

Cocreate an Intelligent World



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Mini PC & Motherboard Catalog

- 01 Table of contents
- 02 About ASRock Industrial
- 03 Comprehensive Motherboard and Mini PC Lineup
- 04 Comprehensive Motherboard and Mini PC Lineup

■ Fanned Embedded BOX PC

- 05 NUCS Ultra 100 BOX Series, NUCS Ultra 200 BOX Series
- 06 NUC Ultra 100 BOX Series, NUC Ultra 200 BOX Series
- 07 NUC BOX-N97
- 08 4X4 BOX 8040 Series, 4X4 BOX AI300 Series
- 09 DSF-A6000

■ Fanless Embedded BOX PC

- 10 iBOX Ultra 200 Series
- 11 iBOX Ultra 100 Series
- 12 iBOX-N97 R2
- 13 iBOX-260J
- 14 iBOX-250J

■ Mini-ITX Motherboard

- 15 IMB-1246, IMB-1247
- 16 IMB-1248-WV, IMB-1249-WV
- 17 IMB-1237, IMB-1238, IMB-X1238
- 18 IMB-1239-WV, IMB-1240-WV, IMB-X1240-WV
- 19 IMB-1241, IMB-1242
- 20 IMB-1235, IMB-1245-WV, IMB-1250-WV
- 21 IMB-1007J, IMB-1008J
- 22 IMB-1011J-WV, IMB-1012J-WV
- 23 IMB-A1002, IMB-A1003
- 24 IMB-A8000

■ Micro-ATX Motherboard

- 25 IMB-1317, IMB-X1317, IMB-X1317-10G
- 26 IMB-1315, IMB-1318
- 27 IMB-1316, IMB-X1316, IMB-X1316-10G
- 28 IMB-A1302

■ ATX Motherboard

- 29 IMB-1715, IMB-X1715, IMB-X1715-10G
- 30 IMB-XA1901, IMB-XA1901-10G

■ EATX Motherboard

- 31 IMB-X1900, IMB-X1900-10G, IMB-X1902, IMB-X1902-10G

■ SBC Motherboard

- 32 SBC-375
- 33 SBC-371, SBC-371-2H, SBC-373-WT
- 34 SBC-251-WT, SBC-262-WT
- 35 SBC-260J, SBC-261J, SBC-263J

■ NUC Motherboard

- 36 NUC Ultra 100 Motherboard Series, NUC Ultra 200 Motherboard Series
- 37 NUC-N97, NUC-N97-WV

■ 4X4 Motherboard

- 38 4X4 8040 Motherboard Series, 4X4 AI300 Motherboard Series

■ Pico-ITX Motherboard

- 39 SOM-P104

■ SMARC

- 40 SMC-1001M-WT

■ COM Express

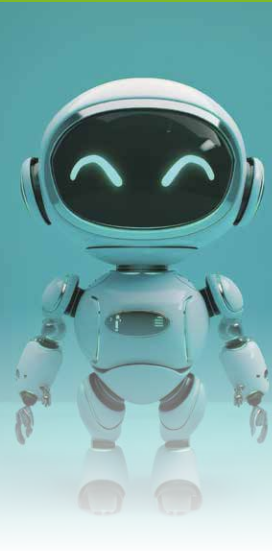
- 41 COM-656
- 42 COM-1001

About ASRock Industrial

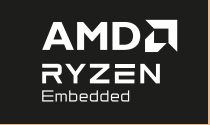
ASRock Industrial Computer Corporation, established as an independent entity in July 2018, is a prominent industry player specializing in the development of motherboards, edge computers, and related solutions for the manufacturing, business, and retail sectors. As the world-leading provider of Industrial PC systems and motherboards, our customers base spans the globe. Previously, it had been a business unit of ASRock Inc. (est. 2002) which was set up in 2011. ASRock Industrial now operates autonomously, allowing us to devote all resources to delivering exceptional B2B solutions.

Vertical Applications in CARES

Our vision is to cocreate an intelligent world, with core focus in CARES
(Commerce/Automation/Robot/Entertainment/Security) industries.

Commerce	Automation	Robot	Entertainment	Security
				
POS			Lottery	Video
KIOSK	Factory Automation	Pet Robot	Gambling	Surveillance
Digital Signage	Process Automation	Service Robot	Slot Machines	Network Security

Comprehensive Motherboard

								
	EATX	ATX	Micro-ATX					
 								
		ATX	Micro-ATX	Micro-STX	Mini-ITX	Mini-STX	SBC	NUC
								
					Mini-ITX	Mini-STX	SBC	NUC
 								
					Mini-ITX			4X4
								
					Mini-ITX			4X4



board and Mini PC Lineup

								
		COM Express			NUC BOX	NUCS BOX	iBOX	
								
UTX	Pico-ITX	COM Express	QSeven	SMARC	NUC BOX		iBOX	
								
					4X4 BOX			
								
					4X4 BOX		iBOX	DSF-A6000





Model	NUCS Ultra 100 BOX Series	NUCS Ultra 200 BOX Series
Chipset/ CPU	Intel® Core™ Ultra processors (Meteor Lake-H) NUCS BOX-155H (Ultra 7 155H, 6P+8E) NUCS BOX-125H (Ultra 5 125H, 4P+8E)	Intel® Core™ Ultra processors (Arrow Lake-H) NUCS BOX-255H (Ultra 7 255H, 6P+8E) NUCS BOX-225H (Ultra 5 225H, 4P+8E)
Dimensions (L x W x H)	117.5 x 110.0 x 38mm (4.63" x 4.33" x 1.50")	
Memory	Dual Channel DDR5 5600 MHz	Dual Channel DDR5 6400 MHz
DIMM Slot	2 x 262-pin SO-DIMM	
Capacity	96GB (48 GB per DIMM)	
MultiDisplay	Quad-Display (Included 2 outputs from Type-C)	
DP	1 x DP 1.4a, DP++ (from Type-C) 1 x DP 2.1, DP++ (from Type-C)	
HDMI	2 x HDMI 2.1 TMDS	
M.2 Key M	1 x M.2 (KEY M, 2280) with PCIe Gen4x4 for SSD 1 x M.2 (KEY M, 2242) with PCIe Gen4x1 for SSD	
RAID	Intel® VMD RAID 0/1 **supported by identical interface (PCIe) PCIe interface: 2*M.2 Key M	
M.2 Key E/WLAN	1 x Wi-Fi 6E 802.11ax + BT 5.3	
USB4	Front: 1 x USB4/Thunderbolt™ 4 (Supports DP2.1 display output)	
USB 3.2	Front: 1 x USB 3.2 Gen2x2 (Type-C, Supports DP1.4a display output) 2 x USB 3.2 Gen2 (Type-A) Rear: 2 x USB 3.2 Gen2 (Type-A)	
LAN	Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro	
Audio	1 (headphone & microphone jack)	
Security	Intel® PTT	
Power	12V~24V DC-In Jack	
Operating Temperature	0 ~ 40° C	
OS Support	Windows 10/11	
Mounting	VESA mounting	
Weight	Net Weight:1.0Kg	
Packing List	1 x 19V/120W Power Adapter (Core Ultra 7) 1 x 19V/90W Power Adapter (Core Ultra 5) 1 x VESA mount bracket	



Model	NUC Ultra 100 BOX Series	NUC Ultra 200 BOX Series
Chipset/ CPU	Intel® Core™ Ultra processors (Meteor Lake-H) NUC BOX-155H (Ultra 7 155H, 6P+8E) NUC BOX-125H (Ultra 5 125H, 4P+8E)	Intel® Core™ Ultra processors (Arrow Lake-H) NUC BOX-255H (Ultra 7 255H, 6P+8E) NUC BOX-225H (Ultra 5 225H, 4P+8E)
Dimensions (L x W x H)	117.5 x 110.0 x 49mm (4.63" x 4.33" x 1.93")	
Memory	Dual Channel DDR5 5600 MHz	Dual Channel DDR5 6400 MHz
DIMM Slot	2 x 262-pin SO-DIMM	
Capacity	96GB (48 GB per DIMM)	
MultiDisplay	Quad-Display (Included 2 outputs from Type-C)	
DP	1 x DP 1.4a, DP++ (from Type-C) 1 x DP 2.1, DP++ (from Type-C)	
HDMI	2 x HDMI 2.1 TMDS	
M.2 Key M	1 x M.2 (KEY M, 2242/2280) with PCIe Gen4x4 for SSD 1 x M.2 (KEY M, 2242) with PCIe Gen4x4 for SSD	
RAID	Intel® VMD RAID 0/1 **supported by identical interface (PCIe) PCIe interface: 2*M.2 Key M	
M.2 Key E/WLAN	1 x Wi-Fi 6E 802.11ax + BT 5.3	
USB4	Front: 1 x USB4/Thunderbolt™ 4 (Supports DP2.1 display output)	
USB 3.2	Front: 1 x USB 3.2 Gen2x2 (Type-C, Supports DP1.4a display output) 1 x USB 3.2 Gen2 (Type-A) Rear: 2 x USB 3.2 Gen2 (Type-A)	
LAN	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps	
Audio	1 (headphone & microphone jack)	
Security	Intel® PTT	
Power	12V~24V DC-In Jack	
Operating Temperature	0 ~ 40° C	
OS Support	Windows 10/11	
Mounting	VESA mounting	
Weight	Net Weight:1.0Kg	
Packing List	1 x 19V/120W Power Adapter (Core Ultra 7) 1 x 19V/90W Power Adapter (Core Ultra 5) 1 x VESA mount bracket	



