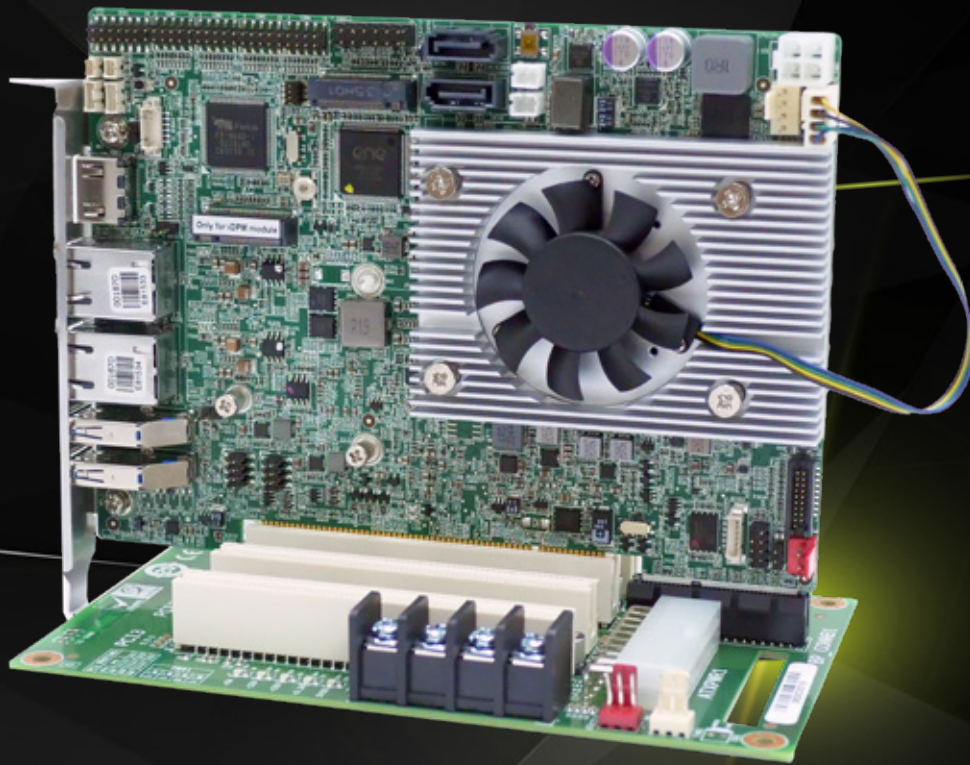


# PIC0e-EHL-J6412C

Half-size PCIe CPU Card supports Intel® Elkhart Lake Processor Intel® Celeron® J6412 on-board SoC

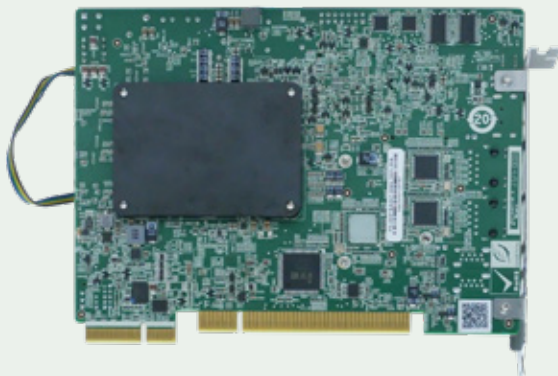
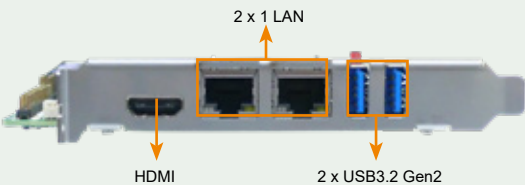
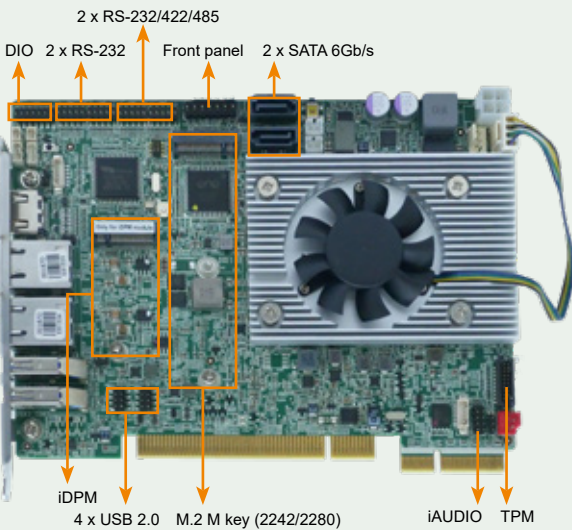
- With 8GB LPDDR4x memory on board default
- Support Dual Intel® GbE LAN
- Support HDMI and iDPM module
- Support two SATA and M.2 M key for storage
- Flexible expansion with half-size PICMG1.3 CPU board



