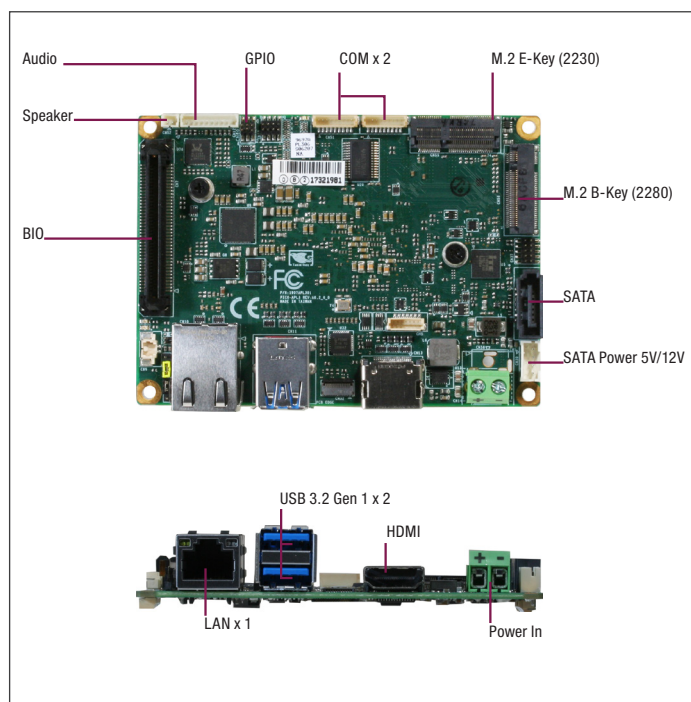




Pico-ITX Board with Intel® Pentium® N4200/ Celeron® N3350/ Atom® Processor SoC



## 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)



Video	HDMI 1.4 x 1
<b>Internal I/O</b>	
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(Audio function not available for WITAS SKU)
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	—
<b>Expansion</b>	
Mini PCIe/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	BIO x 1 (Optional, supports PCIe [x1] x 2, DDI, LPC, SMBUS, USB3.0/2.0)
<b>Environment &amp; Certification</b>	
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

<b>System</b>	
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
<b>Power</b>	
Power Requirement	+12V
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
Power Consumption	Intel® E3950, DDR3L 4GB x 1, 2.20A, @ +12V(TYPICAL) Intel® E3950, DDR3L 4GB x 1, 2.37A, @ +12V(Max)
<b>Display</b>	
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
<b>Audio</b>	
Codec	Realtek ALC256
Audio Interface	Line-In / Line-Out / Mic (Audio function not available for WITAS SKU)
Speaker	Amplifier Header
<b>External I/O</b>	
Ethernet	Realtek 8111 1GbE, RJ45 x 1
USB	USB 3.2 Gen1 x 2
Serial Port	—