KEY FEATURES

- Intel® Alder Lake-N Processors N97
- 1 x 260-pin SO-DIMM DDR4 3200 MHz , up to 32GB
- 5 x USB 3.2 Gen2, 1 x M.2 Key M, 1 x M.2 Key E (WiFi-6E Module), 1 x SATA3
- 2 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 2 x DP 1.4a (from Type-C)
- TPM 2.0 onboard IC
- 19V/65W Power Adapter
- 117.5 x 110.0 x 47.85mm (4.63" x 4.33" x 1.88"), Fanned Barebone

SPECIFICATIONS

Processor System

CPU	Intel® Alder Lake-N Processors N97
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Single Channel DDR4 3200 MHz
Capacity	32GB
Socket	1 x 260-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Triple-Display (Included 2 outputs from Type-C)

Expansion Slot

M.2/ WLAN	1 x Wi-Fi 6E 802.11ax + BT 5.2
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Audio

Interface	Realtek ALC256, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Storage

M.2	1 x M.2(KEY M, 2242/2260/2280) with PCIe Gen3 x1 and SATA3 for SSD *M.2 Key M 2280(Supported by bracket)
SATA	1 x SATA3.0 (6.0 Gb/s)

Front I/O

USB	1 x USB 3.2 Gen2 (Type-A) 2 x USB 3.2 Gen2 (Type-C, Supports DP1.4a display output)
Audio	1 (headphone & microphone jack)

Rear I/O

HDMI	2 x HDMI 2.0b
Ethernet	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 (Type-A)
DC Jack	1

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	9V~19V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	0°C ~ 40°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

Mechanical

Mounting	VESA mount
Dimensions (L x W x H)	117.5 x 110.0 x 47.85mm (4.63" x 4.33" x 1.88")
Weight	Net Weight:1.0Kg

Others

OS Support	Windows 10/11
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC
Packing List	1 x 19V/65W Power Adapter 1 x VESA mount bracket



Model	4X4 BOX 8040 Series	4X4 BOX AI300 Series
Chipset/ CPU	AMD Ryzen™ 8040U Series - 4X4 BOX-8840U (AMD Ryzen™ 7 8840U, 8Cores, Max Speed up to 5.1GHz) - 4X4 BOX-8640U (AMD Ryzen™ 5 8640U, 6Cores, Max Speed up to 4.9GHz)	AMD Ryzen™ AI 300 Series - 4X4 BOX-AI350 (AMD Ryzen™ AI 7 350, 8Cores, Max Speed up to 5.0GHz) - 4X4 BOX-AI340 (AMD Ryzen™ AI 5 340, 6Cores, Max Speed up to 4.8GHz)
Dimensions (L x W x H)	117.5 x 110.0 x 49mm (4.63" x 4.33" x 1.93")	
Memory	Dual Channel DDR5 5600 MHz	
DIMM Slot	2 x 262-pin SO-DIMM	
Capacity	96GB (48 GB per DIMM)	
MultiDisplay	Max 4 display (Included 2 outputs from Type-C)	
DP	2 x DP 1.4a (from Type-C)	
HDMI	2 x HDMI 2.1	
M.2 Key M	1 x M.2 (KEY M, 2242/2280) with PCIe Gen4x4 for SSD 1 x M.2 (KEY M, 2242) with PCIe Gen4x4 for SSD	
M.2 Key E/WLAN	1 x Wi-Fi 6E 802.11ax + BT 5.2 (M.2 Key E, 2230 with PCIe Gen4 x1, USB 2.0 for Wireless)	
USB4	Front: 2 x USB4 (Supports DP1.4a display output)	
USB 3.2	Front: 1 x USB 3.2 Gen2 (Type-A)	Front: 1 x USB 3.2 Gen2 (Type-A) Rear: 2 x USB 3.2 Gen1 (Type-A)
USB 2.0	Rear: 2 x USB 2.0	NA
LAN	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps	
Audio	1 (headphone & microphone jack)	
Security	AMD FWTPM	
Power	12V~24V DC-In Jack	
Operating Temperature	0°C ~ 40°C	
OS Support	Windows 10/11	Windows 11
Mounting	VESA mounting	
Weight	Net Weight: 1.0Kg	
Packing List	1 x 19V/120W Power Adapter (Ryzen 7) 1 x 19V/90W Power Adapter (Ryzen 5) 1 x VESA mounting bracket	



KEY FEATURES

- AMD Ryzen™ Embedded R-Series R2314
- 2 x 260-pin ECC/non-ECC SO-DIMM DDR4 2666 MHz, up to 64GB (32GB per DIMM)
- 2 x USB 3.2 Gen2, 1 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 1 x M.2 Key M, 1 x COM
- 1 x Intel Gigabit LAN, 1 x Realtek Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN with PoE+ function (optional)
- Support Quad display, 4 x HDMI 2.0b
- TPM 2.0 onboard IC
- Optional support Allxon 24/7 Edge AI device remote management through MPU-OOB card
- 1 x 19V/90W Power Adapter
- 182.2 x 175.2 x 25mm (7.1" x 6.9" x 1"), Fanned Barebone

SPECIFICATIONS

Processor System

CPU	AMD Ryzen™ Embedded R-Series (R2314, 4C, 2.1GHz, 12-35W)
BIOS	AMI SPI 64 Mbit

Memory

Technology	Dual Channel ECC/non-ECC DDR4 2666 MHz
Capacity	64 GB (32 GB per DIMM)
Socket	2 x 260-pin SO-DIMM

Graphics

Controller	AMD Radeon™ Graphics
HDMI	HDMI 2.0b
	Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad Display

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1 and USB 2.0 for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket	1 x Socket connected to M.2 Key B

Audio

Interface	Realtek ALC256, High Definition Audio. Line-out, Mic-in
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Ethernet

Controller/ Speed	LAN1: Realtek® RTL8111H with 10/100/1000 Mbps LAN2: Intel® I210 with 10/100/1000 Mbps LAN3: Realtek® RTL8125BG with 10/100/1000/2500 Mbps, supports PoE+ (optional)
Connector	3 x RJ-45

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x4 for SSD
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Front I/O

Ethernet	2 x 1 Gigabit LAN
HDMI	4 x HDMI 2.0b
USB	2 x USB3.2 Gen2
HDD/WIFI LED	1
Power Button	1

Rear I/O

DC Jack	1
Ethernet	1 x 2.5 Gigabit LAN
Clear EDID Button	1
COM	1 x RS232 (RJ50)
USB	1 x USB 2.0
Audio	1 (Mic-in or Line-out)
SIM Socket	1

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12V~19V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	0°C ~ 40°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

Mechanical

Mounting	VESA mount/Wall mount/Din Rail
Dimensions (L x W x H)	182.2 x 175.2 x 25 mm (7.1" x 6.9" x 1")
Weight	Net Weight: 0.75kg (1.65 lbs)

Others

OS Support	Windows 11
OOB support	Optional: Out of band management through MPU-OOB card
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC
Packing List	1 x 19V/90W Power Adapter 1 x Wall mount bracket

iBOX Ultra 200 Series

iBOX-255H, iBOX-225H
Fanless Embedded BOX PC



KEY FEATURES

- Intel® Core™ Ultra processors (Arrow Lake-H)
- 2 x 262-pin CSO-DIMM DDR5 6400MHz up to 96GB (48GB per DIMM)
- 1 x USB4/Thunderbolt™4, 4 x USB3.2 Gen2, 2 x USB 2.0, 2 x M.2 Key M, 1 x M.2 Key E, 1 x COM, 1 x SATA3
- 2 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1 TMDS, 1 x DP 2.1 (from USB4), 1 x DP 1.4a (from Type-C)
- Intel® PTT
- Supports Intel® vPro, VMD RAID 0/1
- 19V Power Adapter
- OOB Function (BOM Optional)
- 200 x 176.6 x 53.6mm (7.87" x 6.95" x 2.11"), Fanless Embedded BOX PC

