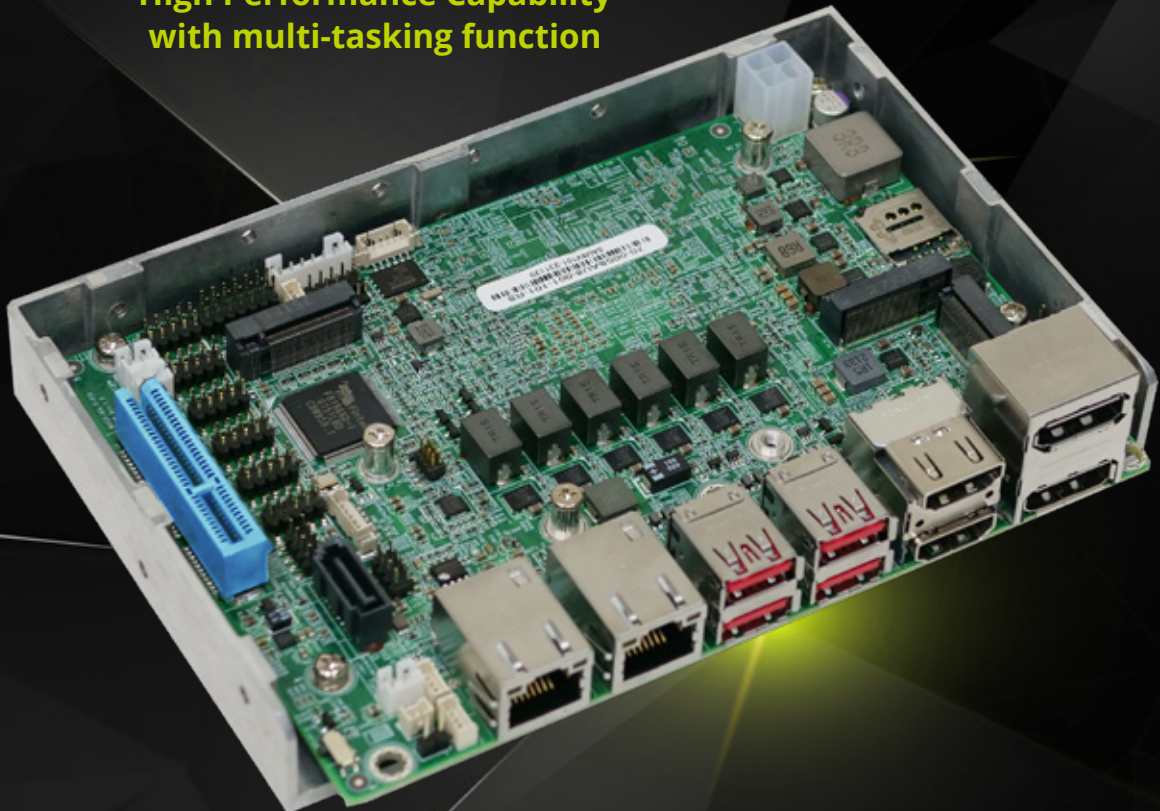


WAFER-ADL-P

3.5 SBC supports Intel® Alder Lake-P/Raptor Lake-P Core™ i7/i5/i3 and Celeron® processor with 8GB LPDDR4x memory on board default

- On-board LPDDR4x 3200 MHz 8GB , up to 32GB
- Support 2 x 2.5GbE with Intel® I226-V
- Support quadruple independent display
- Support PCIe X4, M.2 B key, M.2 A key and M.2 M key expansion

