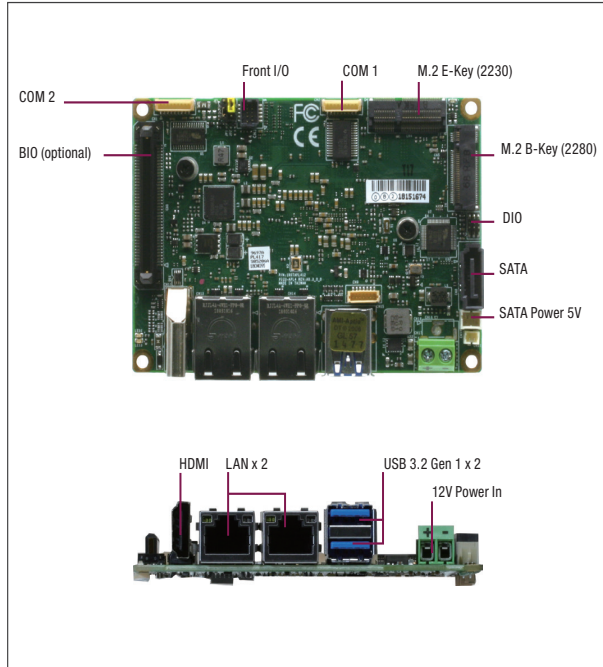


03 PICO-APL4

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

Pico-ITX Boards



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	—
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, 1.43A@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	—
AUDIO INTERFACE	—
Speaker	—
EXTERNAL I/O	
ETHERNET	Realtek 8111 Gigabit Ethernet 10/100/1000Base, RJ-45 x 2
USB	USB 3.2 Gen 1 x 2
SERIAL PORT	—
VIDEO	HDMI 1.4b x 1 (up to 3840 x 2160@30Hz)

Features

- Intel® Atom™/ Pentium® N4200/ Celeron® N3350 Processor SoC
- Onboard DDR3L 2GB (Optional to 4GB)
- Onboard Storage eMMC 32GB (optional to 16GB/64GB/128GB)
- Dual Gigabit Ethernet Support
- HDMI 1.4b, eDP (Optional) 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



INTERNAL I/O	
USB	USB 2.0 x 2 (Internal, co-use with FAN connector)
SERIAL PORT	COM1: RS-232 x 1, COM2: RS-232/422/485 x 1 (Ring/ +5V/ +12V)
VIDEO	eDP x 1 (up to 3840x2160@60Hz, Optional)
SATA	SATA III x 1 +5V SATA Power Connector x 1 eMMC 32GB (Optional to 16GB/64GB/128GB)
AUDIO	—
DIO/GPIO	4-bit
SMBus/I2C	I2C/SMBus 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	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)	191,895
EMC	CE/FCC Class A

Packing List

- PICO-APL4

Optional Accessories

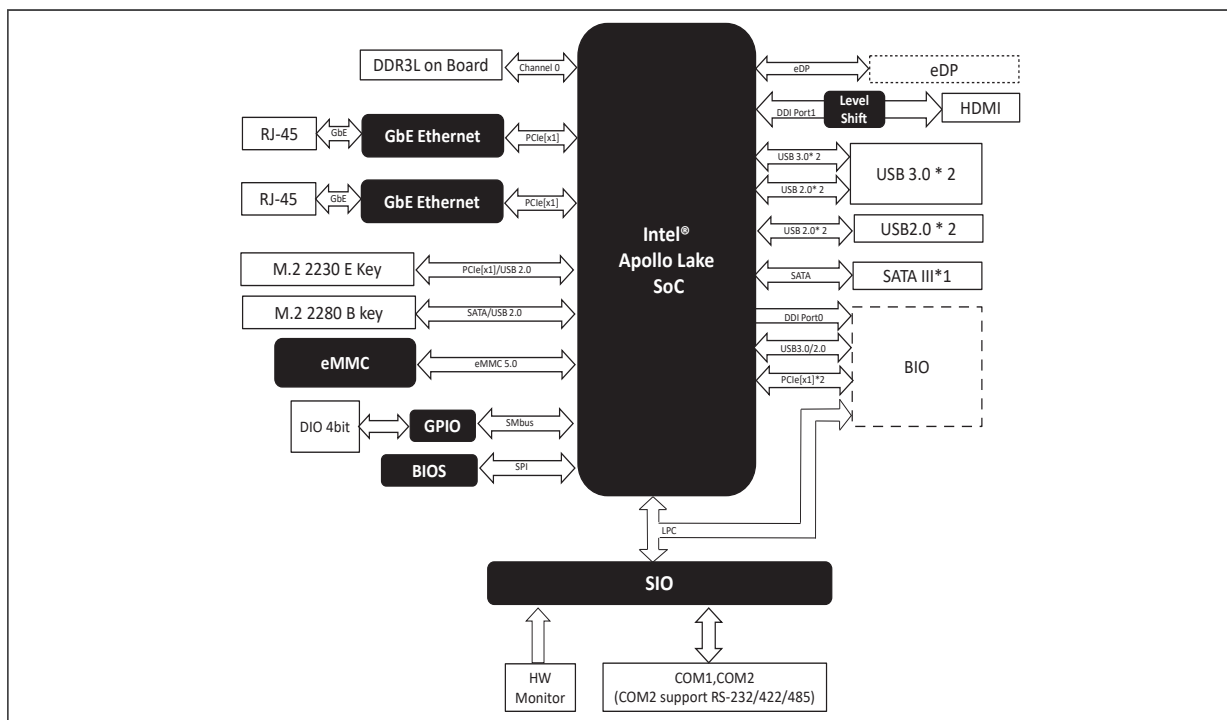
Part Number	Description	Qty
1709070500	(TF) SATA Cable, 50cm	1
1702150155	(TF) SATA Power Cable, 12cm	1
PICO-APL4-HSK01	Heat Sink.100*72*15.5mm.Silver.used with HSP	1
PICO-APL4-HSP01	Heat Spreader, 100 x 72 x 8.5 mm, Silver	1
1700040151	(TF) USB Cable, 15cm	2
1701090122	(TF) Flat Cable, D-Sub 9P(M), 9P 1.0mm Housing, 12cm	2
PICO-APL4-FAN01	CPU Cooler, 100*72*15.5mm, Silver, use w/HSP	1