SPECIFICATIONS

Processor System

CPU	Intel® Core™ Ultra processors (Arrow Lake-H) iBOX-255H (Ultra 7 255H, 6P+8E) iBOX-225H (Ultra 5 225H, 4P+8E)
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 6400MHz
Capacity	96GB (48GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Graphics
HDMI	HDMI 2.1 TMDS Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 2.1/ 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad-Display (Included 2 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless
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Audio

Interface	Realtek ALC256, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Intel I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel I226V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Storage

M.2	1 x M.2 (KEY M, 2242) with PCIe Gen4 x4 for SSD 1 x M.2 (KEY M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	1 x SATA3.0 (6.0 Gb/s)
RAID	Intel® VMD RAID 0/1 **supported by identical interface (PCIe) PCIe interface: 2* M.2 Key M

Front I/O

USB	1 x USB 3.2 Gen2 (Type A) 1 x USB4/Thunderbolt™ 4 (5V/3A, Supports DP 2.1 display output) 1 x USB3.2 Gen2 x2 (Type-C, 5V/3A, Supports DP1.4a display output) 2 x USB 2.0 *For Thunderbolt support, please refer to support list.
Audio	1 (headphone & microphone jack)
COM	1 x COM(RS-232/422/485)

Rear I/O

HDMI	2 x HDMI 2.1 TMDS
Ethernet	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 (Type-A)
DC Jack	1
OOB	Supports Remote Power On/Off/Reset (BOM Optional)

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12V~24V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 50°C with air flow 0.5~0.8 m/s (with extended temp. peripherals)
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

Mechanical

Construction	Aluminum housing
Mounting	VESA mount/Wall mount/Din-rail
Dimensions (L x W x H)	200 x 176.6 x 53.6mm (7.87" x 6.95" x 2.11")
Weight	Net Weight: 3Kg

Others

OS Support	Windows 10/11
TPM	Intel® PTT
Certifications	CE, FCC
Packing List	1 x 19V Power Adapter 1 x Wall mount kit

iBOX Ultra 100 Series

iBOX-155U, iBOX-125U
Fanless Embedded BOX PC



KEY FEATURES

- Intel® Core™ Ultra processors (Meteor Lake-U)
- 2 x 262-pin SO-DIMM DDR5 5600MHz up to 96GB (48GB per DIMM)
- 1 x USB4/Thunderbolt™4, 4 x USB3.2 Gen2, 2 x USB 2.0, 2 x M.2 Key M, 1 x M.2 Key E, 1 x COM, 1 x SATA3
- 2 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1 TMDS, 1 x DP 2.1 (from USB4), 1 x DP 1.4a (from Type-C)
- Intel® PTT
- Supports Intel® vPro, VMD RAID 0/1
- 19V/90W Power Adapter
- 171.8 x 109.45 x 50.05mm (6.76" x 4.31" x 1.97"), Fanless Embedded BOX PC

SPECIFICATIONS

Processor System

CPU	Intel® Core™ Ultra processors (Meteor Lake-U) iBOX-155U (Ultra 7 155U, 2P+8E) iBOX-125U (Ultra 5 125U, 2P+8E)
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 5600 MHz
Capacity	96GB (48GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Graphics
HDMI	HDMI 2.1 TMDS Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 2.1/ 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad-Display (Included 2 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless
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Audio

Interface	Realtek ALC256, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Intel I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel I226V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Storage

M.2	1 x M.2 (KEY M, 2242) with PCIe Gen4 x4 for SSD 1 x M.2 (KEY M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	1 x SATA3.0 (6.0 Gb/s)
RAID	Intel® VMD RAID 0/1 **supported by identical interface (PCIe) PCIe interface: 2* M.2 Key M

Front I/O

USB	1 x USB 3.2 Gen2 (Type A) 1 x USB4/Thunderbolt™ 4 (5V/3A, Supports DP 2.1 display output) 1 x USB3.2 Gen2 x2 (Type-C, 5V/3A, Supports DP1.4a display output) 2 x USB 2.0 *For Thunderbolt support, please refer to support list.
Audio	1 (headphone & microphone jack)

Rear I/O

HDMI	2 x HDMI 2.1 TMDS
Ethernet	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 (Type-A)
DC Jack	1
COM	1 x COM(RS-232/422/485)

Watchdog Timer

Output Interval	From Super I/O to drag RESETCON# 256 Segments, 0, 1, 2, ...255sec
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Power Requirements

Input PWR	12V~24V DC-In Jack AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready
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Environment

Operating Temp	-20°C ~ 50°C with air flow 0.5~0.8 m/s (with extended temp. peripherals)
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

Mechanical

Construction	Aluminum housing
Mounting	VESA mount/Wall mount/Din-rail
Dimensions (L x W x H)	171.8 x 109.45 x 50.05mm (6.76" x 4.31" x 1.97")
Weight	Net Weight:1.6Kg

Others

OS Support	Windows 10/11
TPM	Intel® PTT
Certifications	CE, FCC
Packing List	1 x 19V/90W Power Adapter 1 x Wall mount kit

iBOX-N97 R2

Fanless Embedded BOX PC



KEY FEATURES

- Intel® Alder Lake-N SoC Processor N97
- 1 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 6 x USB 3.2 Gen2, 1 x M.2 Key E, 1 x M.2 Key M, 1 x COM, 1 x SATA3
- 2 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 2 x DP 1.4a (From Type-C)
- TPM 2.0 onboard IC
- 19V/65W Power Adapter
- 135 x 110 x 44.5mm (5.31" x 4.33" x 1.75"), Fanless Embedded BOX PC

SPECIFICATIONS

Processor System

CPU	Intel® Alder Lake-N SoC Processors iBOX-N97 R2 (N97, QC, Max Speed Up to 3.6GHz, 12W)
Chipset	SoC
BIOS	AMI SPI 256 Mbit

Memory

Technology	Single Channel DDR4 3200 MHz
Capacity	32GB
Socket	1 x 260-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Triple-Display (Included 2 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless
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Audio

Interface	Realtek ALC256, High Definition Audio
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Storage

M.2	1 x M.2 (KEY M, 2242/2260/2280) with PCIe Gen3 x1 and SATA3 for SSD *M.2 Key M 2280 (Supported by bracket)
SATA	1 x SATA3.0 (6.0 Gb/s)

Front I/O

USB	2 x USB 3.2 Gen2 (Type-A) 2 x USB 3.2 Gen2 (Type-C, Supports DP 1.4a display output)
COM	1 x COM (RS-232/422/485)
Audio	1 (headphone & microphone jack)

Rear I/O

HDMI	2 x HDMI 2.0b
Ethernet	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 (Type-A)
DC Jack	1

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	9V~19V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 50°C with air flow 0.5~0.8 m/s (with extended temp. peripherals)
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

Mechanical

Construction	Aluminum housing
Mounting	VESA mount/Wall mount/Din-rail
Dimensions (L x W x H)	135 x 110 x 44.5mm (5.31" x 4.33" x 1.75")
Weight	Net Weight: 0.7kg

Others

OS Support	Windows 10/11
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC
Packing List	1 x 19V/65W Power Adapter 1 x Wall mount kit



KEY FEATURES

- Intel® Alder Lake-N Processors
- 1 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 2 x USB3.2 Gen2, 2 x USB2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 3 x COM, 1 x SATA3
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4a, 1 x VGA
- 1 x 19V/65W AC-DC power brick adapter
- 200 x 134.5 x 39mm (7.87" x 5.3" x 1.54"), Fanless Barebone

SPECIFICATIONS

Processor System

CPU	Intel® Alder Lake-N SoC Processors iBOX-260J (N97, QC, Max Speed Up to 3.6GHz, 12W)
Chipset	SoC
BIOS	AMI SPI 256 Mbit

Memory

Technology	Single Channel DDR4 3200 MHz
Capacity	32GB
Socket	1 x 260-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
DisplayPort	DP 1.4a Max resolution up to 4096 x 2160@60Hz
VGA	Max resolution up to 1920 x 1200
MultiDisplay	Triple Display

Audio

Interface	Realtek ALC256 HD, High Definition Audio
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Ethernet

Controller/ Speed	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps
Connector	2 x RJ-45

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1 and USB 2.0 for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1/USB 3.2/USB 2.0 and SIM for 4G/5G
SIM Socket	1x SIM socket connected to M.2 key B

Storage

M.2	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1 or SATA3 for SSD
SATA	1 x SATA3 (6Gb/s)

Front I/O

USB	2 x USB 2.0
COM	2 x COM (RS-232/422/485) 1 x COM (RS-232)

