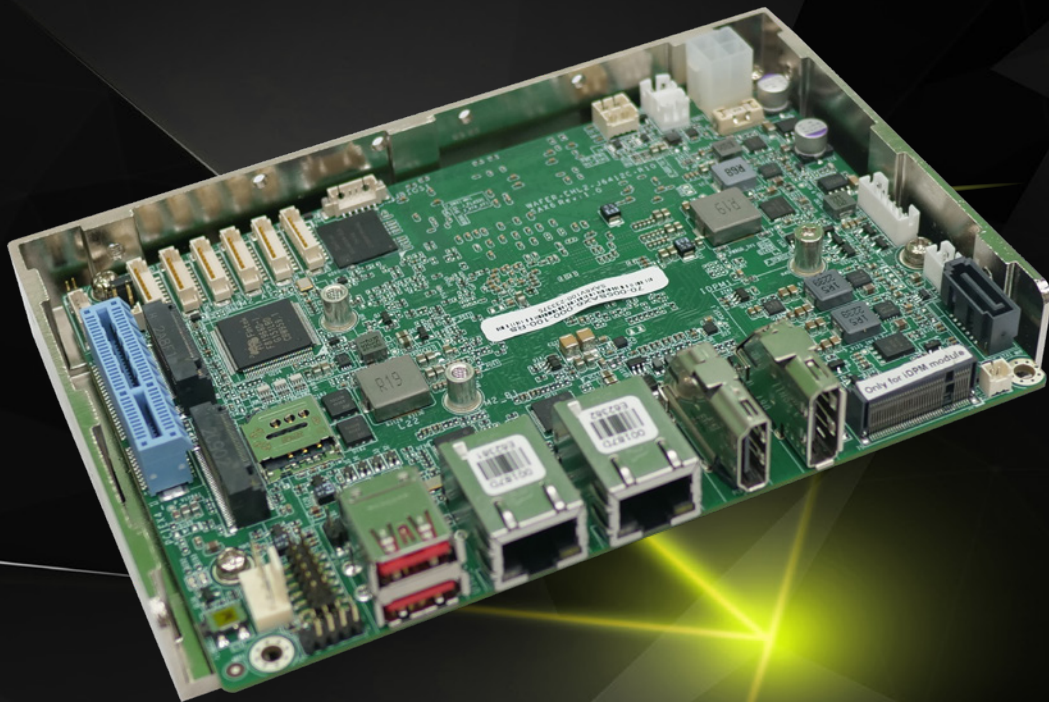


# WAFER-EHL2

3.5" SBC supports Intel® Celeron® J6412 on-board SoC

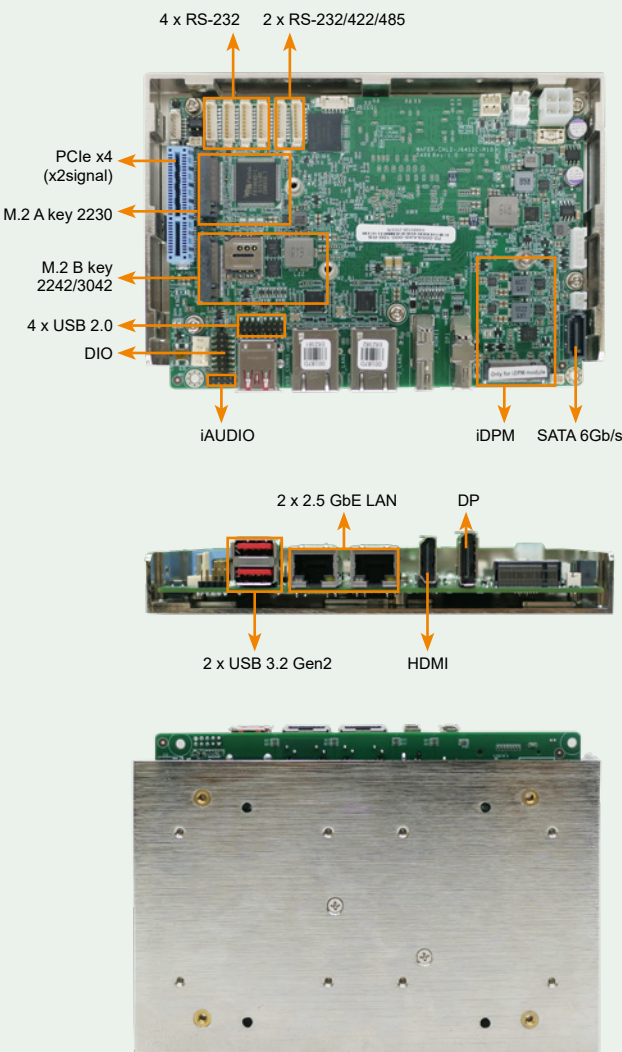
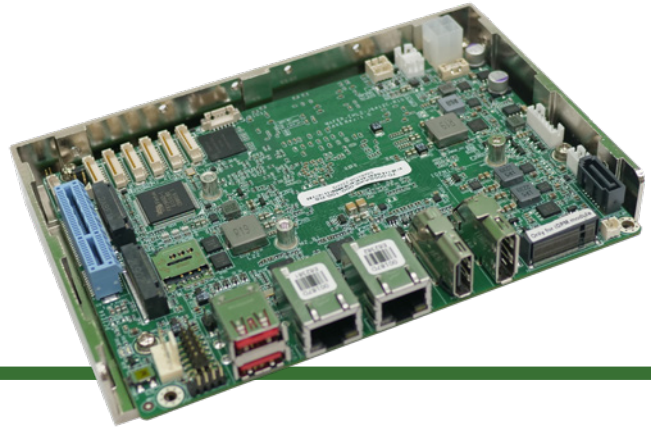
- With 8GB LPDDR4x memory on board default
- Supporting Intel® I225-V/I226-V 2.5GbE Controllers
- Support two RS-232/422/485 and four RS-232
- PCIe x4 slot available for Riser Card
- IEI-specific iDPM interface



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

# WAFER-EHL2

3.5" SBC supports Intel® Celeron® J6412 on-board SoC with 8GB LPDDR4x memory on board default, dual display with HDMI and iDPM slot, dual 2.5 GbE, USB 3.2 Gen 2, M.2, SATA 6Gb/s, 6 COM, iAUDIO, 0°C ~60°C and RoHS



## 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® I225-V/I226-V 2.5GbE Controllers

Two RJ45 network interfaces are supported via Intel® I225-V/I226-V 2.5GbE controllers, achieving up to 2.5GbE network transmission rate.



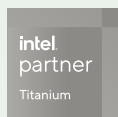
## PCIe x4 slot available for Riser Card

One PCIe x4 (PCIe Gen3 x2 signal) slot is reserved on the edge of the motherboard, which can be used to connect a PCIe expansion card or a riser card uniquely designed by IEI, which is divided into two PCIe x1 slots and uses multiple PCIe expansion cards.

