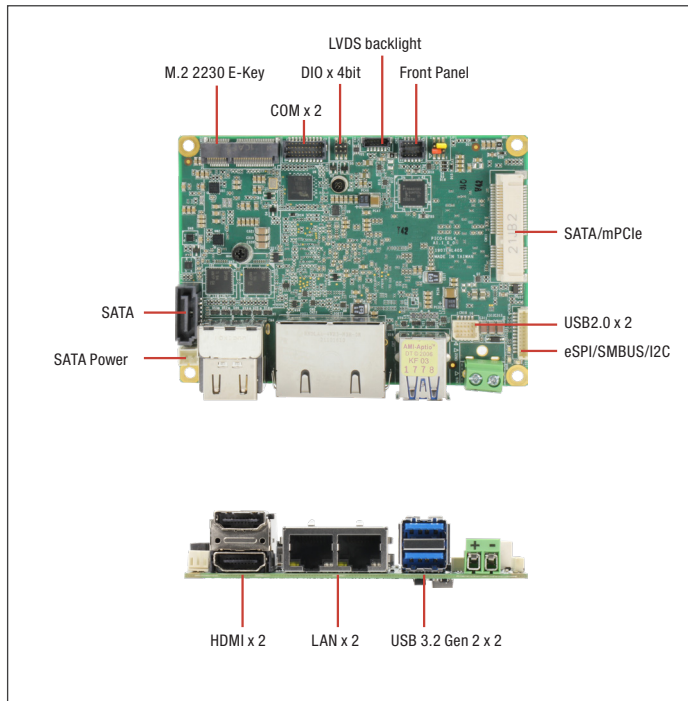


PICO-EHL4

Pico-ITX Board with Intel® Atom® x6000E Series, Intel® Pentium®, and Celeron® N and J series processors



Specifications

SYSTEM	
FORM FACTOR	PICO-ITX
CPU	Intel® Atom® x6000E series, Pentium®, and Celeron® N and J series Processors: J6412 (4C/4T, 2.00GHz, 10W) N6210 (2C/2T, 1.20GHz, 6.5W) x6425E (4C/4T, 2.0GHz, 12W) x6211E (2C/2T, 1.3GHz, 6W)
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	Onboard LPDDR4x 3200, Single Channel, Non-ECC (Max.16GB)
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	Intel® PTT (Integrated TPM)
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) Ubuntu 20.04.4/Kernel 5.13.0-30-generic
POWER	
POWER REQUIREMENT	+12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (colay)
POWER CONSUMPTION	Intel® Atom™ x6425E, LPDDR4x onboard 16GB, 2.48A@ +12V(TYPICAL) Intel® Atom™ x6425E, LPDDR4x onboard 16GB, 2.62A@ +12V(MAX)
DISPLAY	
CONTROLLER	Intel® UHD Graphics for 10th Gen Intel® Processors
LVDS/eDP	LVDS x 1 (18/24bit 2CH) 1920 x 1200 @60Hz eDP1.3 x 1, 3840 x 2160 @60Hz (Optional)
Display Interface	HDMI 2.0 x 2, 3840 x 2160 @60Hz
Multiple Display	Up to 3 Simultaneous Displays
AUDIO	
CODEC	—
AUDIO INTERFACE	—
Speaker	—
EXTERNAL I/O	
ETHERNET	Realtek 8111 1GbE, RJ45 x 2

Features

- Intel® Atom® x6000E series, Intel® Pentium®, and Celeron® N and J series processors (formerly Elkhart Lake)
- HDMI2.0b x 2 + LVDS/eDP1.3 x 1
- GbE x 2
- 2 x USB 3.2 Gen 2, 2 x USB2.0
- LPDDR4x onboard memory, In-Band ECC
- eMMC x 1, SATA x 1
- COM x 2 Full, CANBUS x 2(optional), mSATA x 1, M.2 E-Key 2230 x 1