Rear I/O

HDMI	1 x HDMI2.0b
DisplayPort	1 x DP 1.4a
VGA	1
Ethernet	1 x 1 Gigabit LAN, 1 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2

Watchdog Timer

Output Interval	From Super I/O to drag RESETCON# 256 Segments, 0, 1, 2, ...255sec
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Power Requirements

Input PWR	9~36V DC-In
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 50°C (With extended temp. peripherals)
Storage Temp	-40°C ~ 85°C
Operating Humidity	10% ~ 90%
Storage Humidity	10% ~ 90%

Mechanical

Construction	Aluminum housing
Mounting	VESA mount/Wall mount/Din-rail
Dimensions (L x W x H)	200 x 134.5 x 39mm (7.87" x 5.3" x 1.54")
Weight	Net Weight: 1.3kg

Others

OS Support	Windows 10/11
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC
Packing List	1 x 19V/65W Power Adapter 1 x Wall mount kit

iBOX-250J

Fanless Embedded BOX PC



KEY FEATURES

- Intel® Elkhart Lake SoC Processors J6412
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB(16GB per DIMM)
- 1 x USB 3.2 Gen2, 3 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 3 x COM, 1 x SATA3
- 2 x Intel 2.5 Gigabit LAN
- Supports dual display, 1 x HDMI2.0b, 1 x VGA
- 1 x 19V/65W AC-DC Power Brick Adapter
- 200 x 134.5 x 39mm (7.87" x 5.3" x 1.54"), Fanless Barebone

SPECIFICATIONS

Processor System

CPU	Intel® Elkhart Lake SoC Processors iBOX-250J (J6412, QC, Max Speed Up to 2.6GHz, 10W)
Chipset	SoC
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR4 3200 MHz
Capacity	32GB (16GB per DIMM)
Socket	2 x 260-pin SO-DIMM

Graphics

Controller	Intel® Gen 11 Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
VGA	Max resolution up to 1920x1200@60Hz
MultiDisplay	Dual Display

Audio

Interface	Realtek ALC256 HD, High Definition Audio
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Ethernet

Controller/ Speed	LAN1: Intel® I225V with 10/100/1000/2500 Mbps LAN2: Intel® I225V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1 and USB 2.0 for Wireless
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Storage

M.2	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1 for SSD
SATA	1 x SATA3 (6Gb/s)

Front I/O

USB	2 x USB 2.0
COM	1 x COM (RS-232/422/485) 2 x COM (RS-232)

Rear I/O

HDMI	1 x HDMI2.0b
VGA	1
Ethernet	2 x 2.5 Gigabit LAN
USB	1 x USB 3.2 Gen2, 1 x USB 2.0

Watchdog Timer

Output Interval	From Super I/O to drag RESETCON# 256 Segments, 0, 1, 2, ...255sec
-----------------	--

Power Requirements

Input PWR	9~36V DC-In
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 50°C (With extended temp. peripherals)
Storage Temp	-40° C ~ 85° C
Operating Humidity	10% ~ 90%
Storage Humidity	10% ~ 90%

Mechanical

Construction	Aluminum housing
Mounting	VESA mount/Wall mount/Din-rail
Dimensions (L x W x H)	200 x 134.5 x 39mm (7.87" x 5.3" x 1.54")
Weight	Net Weight:1.3kg

Others

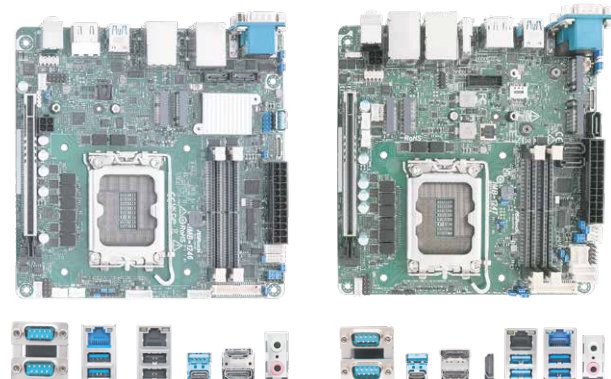
OS Support	Windows 10/11
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC
Packing List	1 x 19V/65W Power Adapter 1 x Wall mount kit

IMB-1246, IMB-1247

Mini-ITX Motherboard

KEY FEATURES

- Intel® Core™ Ultra Processors (Arrow Lake-S) with H810 chipset (IMB-1246)
- Intel® Core™ Ultra Processors (Arrow Lake-S) with Q870 chipset (IMB-1247)
- 2 x 262-pin CSO-DIMM DDR5 6400 MHz, SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x16 (Gen5), 1 x USB4/Thunderbolt™4
- 2 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 4 x COM, 2 x SATA3 (IMB-1246)
- 5 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 2 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key E, 2 x M.2 Key M, 4 x COM, 3 x SATA3 (IMB-1247)
- 1 x Realtek 2.5 Gigabit LAN, 1 x Intel 1 Gigabit LAN (IMB-1246)
- 1 x Intel 2.5 Gigabit LAN, 1 x Intel 1 Gigabit LAN (IMB-1247)
- Supports Triple display, 2 x HDMI 2.1 TMDS, 1 x DP 2.1 (from Type-C), 1 x LVDS or eDP (IMB-1246)
- Supports Quad display, 2 x HDMI 2.1 TMDS, 1 x DP 2.1 (from Type-C), 1 x DP 1.4a, 1 x LVDS or eDP (IMB-1247)
- TPM 2.0 onboard IC (IMB-1247)
- Supports Intel® vPro, VMD RAID 0/1/5/10 (IMB-1247)
- ATX-PWR (24+4-pin) (IMB-1246)
- ATX-PWR (24+4-pin) and +12V DC-In co-design (IMB-1247)



IMB-1246

IMB-1247

SPECIFICATIONS

Form Factor	IMB-1246	IMB-1247
Dimensions (LxWxH)	Mini-ITX (6.7-in x 6.7-in x 1.4-in, 17.0 cm x 17.0 cm x 3.6 cm)	Mini-ITX (6.7-in x 6.7-in x 1.5-in, 17.0 cm x 17.0 cm x 3.8 cm)

Processor System

CPU	Intel® Core™ Ultra Processors (Arrow Lake-S), up to 65W	
Chipset	Intel® H810	Intel® Q870
Socket	LGA1851	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Dual Channel DDR5 5600/6400 MHz	
Capacity	96 GB (48 GB per DIMM)	
Socket	2 x 262-pin SO-DIMM	

Graphics

Controller	Intel® X® LPG Graphics	
HDMI	HDMI 2.1 TMDS Max resolution up to 7680x4320@60Hz	
DisplayPort (IMB-1246)	DisplayPort 2.1, DP++ Max resolution up to 4096x2160@60Hz	
DisplayPort (IMB-1247)	DisplayPort 2.1/ 1.4a, DP++ Max resolution up to 4096x2160@60Hz	
LVDS	Dual channel 24 bit up to 1920x1200@60Hz (Connector shared with eDP)	
eDP	Max resolution up to 1920 x 1200@60Hz (Connector shared with LVDS)	
MultiDisplay	Triple Display (Included 1 output from Type-C)	Quad Display (Included 1 output from Type-C)

Expansion Slot

PCIe	1 x PCIe x16 (Gen5)	1 x PCIe x16 (Gen5, Support riser card x8/x8, x8/x4/x4)
M.2 (IMB-1246)	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless	
M.2 (IMB-1247)	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G	
SIM Socket (IMB-1247)	1 x Socket connected to M.2 Key B (optional)	

Audio

Interface	Realtek ALC897, High Definition Audio. Line-out, Mic-in
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Ethernet

Controller/ Speed (IMB-1246)	LAN1: Realtek® RTL8125BG with 10/100/1000/2500 Mbps LAN2: Intel® I219V with 10/100/1000 Mbps	
Controller/ Speed (IMB-1247)	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219LM with 10/100/1000 Mbps, supports vPro	
Connector	2 x RJ-45	

Rear I/O

HDMI	2 x HDMI 2.1 TMDS	
DisplayPort	N/A	1 x DP 1.4a++

Rear I/O	IMB-1246	IMB-1247
Ethernet	1 x 2.5 Gigabit LAN 1 x 1 Gigabit LAN	
USB (IMB-1246)	1 x USB4/Thunderbolt™ 4 (5V/3A, Supports DP 2.1 display output) 2 x USB 3.2 Gen2 1 x USB 3.2 Gen1 2 x USB 2.0 *For Thunderbolt support, please refer to support list.	
USB (IMB-1247)	1 x USB4/Thunderbolt™ 4 (5V/3A, Supports DP 2.1 display output) 5 x USB 3.2 Gen2 *For Thunderbolt support, please refer to support list.	
Audio	2 (Mic-in, Line-out or Mic-in, Line-in (optional))	
COM	COM1 (RS-232/422/485) COM3 (RS-232)	COM1, COM3 (RS-232/422/485)