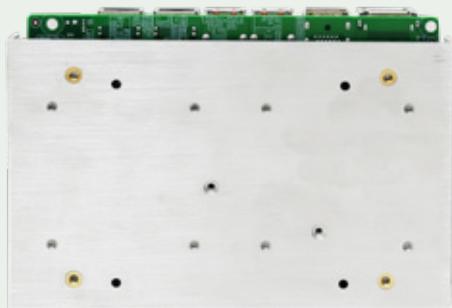
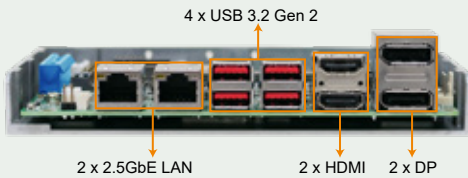
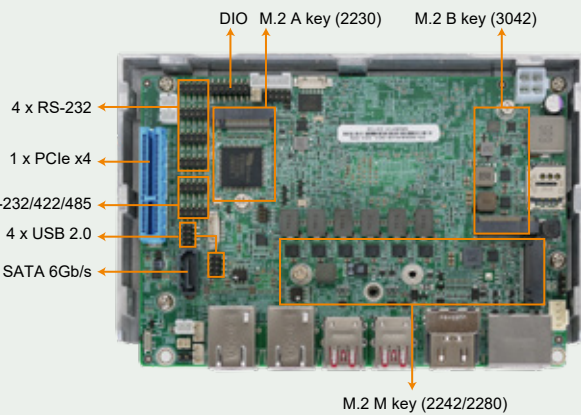
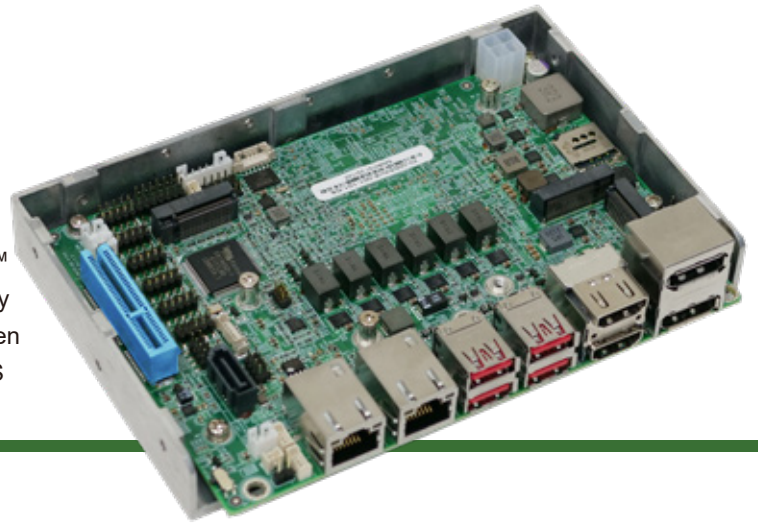
**High Performance Capability
with multi-tasking function**



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WAFER-ADL-P

3.5 SBC supports Intel® Alder Lake-P/Raptor Lake-P Core™ i7/i5/i3 and Celeron® processor with 8GB LPDDR4x memory on board default, with DP ,HDMI ,dual 2.5 GbE , USB 3.2 Gen 2 , M.2, SATA 6Gb/s, COM, PCIe x4 for riser card and RoHS



Support 12th/13th Intel® Alder Lake-P/Raptor Lake-P on-board SoC

Equipped with 12th Intel® Alder Lake-P Celeron® 7305, Core™ i3-1215U, Core™ i5-1235U and i7-1255U on-board SoC.



Support Intel® I226-V 2.5GbE Network Controller

Support two RJ45 network interface via Intel® I226-V 2.5GbE network controller to achieve up to 2.5GbE network transmission rate.



PCIe x4 Slot Available for Riser Card

One PCIe x4 slot (PCIe Gen3 x4 signal) is reserved on the edge of the motherboard, which can be used to connect a PCIe expansion card or a riser card designed by IEI.