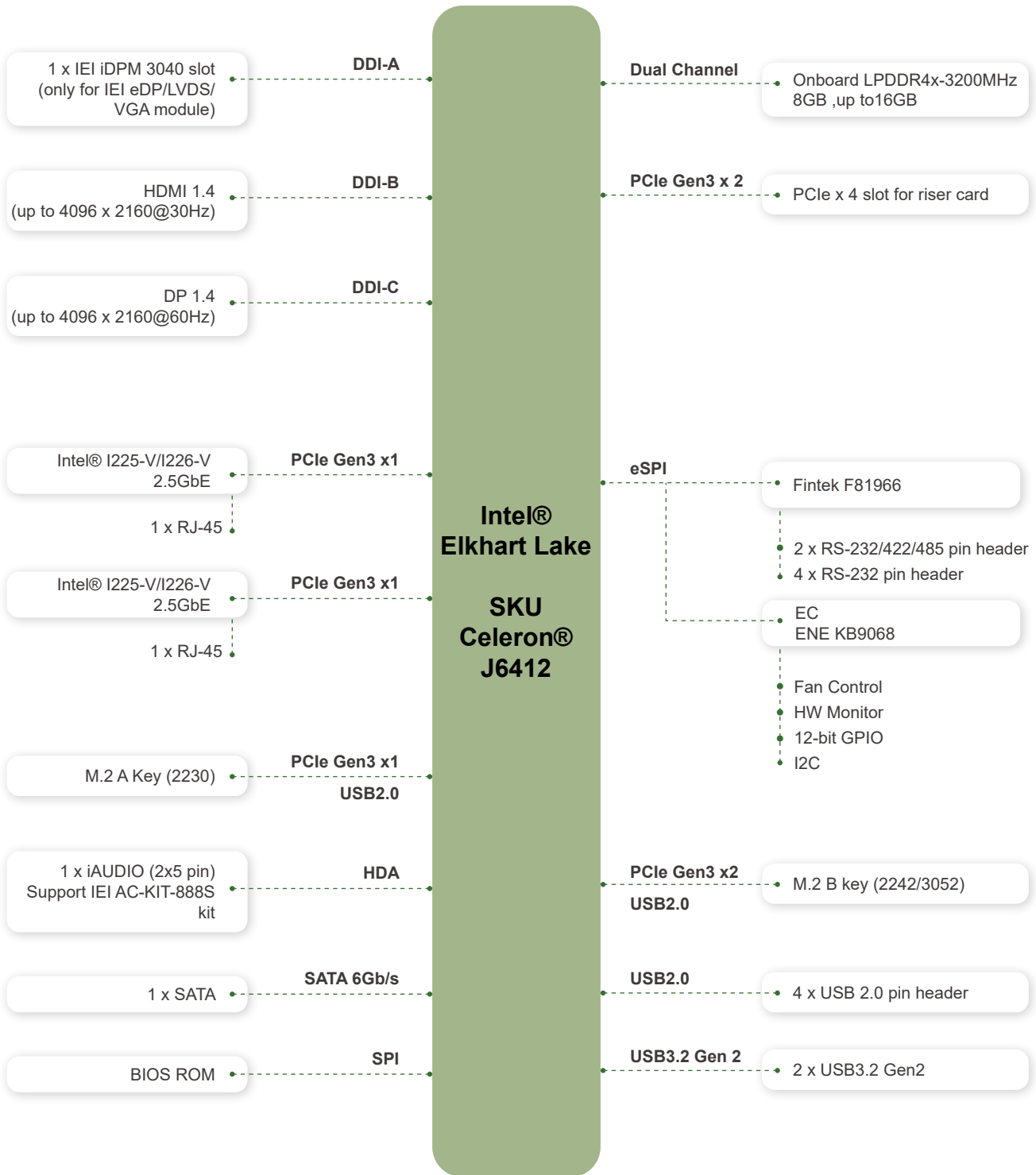


## IEI-specific iDPM interface

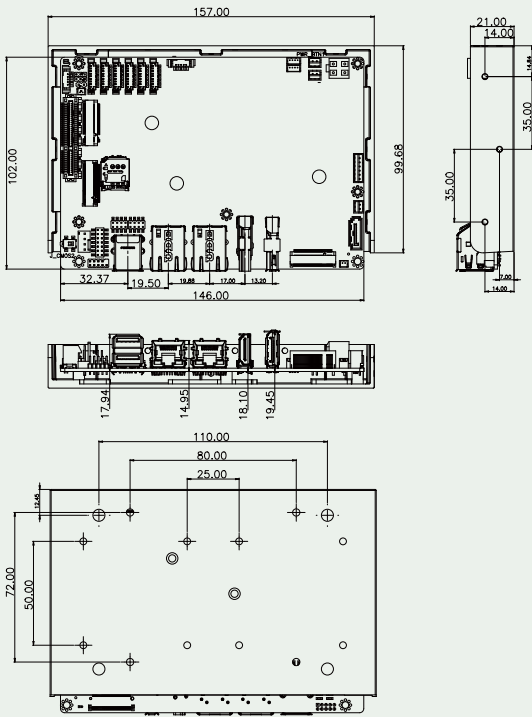
IEI uniquely designs iDPM interface, which can be connected to module cards, and can freely choose to add LVDS/eDP/VGA display interface



