

WAFER-EHL2

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

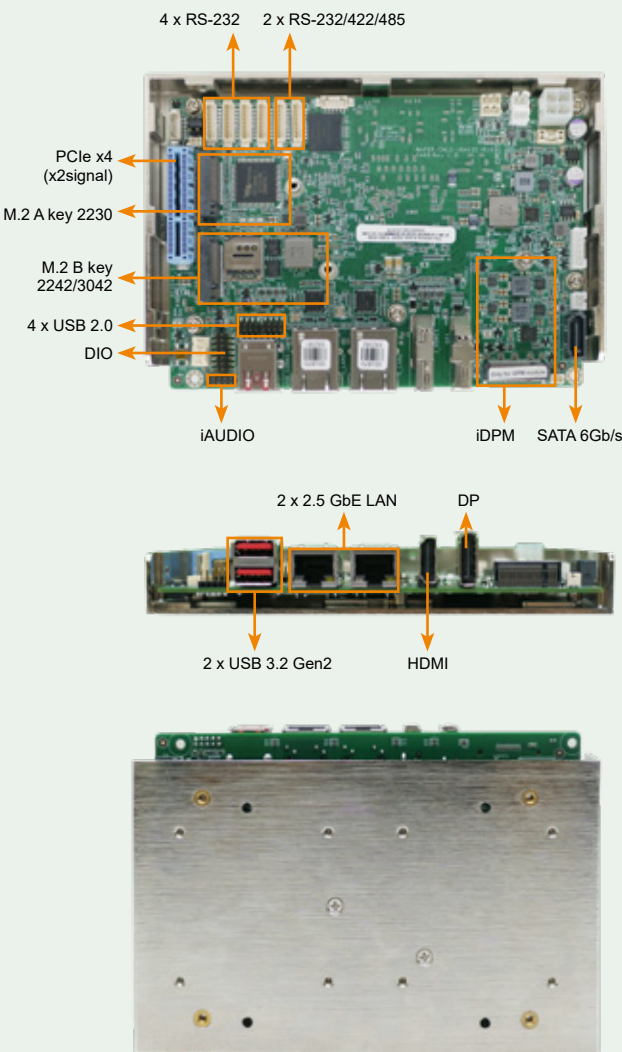
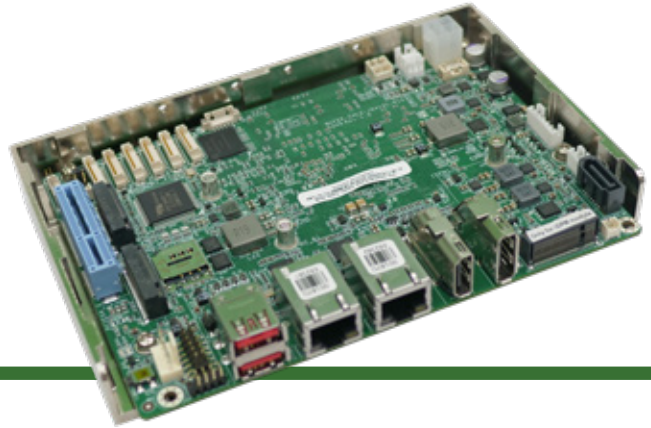
- With 8GB LPDDR4x memory on board default
- Supporting Intel® I226-V 2.5GbE Controllers
- Support two RS-232/422/485 and four RS-232
- PCIe x4 slot available for Riser Card
- IEI-specific iDPM interface



www.ieiworld.com

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® I226-V2.5GbE Controllers

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



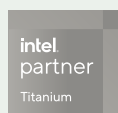
PCIe x4 slot available for Riser Card

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.