## Packing List

- PICO-APL3

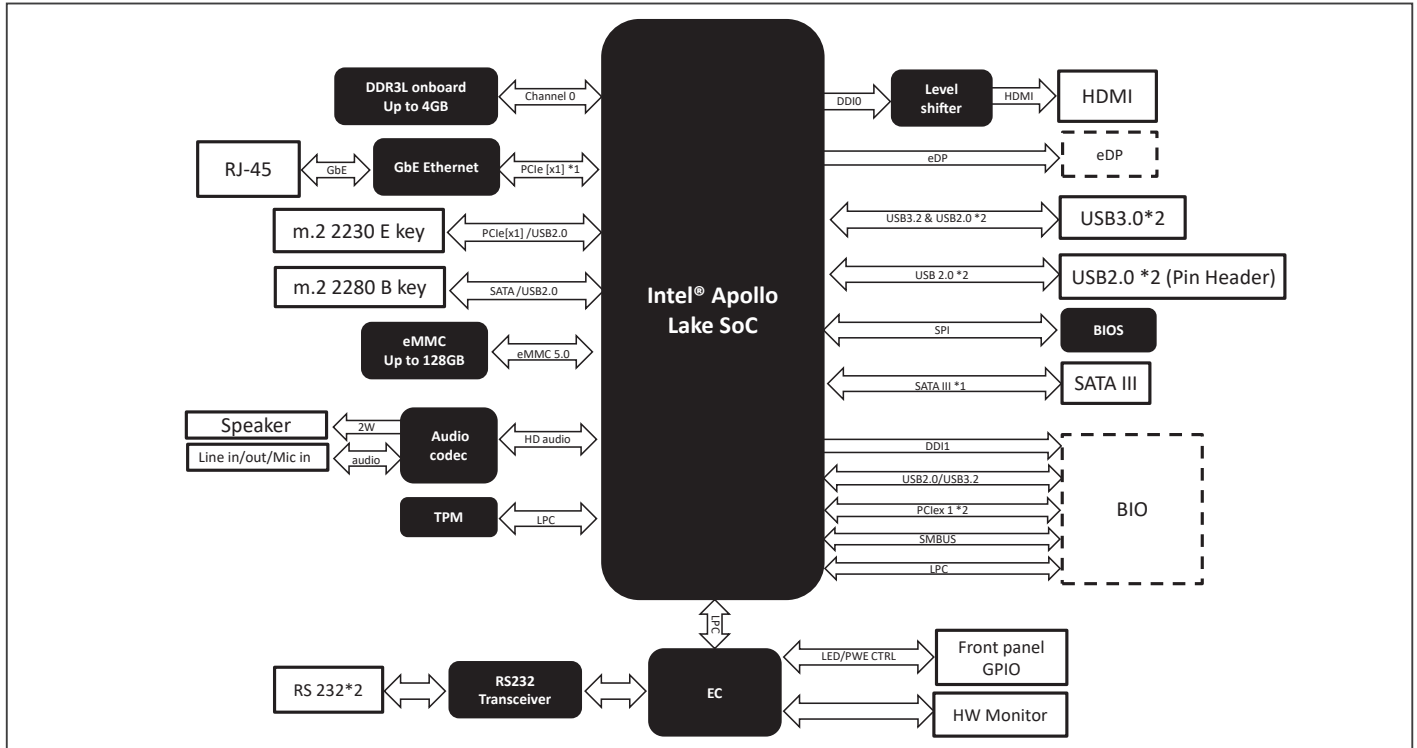
## Optional Accessories

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

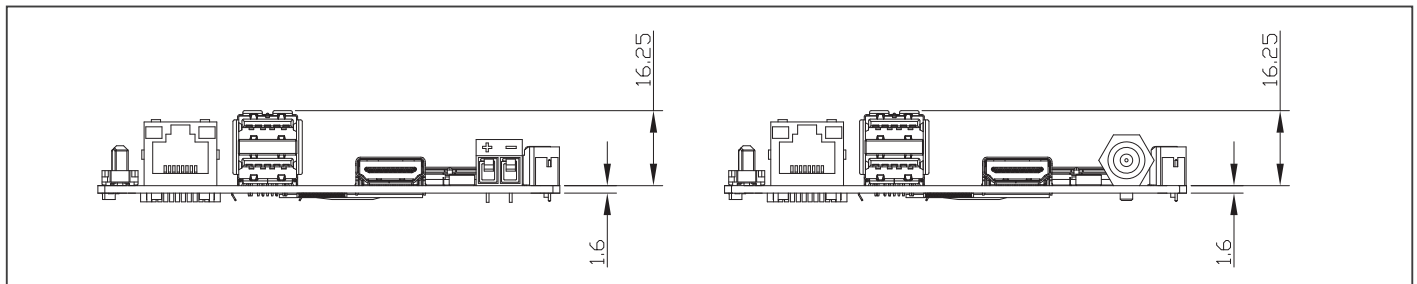
\*Please refer to PICO-APL3-SEMI page for further option.  
\*eDP cable custom by required.



## 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-A11-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	GPIO 4 bit Full Audio with Amp
PICO-APL3-A11-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	GPIO 4 bit Full Audio with Amp
PICO-APL3-A11-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	GPIO 4 bit Full Audio with Amp