Internal Connector

USB (IMB-1246)	1 x USB 3.2 Gen1 (vertical con) 2 x USB 2.0 (1 x 2.54 pitch header)	
USB (IMB-1247)	2 x USB 3.2 Gen1 (1 x USB 3.2 header) 2 x USB 2.0 (1 x 2.54 pitch header)	
COM	COM4, COM6 (RS-232)	
GPIO	4 x GPI, 4 x GPO	
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)	
SATA PWR Output	N/A	1
Speaker Header	1	

Storage

M.2 (IMB-1246)	1 x M.2 (Key M, 2242/2280/3052) with PCIe Gen4 x4 and SATA3 (optional) for SSD	
M.2 (IMB-1247)	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 and SATA3 for SSD 1 x M.2 (Key M, 2242) with PCIe Gen4 x4 and SATA3 for SSD* *Recommend using M2x4-SATA-4P module to support extra 4 SATA ports (Support by special BIOS)	
SATA	2 x SATA3 (6Gb/s)	3 x SATA3 (6Gb/s)* *SATA3_7 shared with M.2 Key M1
RAID (IMB-1247)	Intel® VMD RAID 0/1/5/10 ***supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M1/2 or 2* M.2 Key M SATA interface: SATA port	

Security

TPM	TPM Header	TPM 2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#	
Interval	256 Segments, 0, 1, 2, ..., 255sec	

Power Requirements

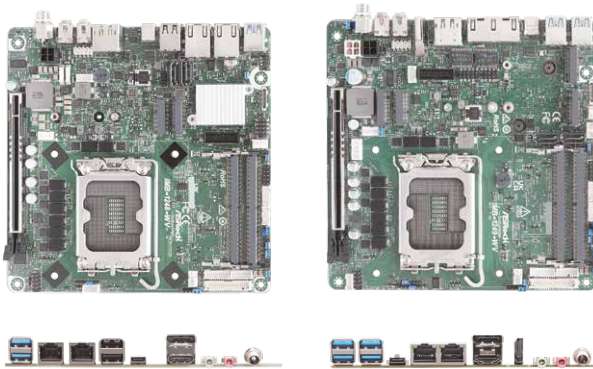
Input PWR	ATX PWR (24+4-pin)	ATX PWR (24+4-pin) and +12V DC-In co-design
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready	

Environment

Operating Temp	-20 °C ~ 70 °C	
Storage Temp	-40 °C ~ 85 °C	
Operating Humidity	5% ~ 90% (non-condensing)	
Storage Humidity	5% ~ 90% (non-condensing)	

IMB-1248-WV, IMB-1249-WV

Mini-ITX Motherboard



IMB-1248-WV

IMB-1249-WV

KEY FEATURES

- Intel® Core™ Ultra processors (Arrow Lake-S) with H810 chipset (IMB-1248-WV)
- Intel® Core™ Ultra processors (Arrow Lake-S) with Q870 chipset (IMB-1249-WV)
- 2 x 262-pin CSO-DIMM DDR5 6400 MHz, SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x16 (Gen5), 1 x USB4/Thunderbolt™4, 2 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 2 x COM, 2 x SATA3 (IMB-1248-WV)
- 1 x PCIe x16 (Gen5), 1 x USB4/Thunderbolt™4, 4 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 2 x COM, 2 x SATA3 (IMB-1249-WV)
- 2 x Realtek 1 Gigabit LAN (IMB-1248-WV)
- 1 x Intel 2.5 Gigabit LAN, 1 Intel 1 Gigabit LAN (IMB-1249-WV)
- Supports Triple display, 1 x HDMI 2.1 TMDS, 1 x DP 2.1 (1 from Type C), 1 x DP 1.4a, 1 x LVDS or eDP (IMB-1248-WV)
- Supports Quad display, 2 x HDMI 2.1 TMDS, 1 x DP 2.1 (1 from Type C), 1 x DP 1.4a, 1 x LVDS or eDP (IMB-1249-WV)
- TPM 2.0 onboard IC (IMB-1249-WV)
- Supports Intel® vPro, VMD RAID 0/1 (IMB-1249-WV)
- 12~28V DC-In (Lockable DC Jack)/ 12V DC-In only (BOM option)

SPECIFICATIONS

Form Factor	IMB-1248-WV	IMB-1249-WV
Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.03-in, 17.0 cm x 17.0 cm x 2.6 cm)	

Processor System

CPU	Intel® Core™ Ultra processors (Arrow Lake-S), up to 65W	
Chipset	H810	Q870
Socket	LGA 1851	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Dual Channel DDR5 5600/6400 MHz	
Capacity	96GB (48GB per DIMM)	
Socket	2 x 262-pin SO-DIMM	

Graphics

Controller	Intel® Xe® LPG Graphics	
HDMI	HDMI 2.1 TMDS Max resolution up to 7680x4320@60Hz	
DisplayPort	DisplayPort 2.1/1.4a, DP++ Max resolution up to 4096x2160@60Hz	
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)	
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)	
MultiDisplay	Triple display (Included 1 output from Type-C)	Quad display (Included 1 output from Type-C)

Expansion Slot

PCIe (IMB-1248-WV)	1 x PCIe x16 (Gen5)
PCIe (IMB-1249-WV)	1 x PCIe x16 (Gen5, support riser card x8/x8, x8/x4/x4)
M.2 (IMB-1248-WV)	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless
M.2 (IMB-1249-WV)	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket (IMB-1249-WV)	1 x SIM socket connected to M.2 key B

Audio

Interface	Realtek ALC897 HD, High Definition Audio. Line-out, Mic-in
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Ethernet

Controller/ Speed (IMB-1248-WV)	LAN1: Realtek RTL8111H with 10/100/1000 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Controller/ Speed (IMB-1249-WV)	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219LM with 10/100/1000 Mbps, supports vPro
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.1 TMDS	2 x HDMI 2.1 TMDS
DisplayPort	1 x DP 1.4a++	
Ethernet	2 x 1 Gigabit LAN	1 x 2.5 Gigabit LAN 1 x 1 Gigabit LAN

Rear I/O	IMB-1248-WV	IMB-1249-WV
USB (IMB-1248-WV)	2 x USB 2.0 2 x USB 3.2 Gen2 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.	
USB (IMB-1249-WV)	4 x USB 3.2 Gen2 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.	
Audio	2 (Lin-In/Line-Out or Line-In/ Mic-In (BOM option))	
DC Jack	1 DC-in	

Internal Connector

USB (IMB-1248-WV)	2 x USB 3.2 Gen1 (1 x USB 3.2 wafer) 2 x USB 2.0 (1 x 2.54 pitch header)
USB (IMB-1249-WV)	2 x USB 3.2 Gen1 (1 x USB 3.2 wafer) 4 x USB 2.0 (1 x 2.54 pitch header)
COM (IMB-1248-WV)	COM1 (RS-232/422/485) COM3 (RS-232)
COM (IMB-1249-WV)	COM1, COM3 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1

Storage

M.2 (IMB-1248-WV)	1 x M.2 (Key M, 2242/2280/3052) with PCIe Gen4 x4 for SSD
M.2 (IMB-1249-WV)	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 and SATA3 for SSD 1 x M.2 (Key M, 2242) with PCIe Gen4 x4 and SATA3 for SSD* *Recommend using M2X4-SATA-4P module to support extra 4 SATA ports (Support by special BIOS)
SATA	2 x SATA3 (6Gb/s)
RAID (IMB-1249-WV)	Intel® VMD RAID 0/1 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B+ M.2 Key M, 2 x M.2 Key M SATA interface: 2 x SATA port

Security

TPM	TPM Header	TPM 2.0 onboard IC
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Watchdog Timer

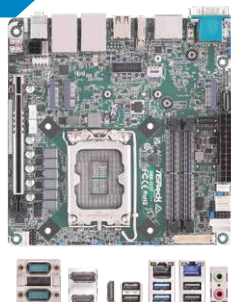
Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

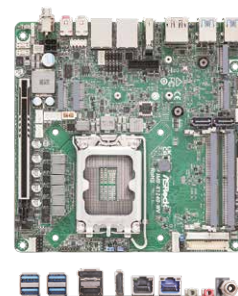
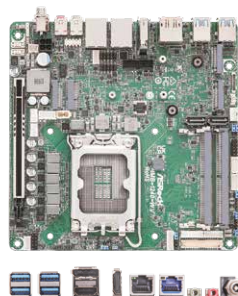
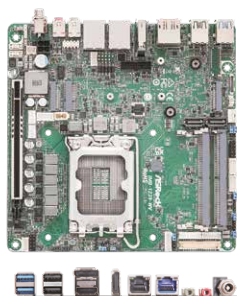
Input PWR	12~28V DC-In with 4-pin wafer PWR cable or DC Jack (Screw type) 12V DC-In only (BOM option)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)



