KINO-EHL-J6412

Mini-ITX SBC supports Intel® Elkhart Lake Celeron® on-board SoC with Triple Independent Display, HDMI, DP,iDPM, SATA 6Gb/s, Dual 2.5GbE, USB 3.2, M.2, 12V DC input and RoHS

- Mini-ITX SBC supports Intel® Elkhart Lake Celeron® J6412
- Support Triple independent displays via HDMI,DP, iDPM
- Dual Intel® i225V 2.5GbE ports
- One PCIe Gen3 x4 slot,M.2 A key and M.2 B key expansions
- Two USB 3.2 Gen2,six USB 2.0,two RS-232,four RS-422/485

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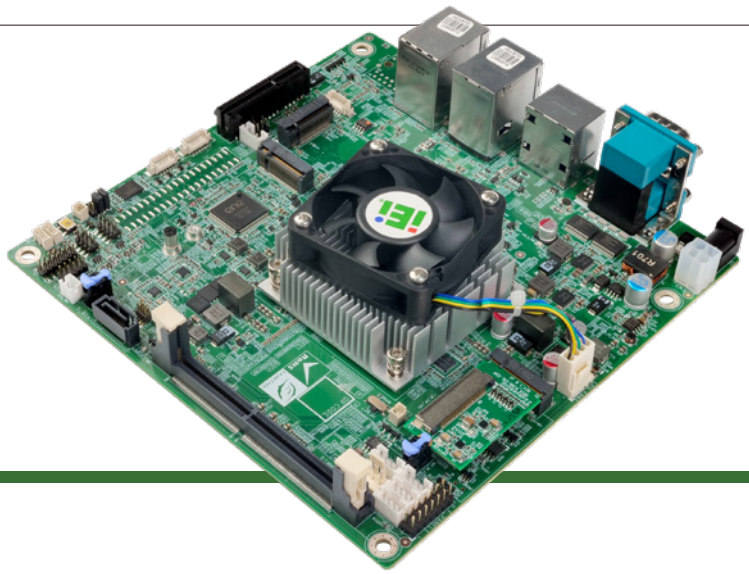
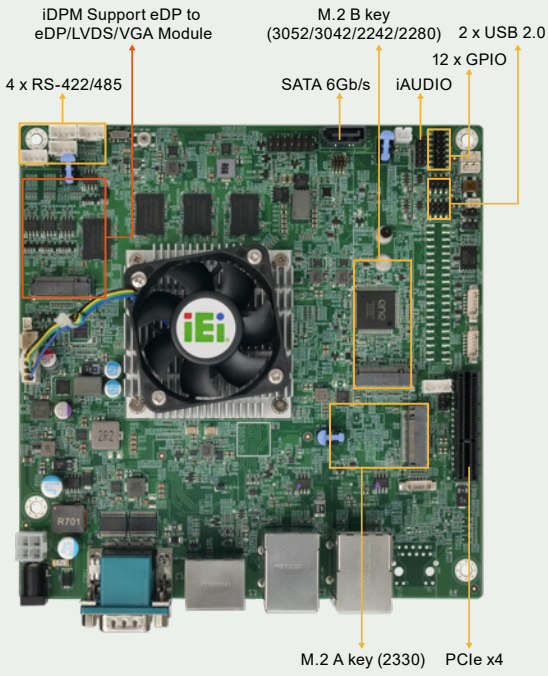
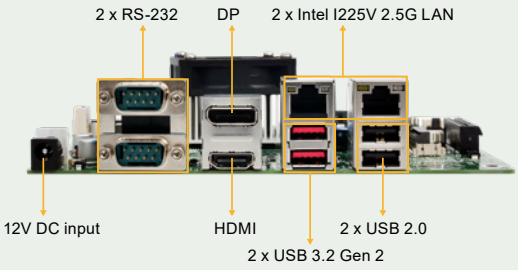






10W Low-power Intel® Elkhart Lake Celeron® J6412 CPU

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

Supporting Intel® I225V 2.5GbE Controllers

Two RJ45 network interfaces are supported via Intel® I225V 2.5GbE controllers, achieving up to 2.5GbE network transmission rate.