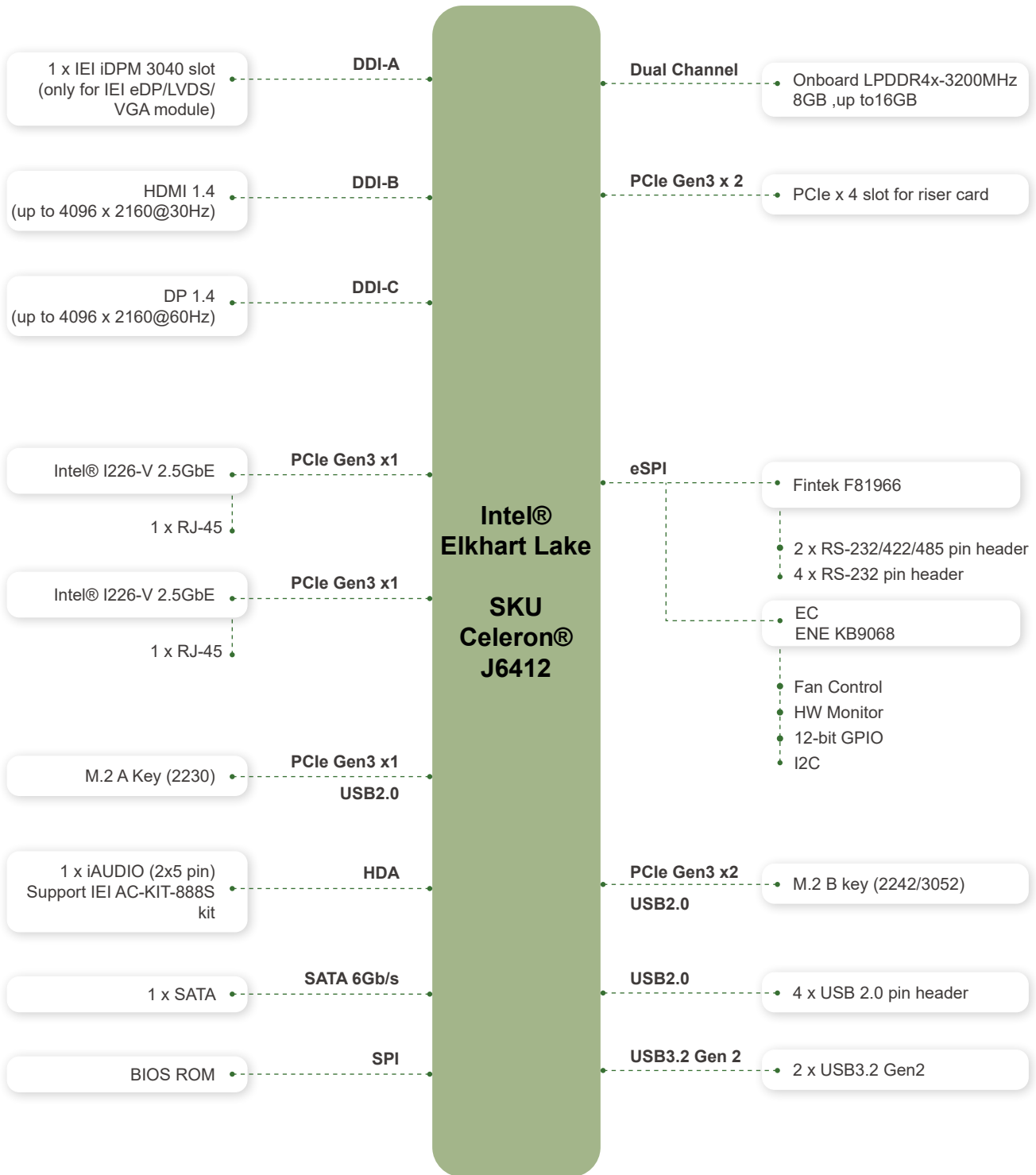


IEI-specific iDPM interface

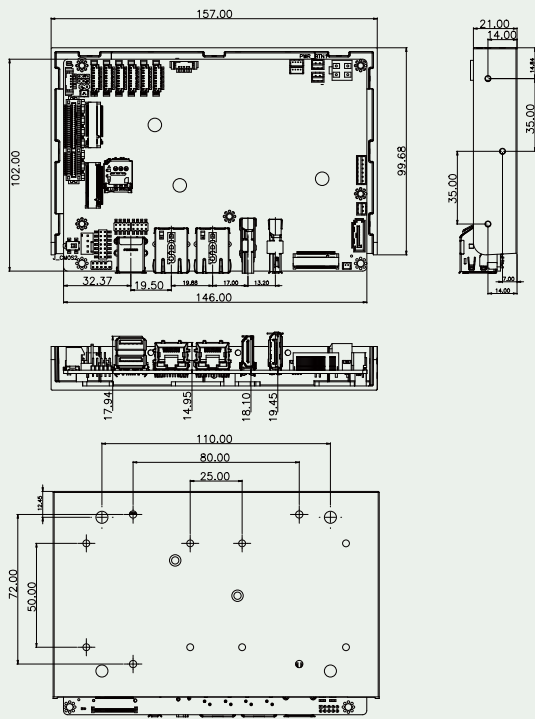
IEI uniquely designs iDPM interface, which can be connected to module cards, and can freely choose to add LVDS/eDP/VGA display interface



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® I226-V 2.5GbE LAN2: Intel® 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 ~ 60°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-R11	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)