[www.ieiworld.com](http://www.ieiworld.com)

# PIC0e-EHL-J6412C

Half-size PCIe CPU Card supports Intel® Elkhart Lake Processor Intel® Celeron® J6412 on-board SoC



## 10W Low-power Intel® Elkhart Lake Celeron® J6412 CPU

Intel® 10nm Celeron® J6412 On-board SoC, 4 cores and 4 threads, base frequency 2.00GHz, turbo frequency up to 2.60GHz, 1.5MB cache



## IEI-specific iDPM Interface

IEI uniquely designs a iDPM interface that can connect to display modules, enabling users to add LVDS/eDP/VGA display interface upon requirements.



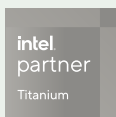
## Support multiple interface

The external I/O include 2 x USB 3.2 Gen2 (10Gb/s), providing faster transmission rates. The internal connect has 4 x USB 2.0 ports, 2 x RS-232, 2 x RS-232/422/485 for wiring expansion, and M.2 M key for NVME storage expansion

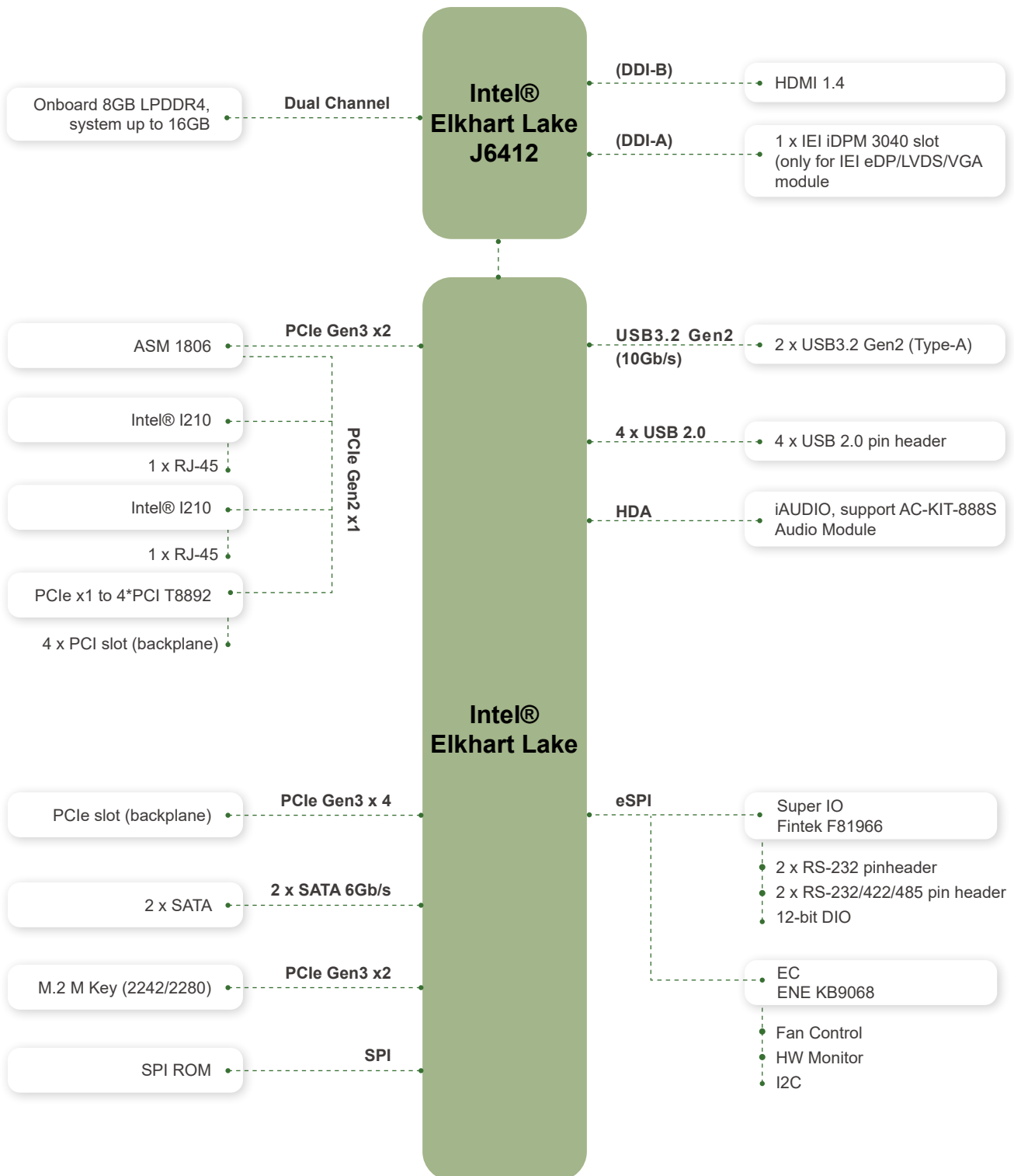


## Support multiple baseboard options

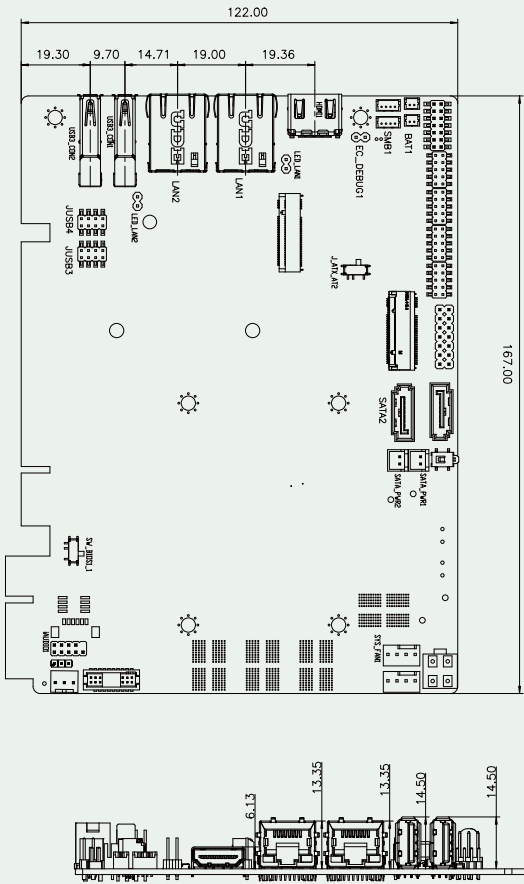
Support 4-lanes PCIe and 4-lanes PCI signals from CPU board via golden finger, and the backplane can be selected according to requirements



# Block Diagram



Dimensions



Optional Accessories

CB-USB02A-RS	32205-002700-200-RS
32102-000100-200-RS	19800-000200-100-RS
IDPM-LVDS-R10	AC-KIT-888S-R10
IDPM-VGA-R10	IDPM-eDP-R10

