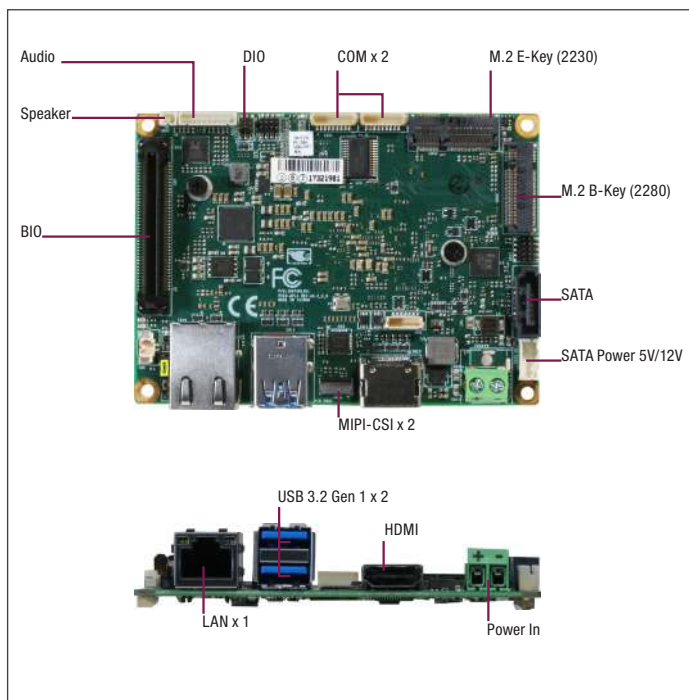


Pico-ITX Board with Intel® Pentium® N4200/ Celeron® N3350/ Atom® Processor SoC



## 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
SERIAL PORT	COM1~2 (RS232)
VIDEO	eDP x 1 (Optional)
SATA	SATA 6.0 Gb/s x 1, +5V SATA Power Connector x 1 eMMC5.1 32GB (Optional to 16/64GB)
AUDIO	Audio Header
DIO/GPIO	GPIO 4-bit
SMBus/I2C	I2C/I2S x 1 (Default: I2C)
FAN	—
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	—
M.2	M.2 2230 E-Key x 1 (PCIe 3.0 [x1] + USB2.0) M.2 2280 B-Key x 1 (SATA + USB2.0)
Others	MIPI-CSI x 2 Lanes (Optional) MIPI-CSI x 4 Lanes (Optional) BIO x 1 (Optional, supports PCIe [x1] x 2, DDI, LPC, SMBUS, USB3.0/2.0)
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® Processors: N4200 (4C/4T, 1.10GHz, 6W) N3350 (2C/2T, 1.10GHz, 6W) E3950 (4C/4T, 1.60GHz, 12W) E3940 (4C/4T, 1.60GHz, 9.5W) E3930 (2C/2T, 1.306GHz, 6.5W)
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	Onboard DDR3L 1866, Single Channel, Non-ECC (Max.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) Linux Ubuntu 16.04.2/ Kernel 4.8.0-36
POWER	
POWER REQUIREMENT	+12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
POWER CONSUMPTION	Intel® N4200, DDR3L 8GB x 1, 1.08A, eMMC 32GB@ +12V(TYPICAL)
DISPLAY	
CONTROLLER	Intel® HD Graphics 500/505
LVDS/eDP	eDP x 1, 1920 x 1080 @60Hz (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 ALC269
AUDIO INTERFACE	Line-in/Line-out/MIC
Speaker	Amplifier Header
EXTERNAL I/O	
ETHERNET	Realtek 8111 1GbE, RJ45 x 1
USB	USB 3.2 Gen1 x 2
SERIAL PORT	—
VIDEO	HDMI 1.4 x 1