Model	IMB-1237	IMB-1238	IMB-X1238
Chipset/ CPU	Intel® H610	Intel® Q670	Intel® W680
Socket	LGA1700		
Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.5-in, 170 cm x 170 cm x 3.8 cm)		
Memory	Dual Channel DDR5 4800/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *If motherboard ambient temp. is over 55°C, the memory thermal solution should be added to avoid thermal issue		Dual Channel ECC/non-ECC DDR5 4800/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *If motherboard ambient temp. is over 55°C, the memory thermal solution should be added to avoid thermal issue
DIMM Slot	2 x 262-pin SO-DIMM		
Capacity	96 GB (48 GB per DIMM)		
PCIe	1 x PCIe x16 (Gen5)	1 x PCIe x16 (Gen5, Support riser card x8/x8)	
DP	1 x DP 1.4a		
HDMI	1 x HDMI 2.0b, 1 x HDMI 1.4b		
LVDS/eDP	1 x LVDS or eDP		
M.2 Key M	1 x M.2 (Key M, 2242/2280) with PCIe Gen4x4 for SSD	1 x M.2 (Key M, 2242/2280) with PCIe Gen4x4 for SSD 1 x M.2 (Key M, 2242) with PCIe Gen3x4 and SATA3 for SSD* *Recommend using M2X4-SATA-4P module to support extra 4 SATA ports (Support by special BIOS)	
M.2 Key E	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless		
M.2 Key B	1 x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G		
SATA	2 x SATA3 (6Gb/s)	4 x SATA3 (6Gb/s)	
RAID	N/A	Intel® VMD RAID 0/1/5/10 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M1/2 or 2*M.2 Key M SATA interface: SATA port	
USB 3.2	Internal: 1 x USB 3.2 Gen1 (1 x USB 3.2 header) Rear: 2 x USB 3.2 Gen2	Internal: 2 x USB 3.2 Gen1 (1 x USB 3.2 header) Rear: 4 x USB 3.2 Gen2	
USB 2.0	Internal: 1 x USB 2.0 (From USB 3.2 header) Rear: 4 x USB 2.0	Internal: 2 x USB 2.0 (1 x 2.54 pitch header) Rear: 2 x USB 2.0	
GPIO	4 x GPI, 4 x GPO		
LAN	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219V with 10/100/1000 Mbps	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219LM with 10/100/1000 Mbps, supports vPro	
COM Port	Internal: COM3, COM4 (RS-232) Rear: COM1, COM2 (RS-232/422/485)		
Audio	2 (Mic-In, Line-Out)		
TPM	TPM 2.0 onboard IC		
Power	ATX PWR (24+4-pin) and +12V DC-In co-design		
Operating Temperture	-20°C ~ 70°C		



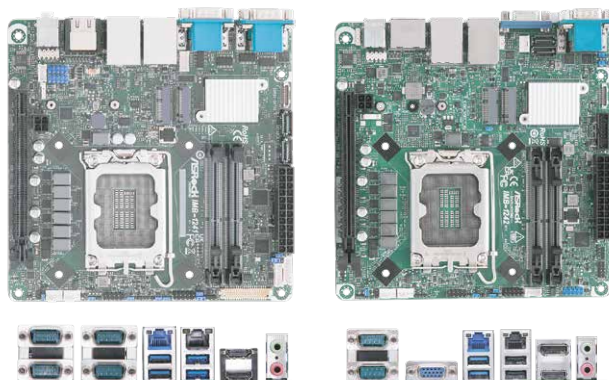
Model	IMB-1239-WV		IMB-1240-WV	IMB-X1240-WV
Chipset/ CPU	Intel® H610		Intel® Q670	Intel® W680
Socket	LGA1700			
Form Factor	Mini-ITX (6.7-in x 6.7-in x 1.0-in, 170 cm x 170 cm x 2.5 cm)			
Memory	Dual Channel DDR5 4800/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *If motherboard ambient temp. is over 55°C, the memory thermal solution should be added to avoid thermal issue		Dual Channel ECC/non-ECC DDR5 4800/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *If motherboard ambient temp. is over 55°C, the memory thermal solution should be added to avoid thermal issue	
DIMM Slot	2 x 262-pin SO-DIMM			
Capacity	96 GB (48 GB per DIMM)			
PCIe	1 x PCIe x16 (Gen5)	1 x PCIe x16 (Gen5, Support riser card x8/x8)		
DP	1 x DP 1.4a			
HDMI	2 x HDMI 2.0b			
LVDS/eDP	1 x LVDS, 1 x eDP 1.4b			
M.2 Key M	1 x M.2 (Key M, 2242/2280) with PCIe Gen3x4 for SSD	1 x M.2 (Key M, 2242/2280) with PCIe Gen4x4 for SSD 1 x M.2 (Key M, 2242) with PCIe Gen4x4 and SATA3 for SSD* *Recommend using M2X4-SATA-4P module to support extra 4 SATA ports (Support by special BIOS)		
M.2 Key E	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless			
M.2 Key B	1 x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G			
SATA	2 x SATA3 (6Gb/s)			
RAID	N/A	Intel VMD RAID 0/1 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M1/2 or 2*M.2 Key M SATA interface: SATA port		
USB 3.2	Internal: 1 x USB 3.2 Gen1 (1 x USB 3.2 header) Rear: 2 x USB 3.2 Gen2	Internal: 2 x USB 3.2 Gen1 (1 x USB 3.2 header) Rear: 4 x USB 3.2 Gen2		
USB 2.0	Internal: 3 x USB 2.0 (1 x 2.54 pitch header) Rear: 2 x USB 2.0	Internal: 4 x USB 2.0 (2 x 2.54 pitch header)		
GPIO	4 x GPI, 4 x GPO			
LAN	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219V with 10/100/1000 Mbps	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I219LM with 10/100/1000 Mbps, supports vPro		
COM Port	Internal: COM1, COM3 (RS-232/422/485)			
Audio	2 (Mic-In, Line-Out)			
TPM	TPM 2.0 onboard IC			
Power	12~28V DC-In with 4-pin wafer PWR cable or DC Jack (Screw type)			
Operating Temperture	-20°C ~ 70°C			

IMB-1241, IMB-1242

Mini-ITX Motherboard

KEY FEATURES

- Intel® 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with H610 chipset
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 64GB (32GB per DIMM)
- 1 x PCIe x16 (Gen4), 2 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 5 x COM, 2 x SATA3 (IMB-1241)
- 1 x PCIe x16 (Gen4), 2 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 2 x COM, 2 x SATA3 (IMB-1242)
- 1 x Intel Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 1 x LVDS or eDP (IMB-1241)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4a, 1 x VGA (IMB-1242)
- ATX-PWR (24+4-pin) (IMB-1241)
- ATX-PWR (24+4-pin) and 12V DC-In co-design (IMB-1242)



IMB-1241

IMB-1242

SPECIFICATIONS

Form Factor	IMB-1241	IMB-1242
Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.4-in, 17.0 cm x 17.0 cm x 3.6 cm)	

Processor System

CPU	Intel® 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 65W	
Chipset	Intel® H610	
Socket	LGA1700	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Dual Channel DDR4 3200 MHz	
Capacity	64 GB (32 GB per DIMM)	
Socket	2 x 260-pin SO-DIMM	

Graphics

Controller	Intel® UHD Graphics	
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz	
LVDS	Dual channel 24 bit up to 1920x1200@60Hz (Connector shared with eDP)	N/A
eDP	eDP 1.4b Max resolution up to 1920x1200@60Hz (Connector shared with LVDS)	N/A
DisplayPort	N/A	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
VGA	N/A	Max resolution up to 1920x1200@60Hz
MultiDisplay	Triple Display	

Expansion Slot

PCIe	1 x PCIe x16 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless

Audio

Interface	Realtek ALC897, High Definition Audio. Mic-in, Line-out
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Ethernet

Controller/ Speed	LAN1: Intel® I219V with 10/100/1000 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O	IMB-1241	IMB-1242
HDMI	2 x HDMI 2.0b	1 x HDMI 2.0b
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	
DisplayPort	N/A	1 x DP 1.4a ++
VGA	N/A	1
USB	2 x USB 3.2 Gen2, 2 x USB 3.2 Gen1	2 x USB 3.2 Gen2, 2 x USB 2.0
Audio	2 (Mic-in, Line-out)	
COM	COM1(RS-232/422/485) COM2, COM3, COM4(RS-232)	COM1, COM2 (RS-232/422/485)