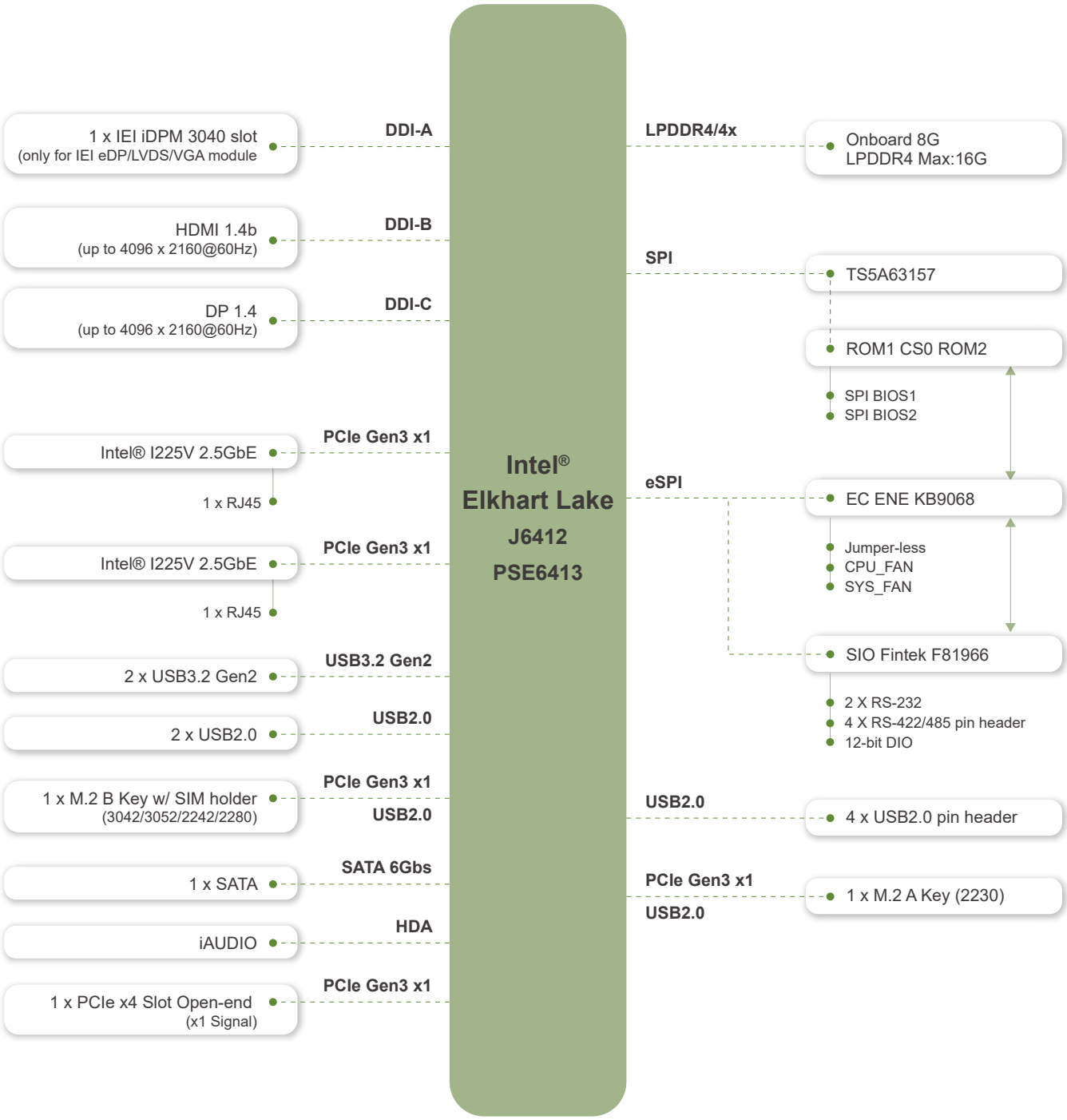
Rich Expansion I/O

Support one M.2 A key for Wi-Fi & Bluetooth modules, one M.2 B key 3042 for 5G modules and one open-ended PCIe Gen3 x4 slot.

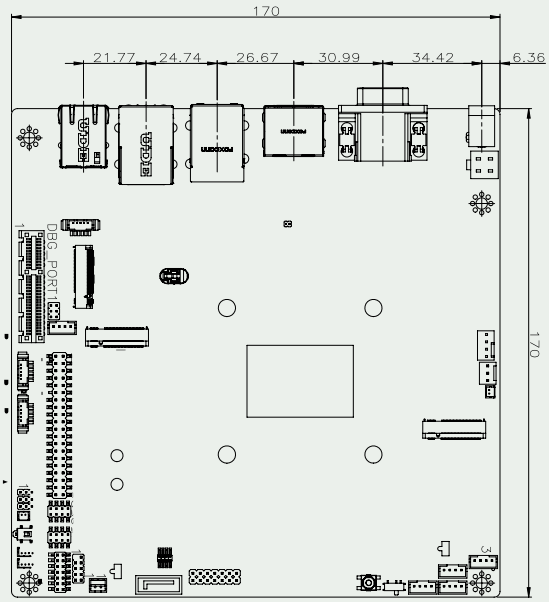
IEI-specific iDPM Interface

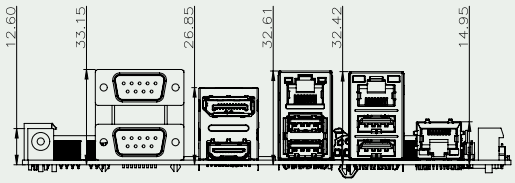
IEI uniquely designs a iDPM interface that can connect to display modules, enabling users to add LVDS/eDP/VGA display interface upon requirements.