## Packing List

- PICO-APL3

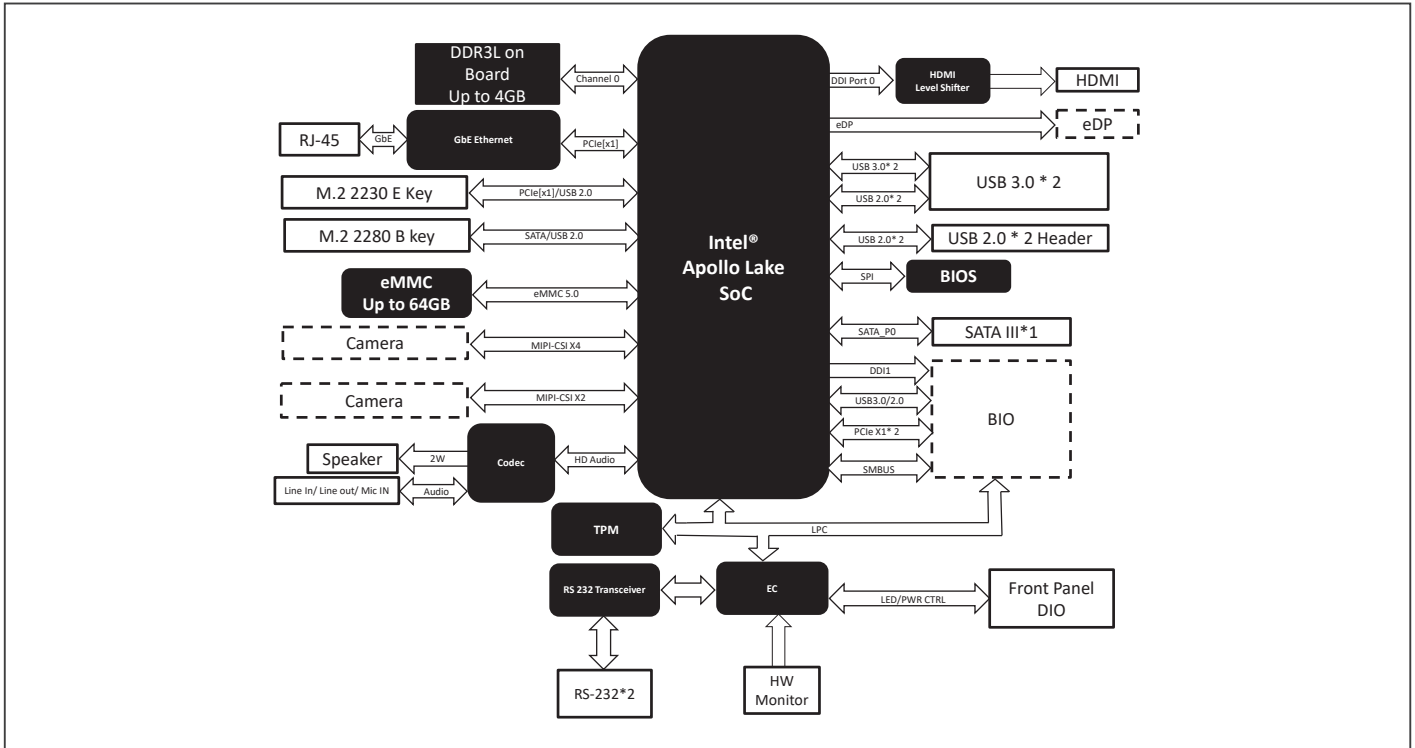
## Optional Accessories

Part Number	Description	Qty
1709070500	SATA CABLE.500mm	1
1702150121	SATA power cable.120mm.for PFM-945C	1
PICO-APL3-HSK01	Heat Sink.100*72*15.5mm.Silver.used with HSP	1
PICO-APL3-HSP01	Heat Spreader.100*72*7mm.Silver.for PICO-APL3 N4200/N3350 CPU	1
1700040151	USB Cable.150mm.for PICO-APL3	2
1701090122	Flat Cable.120mm	2
1702030176	Power Cable.3P DC jack.TERMINAL*21.7mm	1
PER-P30D-A10	120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.0, 30 x 72mm	1

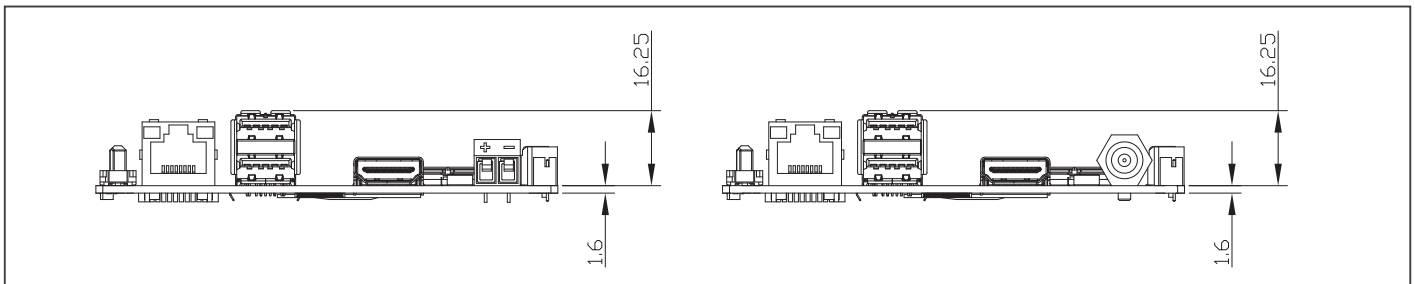
\*Please refer to PICO-APL3-SEMI page for further option.

\*eDP cable custom by required.

## 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