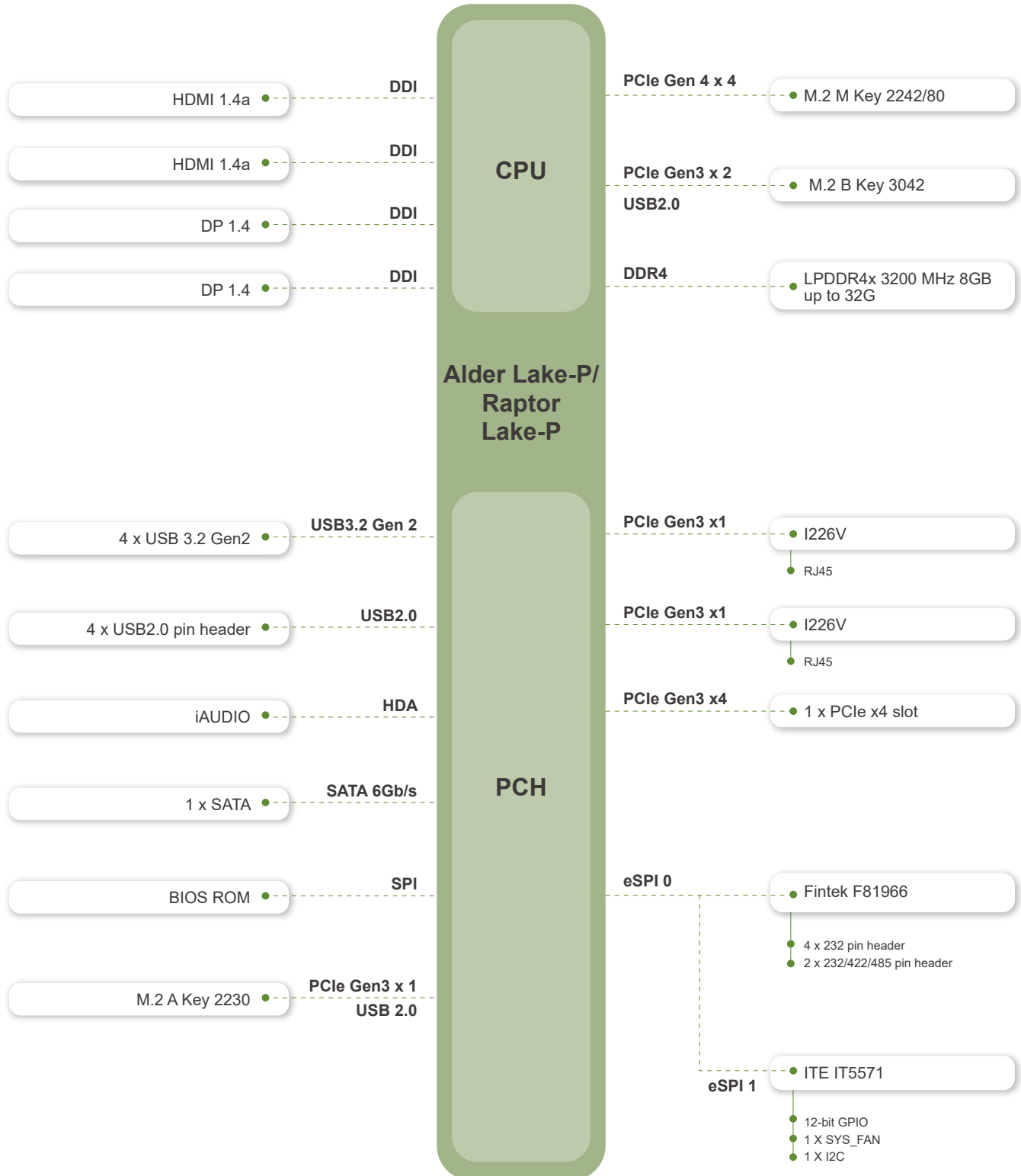


Abundant expansion slots

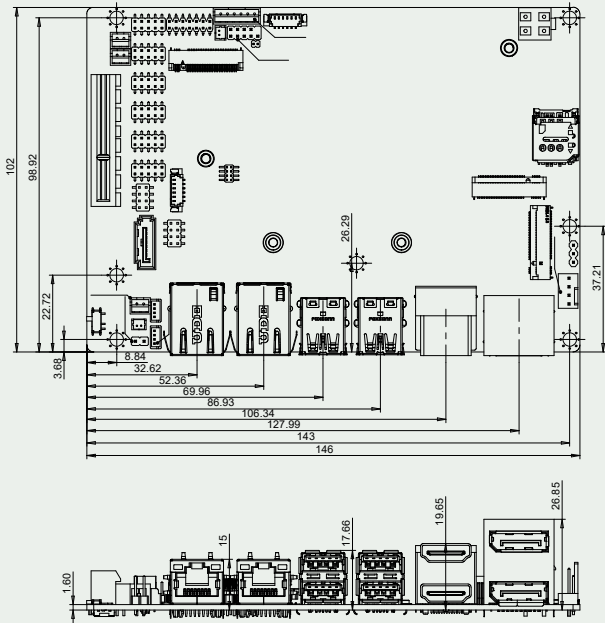
Support M.2 A key for Bluetooth, WiFi module expansion, M.2 B key can be used for 5G module expansion , and M.2 M key for NVME storage expansion