*FAN Solution will be via one of internal USB port without FAN speed control.

*Please refer to PICO-APL4-SEMI for further option.

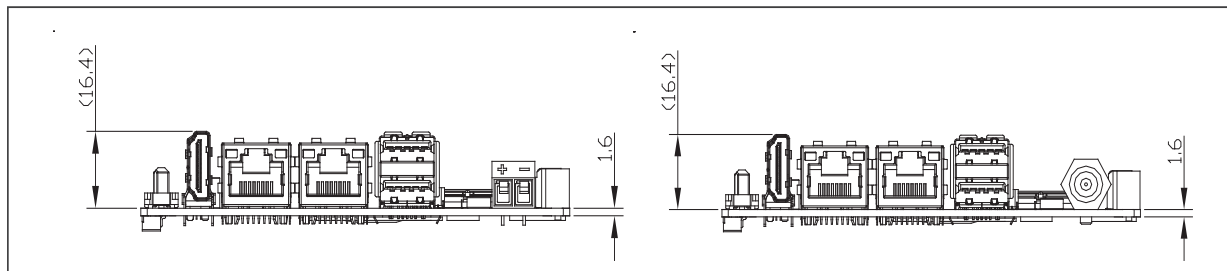
*eDP cable custom by required

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-APL4-A10-F001	Celeron® N3350 (Dual Core)	Onboard DDR3L 2GB	W/o Heatspreader	HDMI x 1	SATA 6.0Gb/s x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 2	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	1	1	M.2 2230 (E Key) x 1	+12V (Phoenix Terminal)	0°C ~ 60°C	DIO 4 bit
PICO-APL4-A10-F002	Celeron® N3350 (Dual Core)	Onboard DDR3L 4GB	W/o Heatspreader	HDMI x 1 eDP x 1	SATA 6.0Gb/s x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 2	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	1	1	M.2 2230 (E Key) x 1	+12V (Phoenix Terminal)	0°C ~ 60°C	DIO 4 bit
PICO-APL4-A10-F003	Pentium® N4200 (Quad Core)	Onboard DDR3L 4GB	W/o Heatspreader	HDMI x 1	SATA 6.0Gb/s x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 2	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	1	1	M.2 2230 (E Key) x 1	+12V (Phoenix Terminal)	0°C ~ 60°C	DIO 4 bit
PICO-APL4-A10-FD04	Celeron® N3350 (Dual Core)	Onboard DDR3L 2GB	W/o Heatspreader	HDMI x 1	SATAIII x 1 M.2 2280 (B Key) x 1 eMMC 32GB	GbE x 2	USB 3.2 Gen 1 x 2 (Rear) USB 2.0 x 2 (Internal)	1	1	M.2 2230 (E Key) x 1	+12V (DC Jack)	0°C ~ 60°C	DIO 4 bit

Remark: cooler is recommended as the thermal solution.

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.

US

sales@assured-systems.com

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660