Others
PICO-APL3-A10-F001	Celeron® N3350 (Dual Core)	Onboard DDR3L 2GB	W/o Heatspreader	HDMI x 1	SATA 3.0 x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 1	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	2	—	M.2 2230 (E Key) x 1	+12V (Phoenix Terminal)	0°C ~ 60°C	DIO 4 bit Full Audio with Amp
PICO-APL3-A10-F002	Celeron® N3350 (Dual Core)	Onboard DDR3L 4GB	W/o Heatspreader	HDMI x 1 eDP x 1	SATA 3.0 x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 1	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	2	—	M.2 2230 (E Key) x 1	+12V (Phoenix Terminal)	0°C ~ 60°C	DIO 4 bit Full Audio with Amp
PICO-APL3-A10-F003	Pentium® N4200 (Quad Core)	Onboard DDR3L 4GB	W/o Heatspreader	HDMI x 1	SATA 3.0 x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 1	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	2	—	M.2 2230 (E Key) x 1	+12V (Phoenix Terminal)	0°C ~ 60°C	DIO 4 bit Full Audio with Amp
PICO-APL3-A10-FD04	Celeron® N3350 (Dual Core)	On board DDR3L 2GB	W/o Heatspreader	HDMI x 1	SATAIII x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 1	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	2	—	M.2 2230 (E Key) x 1	+12V (DC Jack)	0°C ~ 60°C	DIO 4 bit Full Audio with Amp

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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