# Block Diagram



Dimensions



Optional Accessories



Specifications

Model	WAFER-EHL2
SoC	Onboard Intel® Atom™ x6000 series / Pentium® / Celeron® processor (Elkhart Lake platform) 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 3200 MHz 8GB, up to 16 GB
Storage	1 x SATA 6Gb/s with 5V SATA power connector onboard eMMC (optional UP TO 256G)
Graphics Engine	Intel® UHD Graphics
Display Output	Triple Independent Displays 1 x HDMI 1.4a (up to 4096x2160 @ 30Hz) 1 x DP 1.4a (up to 4096x2160 @ 60Hz) 1 x IEI iDPM 3040 slot (only for IEI eDP/LVDS/VGA module)
Ethernet	LAN1: Intel® I225-V/I226-V 2.5GbE LAN2: Intel® I225-V/I226-V 2.5GbE
LAN LED	2 x LAN LED (1x2 pin)
External I/O Interface	2 x USB 3.2 Gen 2
Internal I/O Interface	4 x USB 2.0 pin header 2 x RS-232/422/485 (1x9 pin, P=1.25) 4 x RS-232 (1x9 pin, P=1.25)
I2C	1 x I2C (1x4 pin, P=2.0)
Audio	1 x iAUDIO (2x5 pin) Support IEI AC-KIT-888S kit
Front Panel	1 x Power LED & HDD LED (1x6 pin) 1 x Power button (1x2 pin) 1 x Reset button (1x2 pin)
Expansion	1 x M.2 A Key 2230 (PCIe Gen3 x1 & USB 2.0) 1 x M.2 B key 2242/3042 (PCIe Gen3 x2 & USB 2.0) 1 x On-board SIM card socket (hinge type) for M.2 B key 1 x PCIe x4 slot (PCIe Gen3 x2 signal) (x2 or x1+x1)
Digital I/O	1 x 12-bit digital I/O (2x7 pin)
TPM	Intel® PTT (TPM 2.0)
FAN connector	1 x CPU fan connector (1x4 pin)
Power supply	+12V DC input power (AT/ATX mode)
Watchdog Timer	Software Programmable support 1~255 sec. System reset
Power Consumption	12V@3.24A (Intel® Celeron® J6412 2.0GHz with on-board 8GB 3200MHz LPDDR4 memory and EUP enabled)
Operating Temperature	-10°C ~ 65°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Dimensions	146mm x 102mm
Weight	GW:850g / NW:350g
Certification	CE/FCC Compliant

Packing List

1 x WAFER-EHL2 SBC with heat spreader	1 x Power cable (PN: 32100-087100-RS)
1 x SATA with power cable kit (PN: 32801-000201-200-RS)	1 x QIG

Ordering Informaiton

WAFER-EHL2-J6412C-R10:	3.5" SBC supports Intel® Celeron® J6412 on-board SoC with 8GB LPDDR4x memory on board default, triple display with DP, HDMI and iDPM slot, dual 2.5 GbE, USB 3.2 Gen 2, M.2, SATA 6Gb/s, 6 COM, iAUDIO, -10°C ~60°C and RoHS
------------------------	--

Optional Accessories

AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS
CB-USB02A-RS	Dual port USB cable with bracket, 300mm, P=2.00
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32005-003500-200-RS	Round cable, RS-232/422/485, 300mm, 1*9 pin, P=1.25
NWR-L2S-R10	PCIe x2 to two PCIe x1 riser card for WAFER on the left side
NWR-R2S-R10	PCIe x2 to two PCIe x1 riser card for WAFER on the right side
CM-WAFER-WF-R10	Cooler Module (W/FAN); Mechanical; for 3.5" WAFER series; RoHS
CM-WAFER-WOF-R10	Cooler Module (W/O FAN); Mechanical; for 3.5" WAFER series; RoHS
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)
iDPM-VGA-R10	eDP to VGA Connector converter board (For IEI Display Module)