Specifications

Model	PICOe-EHL-J6412C
CPU	Intel® Elkhart Lake Processor Intel® Celeron® J6412 on-board SoC (up to 2.6GHz, quad-core, 1.5M Cache, TDP=10W)
BIOS	AMI UEFI BIOS
Memory	On-board LPDDR4x-3200MHz 8GB, system up to 16GB
Graphics Engine	Intel® UHD Graphics
Display Output	Dual independent display 1 x HDMI 1.4 (up to 4096 x 2160@30Hz) 1 x iDPM support IEI eDP/ LVDS/ VGA module
Ethernet	LAN1: Intel® I210 controller LAN2: Intel® I210 controller
External I/O Interface	2 x USB 3.2 Gen2 Type-A (10Gb/s)
Internal I/O Interface	2 x SATA 6Gb/s 4 x USB 2.0 (2x4 pin, P=2.00) 2 x RS-232/422/485 (2x5 pin, P=2.00) 2 x RS-232 (2x5 pin, P=2.00)
SMBus	1 x SMBus (1x4 pin)
I2C	1 x I2C (1x4 pin)
Audio	1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2 x 5 pin)
Front Panel	1 x Front Panel (2 x 7 pin, Power LED, HDD LED, Speaker, Power Button, Reset Button)
LAN LED	2 x LAN LED (1x2 pin)
Expansion	1 x M.2 M Key (2242/2280, PCIe x2 ) NVMe support 1 x PCIe x4 (1 x PCIe x4 or 4 x PCIe x1) to the backplane 4 x PCI to the backplane
Digital I/O	1 x 12-bit digital I/O (2x7 pin)
TPM	1 x TPM module (2x10 pin)
FAN connector	1 x CPU fan connector (1x4 pin) 1 x System fan connector (1x4 pin)
Chassis Open	1 x Chassis intrusion (1x2 pin)
Power supply	1 x Internal 12V power connector (2x2 pin) Support AT/ATX mode ErP/EuP Compliant
Watchdog Timer	Software Programmable support 1~255 sec. System reset
Power Consumption	5V@ 6.39A, 5VSB@ 0.22A, 12V@ 0.96A (Intel® Celeron® J6412 CPU with 8 GB 3200 MHz LPDDR4x memory, max. loading, EuP mode enabled)
Operating Temperature	0°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Diemensions	185 mm x 126 mm
Weight	Weight GW:1000g / NW:420g
Safty	CE/FCC compliant

Packing List

1 x PICOe-EHLSBC with cooler module	1 x QIG
1 x SATA cable (PN: 32801-012500-100-RS)	

Ordering Informaiton

PICOe-EHL-J6412C-R10	Half-size PCIe CPU Card supports Intel® Elkhart Lake Processor Intel® Celeron® J6412 on-board SoC, with 8GB LPDDR4x memory on board default, DDR4, HDMI,iDPM display module,Dual Lan, USB 3.2, SATA 6Gb/s, M.2, HD Audio and RoHS
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Optional Accessories

CB-USB02A-RS	Dual port USB cable with bracket, 300mm, P=2.0
32205-002700-200-RS	RS-232/422/485 cable,200mm, P=2.0
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
19800-000200-100-RS	COM port cable; 300mm; 2x(2x5) PIN P=2.0;W/ Bracket
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS
iDPM-eDP-R10	eDP to eDP converter board (for IEI iDPM connector)
iDPM-LVDS-R10	eDP to LVDS converter board (for IEI iDPM connector)
iDPM-VGA-R10	eDP to VGA Connetor converter board (For IEI Display Module)
HPE-4S2-R41	PCI/PCI Express Backplane with 2 PCI, 1 PCIe x4 Slots, RoHS
HPE-5S1-R51	PCI/PCI Express Backplane with 4 PCI Slots, RoHS
HPE-8S0-R41	PCI/PCI Express Backplane with 4 PCI, 2 PCIe x1 Slots, RoHS
HPE-3S2-R41	PCI/PCI Express Backplane with 1 PCI, 1 PCIe x4 Slots, RoHS