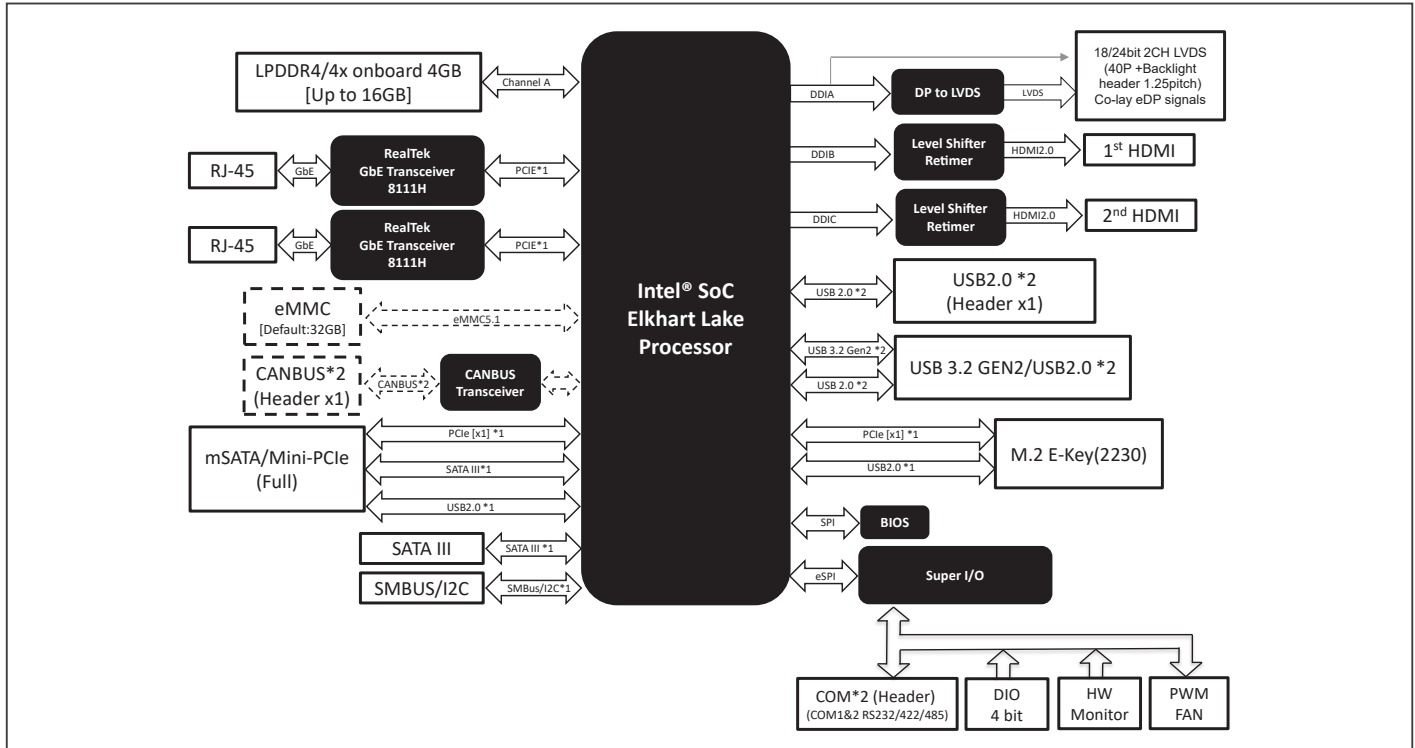
USB	USB 3.2 Gen2 x 2
SERIAL PORT	—
VIDEO	HDMI 2.0 x 2
INTERNAL I/O	
USB	USB 2.0 x 2
SERIAL PORT	COM1~2 (RS232/422/485, support 5V/12V/RI)
VIDEO	LVDS/eDP x 1(Default: LVDS)
SATA	SATA 6.0 Gb/s x 1, +5V SATA Power Connector x 1 eMMC5.1 32GB (Optional to 16/64/128GB)
AUDIO	—
DIO/GPIO	GPIO 4-bit
SMBus/I2C	I2C/SMBus x1 (Default: SMBus)
FAN	4pins Smart Fan x1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	Full size mPCIe/mSATA x 1 (SATA as default, PCIe selected by BIOS)
M.2	M.2 2230 E-Key x 1 (PCIe 3.0 [x1] + USB2.0)
Others	CANBUS x 2 (Optional, N6210/J6412 not support, support up to 5Mbit/s)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 140°F (0°C ~ 60°C) ViTAS 2 -40°F ~ 185°F (-40°C ~ 85°C)
STORAGE TEMP	-40°F ~ 185°F (-40°C ~ 85°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	489,989
EMC	CE/FCC Class A