Internal Connector

USB (IMB-1241)	4 x USB 2.0 (2 x 2.54 pitch header)	
USB (IMB-1242)	2 x USB 3.2 Gen1 (1 x USB 3.2 header) 2 x USB 2.0 (1 x 2.54 pitch header)	
COM	COM5(RS-232)	N/A
GPIO	4 x GPI, 4 x GPO	N/A
LVDS	1 (Connector share with eDP)	N/A
SATA PWR Output	N/A	1
Speaker Header	1	N/A

Storage

M.2 (IMB-1241)	1 x M.2 (Key M, 2242/2280) with PCIe Gen3x4, SATA3 and USB 2.0
M.2 (IMB-1242)	1 x M.2 (Key M, 2260/2280) with PCIe Gen3x4 and SATA3 for SSD
SATA	2 x SATA3 (6Gb/s)

Security

TPM	Intel® PTT	TPM Header
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Watchdog Timer

Output	From Super I/O to drag RESETCON#	
Interval	256 Segments, 0, 1, 2, ...255sec	

Power Requirements

Input PWR (IMB-1241)	ATX-PWR (24+4-pin)	
Input PWR (IMB-1242)	ATX-PWR (24+4-pin) and 12V DC-In co-design	
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready	

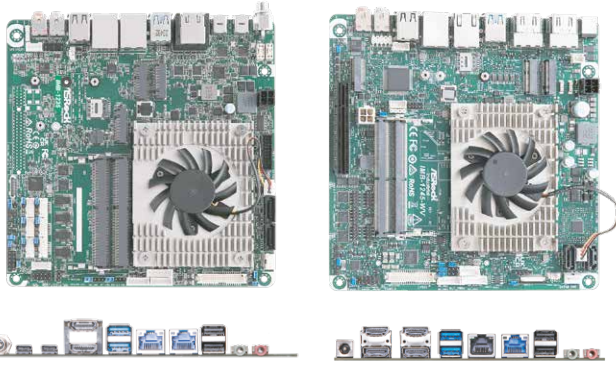
Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

IMB-1235, IMB-1245-WV, IMB-1250-WV

Mini-ITX Motherboard

KEY FEATURES



IMB-1235

IMB-1245-WV
IMB-1250-WV

SPECIFICATIONS

Form Factor	IMB-1235	IMB-1245-WV/ IMB-1250-WV
Dimensions	6.7-in x 6.7-in x 1.5-in, 17.0 cm x 17.0 cm x 3.8 cm	6.7-in x 6.7-in x 0.97-in, 17.0 cm x 17.0 cm x 2.48 cm
Processor System		
CPU	Intel® 13th Gen (Raptor Lake-P) Core™ Processors IMB-1235P (i7-1365UE, 2P+8E) IMB-1235M (i5-1335UE, 2P+8E) IMB-1235V (i3-1315UE, 2P+4E)	Intel® Core™ Ultra processors (Meteor Lake-H) IMB-1245P-WV (Ultra7 155H, 6P+8E) IMB-1245M-WV (Ultra5 125H, 4P+8E) Intel® Core™ Ultra processors (Arrow Lake-H) IMB-1250P-WV (Ultra7 255H, 6P+8E) IMB-1250M-WV (Ultra5 225H, 4P+8E)
BIOS	AMI SPI 256 Mbit	
Memory		
Technology	Dual Channel DDR4 3200 MHz	
Technology	Dual Channel DDR5 5600 MHz (IMB-1245-WV)	
(IMB-1245-WV/IMB-1250-WV)	Dual Channel DDR5 6400 MHz (IMB-1250-WV)	
Capacity	64GB (32GB per DIMM)	96GB (48GB per DIMM)
Socket	2 x 260 SO-DIMM	2 x 262-pin SO-DIMM
Graphics		
Controller	Intel® Iris® Xe Graphics	Intel® Arc™ Graphics (IMB-1245-WV) Intel® Arc™ 140T or 130T graphics (IMB-1250-WV)
HDMI (IMB-1235)	HDMI 2.0b, Max resolution up to 4096x2160@60Hz	
HDMI	Max resolution up to 7680x4320@60Hz (HDMI0/1)	
(IMB-1245-WV/IMB-1250-WV)	Max resolution up to 4096x2160@60Hz (HDMI2/3)	
DisplayPort (IMB-1235)	DisplayPort 1.4a, Max resolution up to 4096x2160@60Hz	
LVDS (IMB-1235)	Dual channel 24 bit up to 1920 x 1200@60Hz	
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz	
(IMB-1245-WV/IMB-1250-WV)	(Connector shared with eDP)	
eDP (IMB-1235)	eDP 1.4b, Max resolution up to 4096x2160@60Hz	
eDP	Max resolution up to 1920 x 1080@60Hz	
(IMB-1245-WV/IMB-1250-WV)	(Connector shared with LVDS)	
MultiDisplay	Quad display (Included 2 outputs from Type-C)	Quad display
Expansion Slot		
PCIe	N/A	1 x PCIe x8 (Gen5)
M.2 (IMB-1235)	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G	
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless	
(IMB-1245-WV/	1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 3.2 Gen1, USB 2.0 and	
IMB-1250-WV)	SIM for 4G/5G	
SIM Socket	1 x SIM Socket connected to M.2 Key B	
Audio		
Interface	Realtek ALC897 HD, High Definition Audio	
Ethernet		
Controller/ Speed	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro (1235P/1235M)	
(IMB-1235)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps (IMB-1235V)	
	LAN2: Intel® I226V with 10/100/1000/2500 Mbps	
Controller/ Speed	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro	
(IMB-1245-WV/IMB-1250-WV)	LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps	
Connector	2 x RJ-45	

- Intel® 13th Gen Raptor Lake-P Processors (IMB-1235)
- Intel® Core™ Ultra processors (Meteor Lake-H) (IMB-1245-WV)
- Intel® Core™ Ultra processors (Arrow Lake-H) (IMB-1250-WV)
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 64GB (32GB per DIMM) (IMB-1235)
- 2 x 262-pin SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM) (IMB-1245-WV)
- 2 x 262-pin CSO-DIMM DDR5 6400 MHz, up to 96GB (48GB per DIMM) (IMB-1250-WV)
- 2 x USB4/Thunderbolt™4, 2 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 3 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 6 x COM, 2 x SATA3 (IMB-1235)
- 1 x PCIe x8 (Gen5), 2 x USB 3.2 Gen2, 6 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 3 x COM, 2 x SATA3 (IMB-1245-WV/IMB-1250-WV)
- 2 x Intel 2.5 Gigabit LAN (IMB-1235)
- 1 x Intel 1 Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN (IMB-1245-WV/IMB-1250-WV)
- Supports Quad display, 2 x HDMI 2.0b, 2 x DP 1.4a (2 from Type C), 1 x LVDS, 1 x eDP (IMB-1235)
- Supports Quad display, 4 x HDMI 2.1 TMDs, 1 x LVDS or eDP (IMB-1245-WV/IMB-1250-WV)
- TPM 2.0 onboard IC (IMB-1235)
- Supports Intel® vPro (IMB-1235P/IMB-1235M/IMB-1245P-WV/IMB-1245M-WV/IMB-1250P-WV/IMB-1250M-WV), VMD RAID 0/1
- 12~28V DC-In

Rear I/O	IMB-1235	IMB-1245-WV/ IMB-1250-WV
HDMI	2 x HDMI 2.0b	4 x HDMI 2.1 TMDs
Ethernet	2 x 2.5 Gigabit LAN	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB 2.0 2 x USB 3.2 Gen2 2 x USB4/Thunderbolt™4 (5V/3A, supports DP1.4a display output) * For Thunderbolt support, please refer to support list (IMB-1235)	
Audio	2 (Mic-In/Line-Out)	
DC Jack	1 DC-in	
Internal Connector		
USB	1 x USB 3.2 Gen1 and 1 x USB 2.0 (1 x USB 3.2 header)	4 x USB 2.0 (2 x 2.00mm pitch header)
COM	COM1, COM2 (RS-232/422/485) COM3, COM4, COM5, COM6 (RS-232)	COM3, COM4, COM5 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO	N/A
LVDS	1	1 (Connector with LVDS/eDP signal, switch by BIOS)
eDP	1	N/A
SATA PWR Output	1	
Speaker Header	1	
MIPI Camera Header	N/A	1
Storage		
M.2 (IMB-1235)	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen4 x4 for SSD	
M.2 (IMB-1245-WV/IMB-1250-WV)	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD 1 x M.2 (Key M, 2242/2280/22110) with PCIe Gen4 x4 for SSD	
SATA	2 x SATA3 (6Gb/s)	
RAID (IMB-1235)	Intel® VMD RAID 0/1 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B+ M.2 Key M SATA interface: 2 x SATA port	
RAID (IMB-1245-WV/IMB-1250-WV)	Intel® VMD RAID 0/1 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M, 2 x M.2 Key M SATAinterface: 2 x SATA port	
Security		
TPM	TPM 2.0 onboard IC	TPM Header
Watchdog Timer		
Output	From Super I/O to drag RESETCON#	
Interval	256 Segments, 0, 1, 2, ...255sec	
Power Requirements		
Input PWR (IMB-1235)	12V~28V DC-in with Lockable DC Jack	
Input PWR (IMB-1245-WV/IMB-1250-WV)	12~28V DC-In with 4-pin plug PWR cable or DC Jack	
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready	
Environment		
Operating Temp	-20°C ~ 70°C	
Storage Temp	-40°C ~ 85°C	
Operating Humidity	5% ~ 90%	
Storage Humidity	5% ~ 90%	



