

Features

- Intel® Atom® x6000E and Intel® Celeron® Series Processors with CPU Bottom Mounted
- 1 x 260-pin DDR4 2666 MHz SO-DIMM Supports Up to 32GB (Only Atom® x6000 Series Processors Support IB ECC) *Note: Due to mainboard design limitation, the mainboard is not recommend to use DDR4 3200MHz SO-DIMM.
- 1 x Dual Stack DP, Single Channel 18/24-bits LVDS
- 2 x Intel® i226LM/IT 2.5G Gigabit Ethernet
- 4 x USB 2.0 by Pin Header, 1 x Dual Stack USB 3.1 Gen2 at I/O
- 1 x M.2 (2242/2260) B-Key, 1 x M.2 (2230) E-Key Support Wifi Module
- 1 x RS232, 1 x RS232/422/485, 4-bit GPIO
- DC in +12V



DP++



DDR4
SO-DIMM



USB 3.1



RS232/422/485

Specifications

System Information

Processor	Intel® Atom® x6000E and Celeron® Series processors
System Memory	1 x 260-pin DDR4 2666MHz SO-DIMM Supports Up to 32GB *Note: Due to mainboard design limitation, the mainboard is not recommend to use DDR4 3200MHz SO-DIMM.
I/O Chipset	EC iTE IT5571
Watchdog Timer	H/W Reset: 1Sec. - 65535Sec./Min. and 1 Sec. or 1Min./Step
BIOS	AMI BIOS, 256Mbit SPI Flash ROM
H/W Status Monitor	CPU temperature monitoring Voltages monitoring CPU fan speed control
Board	PICO ITX

Expansion

Expansion	1 x M.2 Type B 2242/2260 support SSD. (Default: PCIe) With (1 x PCIe x1 / SATA III + USB3.1 GEN 1 + USB 2.0) as Default or (1 x PCIe x2 + USB 2.0, via OEM BIOS request)
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Display

Graphic Chipset	Intel® UHD Graphics for 10th Gen Intel® Processors
Spec. & Resolution	2 x DP (Upper DP, Lower DP++): 4096 x 2160@60 Hz LVDS: 1366x768 Single Channel 18/24-bits LVDS (Chrontel CH7511B-BF (CH7511B-BFI for Wide Temp Version) eDP to LVDS)
Multiple Display	Triple Display
LVDS	1CH 18/24bits LVDS 1366x768 Chrontel. CH7511B eDP to LVDS Converter

Ethernet

LAN Chipset	2 x Intel® i226LM (i226IT for wide temp version) 2.5 Gigabit Ethernet
Ethernet Interface	2.5 Gigabit Ethernet
LAN Port	2 x RJ45

Software Support

OS	Windows 10, Linux
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Certification

Certification Information	CE, FCC, RoHS Compliant
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I/O

USB	2 x USB 3.1 Gen2 4 x USB 2.0
COM Port	1 x RS232 1 x RS232/422/485
DIO	1 x 4-bit GPIO

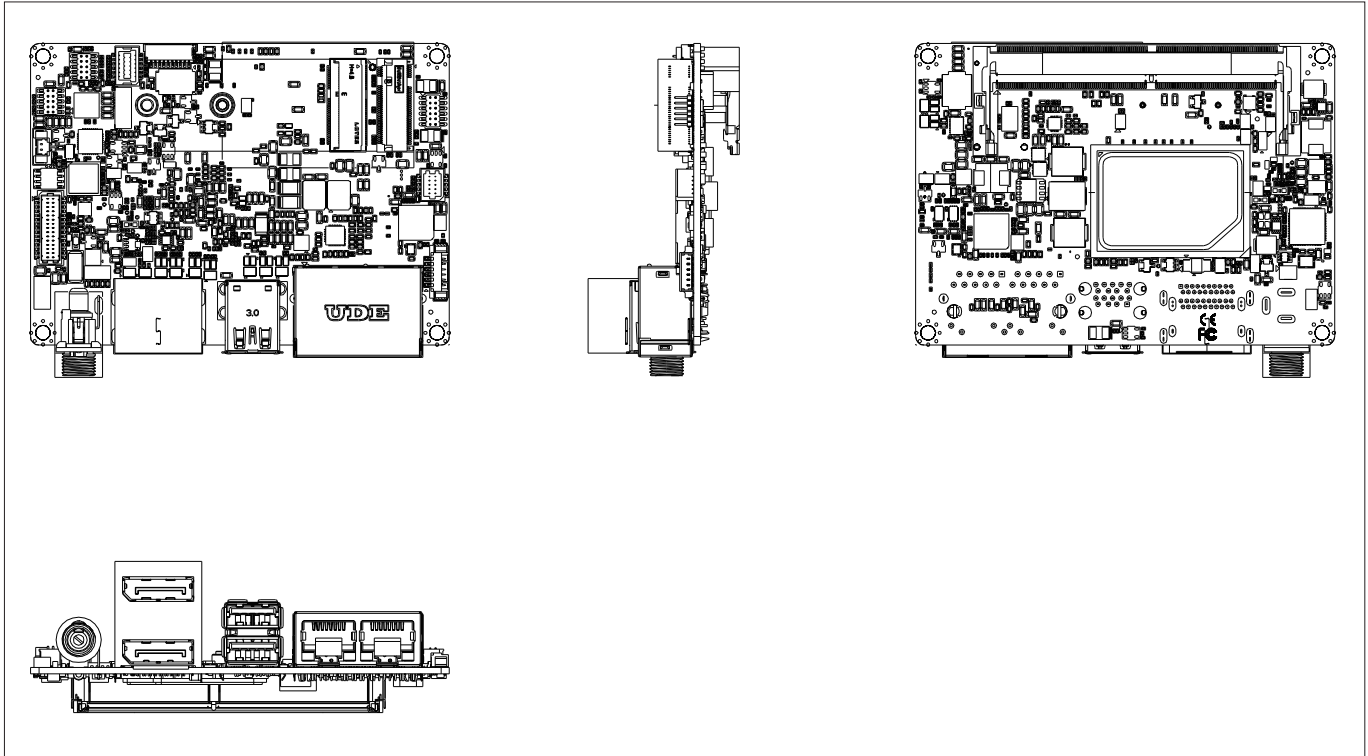
Mechanical & Environmental

Operating Temp.	0~60°C (32~140°F) J Series CPU SKU -20~60°C (-4~140°F) Atom Series CPU SKU w/HDD/SSD, Ambient with 0.5 m/s Air Flow
Storage Temp.	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.66lbs (0.3Kgs)
Power Requirement	DC in +12V
Power Mode	AT/ATX (Default Setting: ATX)
Dimension (L x W)	3.94" x 2.83" (100mm x 72mm)

EPX-EHLP

Intel® Atom® x6000E and Celeron® series® Processor
Pico ITX Motherboard

Mechanical Drawing



Ordering Information

P/N	Processor	Chipset	LAN	USB	COM	PCIe Slot	Power Input	Temp.
EPX-EHLP-J6412-A1R	Intel® Celeron® Processor J6412	NA	2	6	2	0	+12V DC	0°C ~ 60°C (32~140°F)
EPX-EHLP-J6413-A1R	Intel® Celeron® Processor J6413	NA	2	6	2	0	+12V DC	0°C ~ 60°C (32~140°F)
EPX-EHLP-X13E-A1R	Intel® Atom® Processor x6413E	NA	2	6	2	0	+12V DC	-20°C ~ 60°C (-4~140°F)

Block Diagram