WAFER-ADL-P Block Diagram



Dimensions



Specifications

Model	WAFER-ADL-P
SoC	12th/13th Gen. Intel® Alder Lake-P/Raptor Lake-P on board SoC Intel® Celeron® 7305 (1.1 GHz, 5-core, 15W TDP) Intel® Core™ i3-1215U (up to 4.4GHz, 6-core, 15W TDP) Intel® Core™ i5-1235U (up to 4.4GHz, 10-core, 15W TDP) Intel® Core™ i7-1255U (up to 4.7GHz, 10-core, 15W TDP)
BIOS	AMI UEFI BIOS
Memory	On-board LPDDR4x 3200 MHz 8GB, up to 32GB
Graphics Engine	Intel® UHD Graphics for Celeron® 7305 and Core i3-1215U Intel® Xe Graphics architecture for Core i5-1235U and Core i7-1255U
Display Output	Quadruple independent display 2 x HDMI 1.4a (4K@30Hz) 2 x DP 1.4a (4K@60Hz)
Ethernet	LAN1: Intel®I226V 2.5GbE controller LAN2: Intel®I226V 2.5GbE controller (Colay with I226-LM)
External I/O Interface	4 x USB 3.2 Gen2 (10Gb/s)
Internal I/O Interface	1 x SATA 6Gb/s 4 x USB 2.0 (2x4 pin, P=2.0) 2 x RS-232/422/485 (2 x 5 pin, P=2.0) 4 x RS-232 (2 x 5 pin, P=2.0)
SMBus/I2C	1 x I ² C (1x4 pin) 1 x SMBus (1x4 pin)
Audio	1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2 x 5 pin)
Front Panel	1 x Front Panel Power LED&HDD LED(1x6 pin), Power Button (1 x 2 pin), Reset Button (1 x 2 pin)
Expansion	1 x M.2 A Key 2230 for WIFI & BT (PCIe Gen3 x 1 & USB 2.0) 1 x M.2 M Key 2242/80 (PCIe Gen3 x4) 1 x M.2 B Key 3042 (PCIe x2 & USB 2.0) 1 x On-board SIM card socket (hinge type) for M.2 B key 1 x PCIe Gen3 x4 (x4 & x2+x2)
Digital I/O	1 x 12-bit Digital I/O (2x7 pin)
TPM	Intel® PTT
FAN connector	1 x System Fan Connect (1x4 pin)
Power supply	12V DC power supply Support AT/ATX mode
Watchdog Timer	Software Programmable support 1~255 sec. System reset
Power Consumption	12V@2.83A (12th Gen Intel® Core™ i7-1265UE CPU with 8 GB 3200 MHz LPDDR4x memory, max. loading, EuP mode enabled)
Operating Temperature	-10°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~ 95%, non-condensing
Dimension	146mm x 102mm
Weight	GW:850g / NW:350g
Certification	CE/FCC Compliant

Optional accessories



Packing List

1 x WAFER-ADL-P single board computer	1 x SATA with power cable kit (PN: 32801-000201-300-RS)
1 x QIG	

Ordering Information

WAFER-ADL-P-CC-R11	3.5 SBC supports Intel® Alder Lake-P Celeron® 7305 SoC Processor, with 8GB LPDDR4x memory on board default, with DP ,HDMI , dual 2.5 GbE , USB 3.2 Gen2 , M.2, SATA 6Gb/s, COM,PCIe x4 for riser card and RoHS
WAFER-ADL-P-i3C-R11	3.5 SBC supports Intel® Alder Lake-P Core™ i3-1215U Processor, with 8GB LPDDR4x memory on board default, with DP ,HDMI , dual 2.5 GbE , USB 3.2 Gen2 , M.2, SATA 6Gb/s, COM,PCIe x4 for riser card and RoHS
WAFER-ADL-P-i5C-R11	3.5 SBC supports Intel® Alder Lake-P Core™ i5-1235U Processor, with 8GB LPDDR4x memory on board default, with DP ,HDMI , dual 2.5 GbE , USB 3.2 Gen2 , M.2, SATA 6Gb/s, COM,PCIe x4 for riser card and RoHS
WAFER-ADL-P-i7C-R11	3.5 SBC supports Intel® Alder Lake-P Core™ i7-1255U Processor, with 8GB LPDDR4x memory on board default, with DP ,HDMI , dual 2.5 GbE , USB 3.2 Gen2 , M.2, SATA 6Gb/s, COM,PCIe x4 for riser card 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
32205-002700-200-RS	RS-232/422/485, 200mm, P=2.0
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
NWR2-L2S-R10	PCIe x4 to two PCIe x2 riser card for WAFER on the left side
NWR2-R2S-R10	PCIe x4 to two PCIe x2 riser card for WAFER on the right side