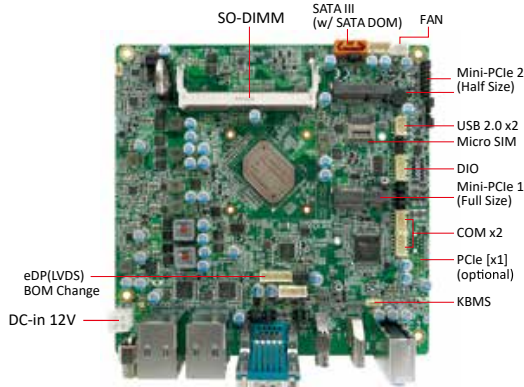


AMIX-APL1

Intel® Atom®/ Pentium®/ Celeron® Series SoC based Mini-ITX Motherboard with HDMI/ DP/ LVDS(eDP), SATA III, 4 COM,6 USB, Dual Intel® GbE LAN.



Key Features

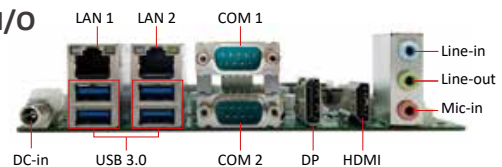
- Intel® Apollo Lake Atom®/ Pentium®/ Celeron series SoC onboard
- One 204-pin SO-DIMM up to 8GB DDR3L 1866MTs SDRAM
- Multi-Display: HDMI/DP/LVDS(eDP)
- Two Intel® Gigabit Ethernet ports
- 1 PCIe (x1), 2 Mini-PCIe (1 combo mSATA, 1 w/ micro-SIM) expansion slots
- Supports 4K/2K Resolution Display
- DC-in 12V, 19V ~ 24V (optional)
- Support TPM 1.2/2.0 (optional)

Product Specification

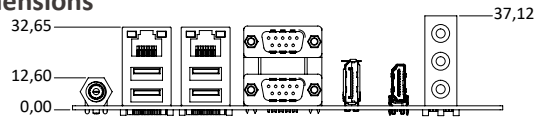
System Processor/Chipset	
Processor	Intel® Apollo Lake series SoC onboard Atom® x7-E3950 (1.6GHz/2.0GHz,QC,18EU, 12W) Atom® x5-E3940 (1.6GHz/1.8GHz,QC,12EU, 9.5W) Atom® x5-E3930 (1.3GHz/1.8GHz,DC,12EU, 6.5W) Pentium® N4200 (1.1GHz/2.5GHz,QC,18EU, 6W) Celeron® N3350 (1.1GHz/2.4GHz,DC,12EU, 6W)
Chipset	Intel® Apollo Lake SoC integrated
BIOS	AMI UEFI Flash ROM
Memory	
Technology	DDR3L SDRAM up to 1866 MT/s
Max. capacity	Up to 8GB
Socket	1 x 204-pin SO-DIMM
Display	
Graphics	Intel® HD Gen 9-LP Graphics
Display interface	1 x HDMI v1.4b, 1 x DP v1.2 1 x LVDS(eDP) (2ch 18/24-bit, co-layout eDP)
Multi-display	Up to three independent displays
Resolution	HDMI: 3840 x 2160 @ 30Hz (max) DP: 4096 x 2160 @ 60Hz (max) LVDS: Up to 1920 x 1200 @ 60Hz eDP: 1920 x 1080 @ 60Hz(max)
Ethernet	
Interface	10/100/1000 Mbps
Controller	Intel® I211 GbE / Intel® I211 GbE (optional)
Connector	2 x RJ45 (rear I/O)
Audio	
Interface	Line-in, Line-out, Mic-in
CODEC	Realtek ALC662 HD Audio Codec
Expansion Slot	
PCI Express	1 x PCIe (x1) (optional)
Mini-PCIe	1 x Full size (combo mSATA) 1 x Full size w/ micro-SIM
SATA	
Max. data transfer rate	6.0Gb/s
Port	1 x SATA III support SATADOM
I/O	
Audio	Line-in, Line-out, Mic-in (rear I/O)
USB	4 x USB 3.0 (rear I/O) 2 x USB 2.0 (box-header)
COM	3 x RS-232 (1x rear I/O, 2x box-header) 1 x RS-232/422/485 (rear I/O) All ports w/ 5V/12V by Jumper selection
HDMI/VGA/DVI/DP/LVDS	1 x HDMI v1.4b and 1 x DP v1.2 (rear I/O) 1 x LVDS (box-header, co-layout eDP, optional) 1 x eDP (box-header, optional)
DIO	1 x 4-in / 4-out Digital I/O (box-header)
SMBus	1x SMBus (pin-header)
PS/2	1x PS/2 Keyboard and Mouse (box-header)

Other	
TPM	Infineon TPM v1.2 (optional) / TPM v2.0 (optional)
Power Requirement	
Power connector	Infineon TPM v1.2 (optional) / TPM v2.0 (optional)
Power type	DC-in 12V; 19V ~ 24V (optional)
Power mode	AT / ATX (by jumper selection)
Watchdog Timer	
Interval	Programmable 1 ~ 255 sec/min
Output	System reset
Environment	
Operating temperature	0°C ~ 60°C (32°F ~ 140°F) standard -20°C ~ 70°C (-4°F ~ 158°F) optional -40°C ~ 70°C (-40°F ~ 158°F) optional
Storage temperature	-40°C ~ 80°C (-40°F ~ 176°F)
Relative humidity	0%~ 95% (non-condensing)
Form Factor	
Dimensions (L x W)	Mini-ITX 170mm x 170mm (6.69" x 6.69")

Rear I/O



Dimensions



Ordering Information

Part Number	Description
AMIX-APL1-3950 (MOQ)	Mini-ITX, Intel Atom E3950 12W, HDMI/DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V)/DC-Jack(Screw)
AMIX-APL1-3940 (MOQ)	Mini-ITX, Intel Atom E3940 9.5W, HDMI/DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V)/DC-Jack(Screw)
AMIX-APL1-3930 (MOQ)	Mini-ITX, Intel Atom E3930 6.5W, HDMI/DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V)/DC-Jack(Screw)
AMIX-APL1-4200 (MOQ)	Mini-ITX, Intel Pentium N4200 6W, HDMI/DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V)/DC-Jack(Screw)
AMIX-APL1-3350 (MOQ)	Mini-ITX, Intel Celeron N3350 6W, HDMI/DP/LVDS, SATA/4COM/6USB/2LAN, DC(12V)/DC-Jack(Screw)

Optional Accessories

Part Number	Description
TBD	I/O Shield
VK00000700A9	SATA cable
VK00002600A9	SATA Power cable
NAAAQ00200DY	Heatsink w/o FAN
47300001801	Cooler w/ FAN

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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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