Optional Accessories

Part Number	Description	Qty.
170X000231	COM cable.300mm	1
170010010D	USB2.0 cable.100mm	1
1702150155	SATA power cable.150mm	1
1703120130	eSPI/SMBUS/I2C cable.130mm	1
1709100108	Front panel cable.100mm	1
PER-T645-A10-0001	CANBus board + CANBus cable	1
PICO-EHL4-HSP01	Heat Spreader.AL.100*72*10.5mm.for J6412/N6210	1
PICO-EHL4-HSP02	Heat Spreader.AL.100*72*9.3mm.for x6425E/x6211E	1
PICO-EHL4-HSK01	Heat Sink.100*72*15.5mm.Silver.To be used with HSP	1
PICO-EHL4-FAN01	Cooler.100*72*20.3mm.for J6412/N6210	1
PICO-EHL4-FAN02	Cooler.100*72*19.3mm.for x6425E/x6211E	1
PER-P30D-A10	120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.0, 30 x 72mm	1

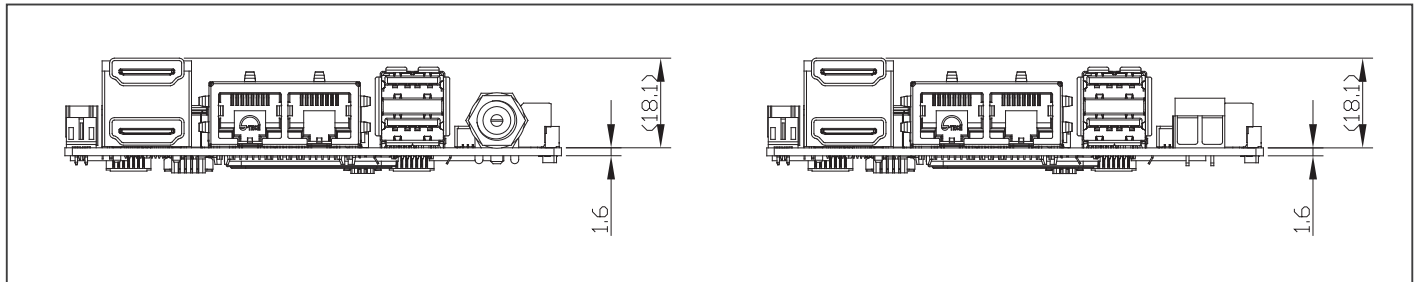
Note:
eDP Panel : B173ZAN01.0-AUO LVDS Panel : G101EVN01.0-AUO

Block Diagram



Dimension

Unit: mm



Packing List

- PICO-EHL4

Ordering Information

Part number	CPU	Memory	Display	Storage	LAN	USB	RS-232/422/485	Expansion slot	Power	Operating Temp	Others
PICO-EHL4-A11-0001	N6210	4GB	HDMI x 2 LVDS x 1	SATAIII x 1 eMMC 32GB	GbE x 2	USB3.2 Gen 2 x 2 USB2.0 x 2	2	M.2 2230 E-key x 1 mSATA(Full-size) x 1	+12V	0°C ~ 60°C	DIO 4 bit SMBUS/eSPI x 1
PICO-EHL4-A11-0002	J6412	4GB	HDMI x 2 LVDS x 1	SATAIII x 1 eMMC 32GB	GbE x 2	USB3.2 Gen 2 x 2 USB2.0 x 2	2	M.2 2230 E-key x 1 mSATA(Full-size) x 1	+12V	0°C ~ 60°C	DIO 4 bit SMBUS/eSPI x 1
PICO-EHL4-A11-0003	J6412	4GB	HDMI x 2 eDP x 1	SATAIII x 1 eMMC 64GB	GbE x 2	USB3.2 Gen 2 x 2 USB2.0 x 2	2	M.2 2230 E-key x 1 mSATA(Full-size) x 1	+12V	0°C ~ 60°C	DIO 4 bit SMBUS/eSPI x 1
PICO-EHL4-A11-0004	J6412	8GB	HDMI x 2 LVDS x 1	SATAIII x 1	GbE x 2	USB3.2 Gen 2 x 2 USB2.0 x 2	2	M.2 2230 E-key x 1 mSATA(Full-size) x 1	+12V	0°C ~ 60°C	DIO 4 bit SMBUS/eSPI x 1
PICO-EHL4W2-A11-0005	x6425E	16GB	HDMI x 2 LVDS x 1	SATAIII x 1	GbE x 2	USB3.2 Gen 2 x 2 USB2.0 x 2	2	M.2 2230 E-key x 1 mSATA(Full-size) x 1	+12V	-40°C ~ 85°C	DIO 4 bit SMBus/eSPI x 1