KINO-EHL-J6412 Block Diagram



Dimensions

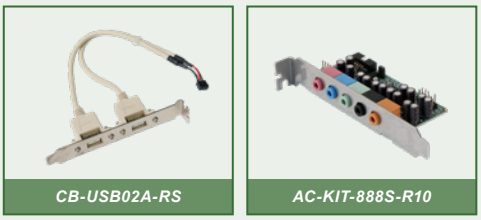


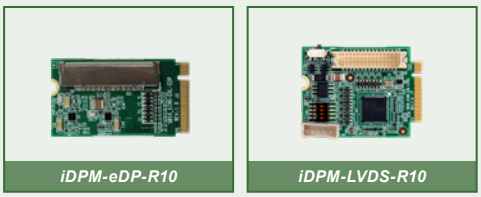


Specifications

Model	KINO-EHL-J6412
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 Dual BIOS for boot & recovery
Memory	Onboard LPDDR4x-3200MHz 8GB, system up to 16GB
Graphics Engine	Gen11LP Gfx firmware and driver, Media SDK, OpenCL* 1.2, OpenGL 4.5, OpenGL-ES 3.2, Vulkan v1.1, DirectX
Display Output	Triple Independent Display 1 x HDMI 1.4 (up to 4096 x 2160@30Hz) 1 x DP 1.4 (up to 4096 x 2160 @60Hz) 1 x IEI iDPM 3040 slot (only for IEI eDP/LVDS/VGA module)
Ethernet	LAN1: Intel® I225V 2.5GbE controller LAN2: Intel® I225V 2.5GbE controller
External I/O	2 x USB 3.2 Gen 2 (10Gb/s) (USB Type A) 2 x USB 2.0 (USB Type A) 2 x RS-232
Internal I/O	1 x SATA 6Gb/s 4 x USB 2.0 (2x4 pin, P=2.0) 4 X RS-422/485 (pin header)
SMBus	1 x SMBus (1x4 pin)
I²C	1 x I2C (1x4 pin)
Audio	1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2x5 pin, P=2.0)
Front Panel	1 x Front Panel (2x7 pin, power LED, HDD LED,power button, reset button)
LAN LED	2 x LAN LED (1x2 pin)
Expansion	1 x PCIe x4 slot, open-ended (PCIe Gen3 x1 signal) 1 x M.2 A key (2230) (PCIe x 1 & USB 2.0) 1 x M.2 B key (3052/3042/2242/2280) w/ SIM holder (PCIe x2 USB 2.0)
Digital I/O	1 x 12-bit DIO (2x7 pin)
TPM	Intel® PTT(TPM 2.0)
Fan Connector	1 x CPU fan connector (1x4 pin) 1 x System fan connector (1x3 pin)
Power Supply	12V DC input 1 x Internal power connector (2x2 pin) 1 x External DC power jack (Ø5.5mm) ErP/EuP Compliant
Watchdog Timer	Software programmable, support 1~255 sec. system reset
Power Consumption	TBD
Operating Temperature	0°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Dimension	170 mm x 170 mm
Weight	GW:900g / NW:400g
Certification	CE/FCC Compliant

Optional accessories





Packing List

1 x KINO-EHL single board computer with cooler module	1 x SATA cable
1 x I/O shielding	1 x QIG

Ordering Information

KINO-EHL-J6412-R10	Mini-ITX SBC supports Intel® Elkhart Lake Celeron® J6412 onboard SoC with triple independent display, HDMI, DP, IDPM, SATA 6Gb/s, dual 2.5GbE, USB 3.2, M.2, 12V DC input and RoHS

Optional Accessories

CB-USB02A-RS	Dual port USB cable with bracket, 300mm, P=2.00
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board,RoHS
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-200-RS	RS-232 cable, 230mm, P=2.54
iDPM-eDP-R10	eDP to eDP DisplayPort converter board (for IEI iDPM connector)
iDPM-LVDS-R10	eDP to LVDS DisplayPort converter board (for IEI iDPM connector)