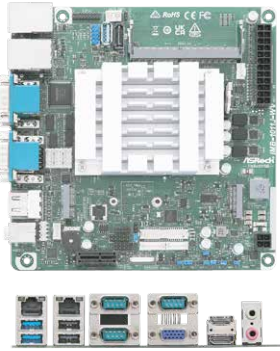
Model	IMB-1007J	IMB-1008J
Chipset/ CPU	Intel® Alder Lake-N SoC Processors N97	
Form Factor	Mini-ITX (6.7-in x 6.7-in x 1.6-in, 17.0 cm x 17.0 cm x 4.0 cm)	Mini-ITX (6.7-in x 6.7-in x 0.86-in, 17.0 cm x 17.0 cm x 2.2 cm)
Memory	Single Channel DDR5 4800 MHz	
DIMM Slot	1 x 262-pin SO-DIMM	
Capacity	32GB	
PCIe	1 x PCIe x1 (Gen3)	N/A
HDMI	2 x HDMI 2.0b	
LVDS/eDP	1 x LVDS or eDP	
M.2 Key M	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 or SATA3 for SSD	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 or SATA3 for SSD (M2_M1) 1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1 and USB 2.0 (M2_M2) *M2M-M2B Card can support on M2_M2 for Key B (3042/3052) with SIM Socket
M.2 Key E	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless	1 x M.2 (Key E, 2230) with CNVi for Wireless
SATA	1 x SATA3 (6Gb/s)	
USB 3.2	Rear: 2 x USB 3.2 Gen2	Internal: 2 x USB 3.2 Gen1 (1 x USB 3.1 header) Rear: 2 x USB 3.2 Gen2
USB 2.0	Internal: 2 x USB 2.0 (1 x 2.54 pitch header) Rear: 2 x USB 2.0	
GPIO	4 x GPI, 4 x GPO	
LAN	LAN1: Realtek RTL8111H with 10/100/1000 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps	
COM Port	Internal: COM5, COM6 (RS-232) Rear: COM1 (RS-232/422/485) COM2, COM3, COM4 (RS-232)	Internal: COM1, COM2 (RS-232/422/485) COM3, COM4 (RS-232) COM5, COM6 (RS-232)(Optional)
Audio	2 (Mic-In, Line-Out)	
TPM	Intel® PTT	TPM Header
Power	12V DC-In with 4-pin plug PWR cable	12V DC-in
Operating Temperature	-20°C ~ 70°C	

IMB-1011J-WV, IMB-1012J-WV

Mini-ITX Motherboard

KEY FEATURES

- Intel® Alder Lake-N Processors N97
- 1 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 1 x PCIe x1 (Gen3), 3 x USB 3.2 Gen2, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 6 x COM, 1 x SATA3 (IMB-1011J-WV)
- 1 x PCIe x1 (Gen3), 3 x USB 3.2 Gen2, 5 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 4 x COM, 1 x SATA3 (IMB-1012J-WV)
- 2 x Realtek 1 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 1 x VGA, 1 x LVDS or eDP (IMB-1011J-WV)
- Supports Triple display, 2 x HDMI 2.0b, 1 x LVDS, 1 x eDP 1.4b (IMB-1012J-WV)
- ATX-PWR (24+4-pin) and 9~28V DC-In co-design (IMB-1011J-WV)
- 9~28V DC-In / 12V DC-In only (BOM option) (IMB-1012J-WV)



IMB-1011J-WV



IMB-1012J-WV

SPECIFICATIONS

Form Factor	IMB-1011J-WV	IMB-1012J-WV
Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.6-in, 17.0 cm x 17.0 cm x 4.1 cm)	Mini-ITX (6.7-in x 6.7-in x 0.9-in, 17.0 cm x 17.0 cm x 2.28 cm)

Processor System

CPU	Intel® Alder Lake-N Processors (N97, QC, Max Speed Up to 3.6GHz, 12W) *For other CPU SKUs request, please contact regional Sales for availability	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Single Channel DDR4 3200 MHz	
Capacity	32GB	
Socket	1 x 260-pin SO-DIMM	

Graphics

Controller	Intel® UHD Graphics	
DisplayPort	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz	
VGA	Max resolution up to 1920 x 1200@60Hz	N/A
LVDS (IMB-1011J-WV)	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)	
LVDS (IMB-1012J-WV)	Dual channel 24 bit up to 1920 x 1200@60Hz	
eDP (IMB-1011J-WV)	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)	
eDP (IMB-1012J-WV)	eDP 1.4b Max resolution up to 4096x2160@60Hz	
MultiDisplay	Triple display	

Expansion Slot

PCIe	1 x PCIe x1 (Gen3)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless

Audio

Interface	Realtek ALC256 HD, High Definition Audio
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8111H with 10/100/1000 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O	IMB-1011J-WV	IMB-1012J-WV
HDMI	2 x HDMI 2.0b	
VGA	1	N/A
Ethernet	2 x 1 Gigabit LAN	
USB	2 x USB 3.2 Gen2 2 x USB 2.0	3 x USB 3.2 Gen2 1 x USB 2.0
Audio	2 (Mic-In, Line-Out)	
DC Jack	N/A	1
COM	COM1 (RS-232/422/485) COM2, COM3 (RS-232)	N/A

Internal Connector

USB (IMB-1011J-WV)	1 x USB 3.2 Gen2 (Type-A vertical con) 2 x USB 2.0 (1 x 2.54 pitch header)	
USB (IMB-1012J-WV)	4 x USB 2.0 (2 x 2.54 pitch header)	
COM (IMB-1011J-WV)	COM4, COM5, COM6 (RS-232)	
COM (IMB-1012J-WV)	COM1 (RS-232/422/485) COM2, COM3 (RS-232) COM4 (RS-232/TTL 5V/ccTalk, switch by Jumper setting)	
GPIO	4 x GPI, 4 x GPO	
LVDS (IMB-1011J-WV)	1 (Connector with LVDS/eDP signal, switch by BIOS)	
LVDS (IMB-1012J-WV)	1	
eDP	N/A	1
SATA PWR Output	1	
Speaker Header	1	
MIPI Camera Header	1 (Optional)	N/A

Storage

M.2	1 x M.2 (Key M, 2280/3052) with PCIe Gen3 x1 and SATA3 for SSD
SATA	1 x SATA3 (6Gb/s)

Security

TPM	TPM Header Intel® PTT
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR (IMB-1011J-WV)	ATX-PWR (24+4-pin) and 9~28V DC-In co-design
Input PWR (IMB-1012J-WV)	9~28V DC-In / 12V DC-In only (BOM option)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

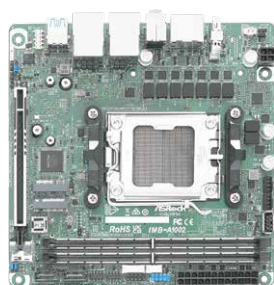
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

IMB-A1002, IMB-A1003

Mini-ITX Motherboard

KEY FEATURES

- AMD EPYC™ 4005/4004 and AMD Ryzen™ 9000/8000/7000 Series Processors with B650 Chipset
- 2 x 288-pin ECC/non-ECC Long-DIMM DDR5 5200 MHz, up to 96GB (48GB per DIMM) (IMB-A1002)
- 2 x 262-pin ECC/non-ECC SO-DIMM DDR5 5200 MHz, up to 96GB (48GB per DIMM) (IMB-A1003)
- 1 x PCIe x16 (Gen5), 6 x USB 3.2 Gen2, 3 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key M, 1 x M.2 Key E, 2 x COM, 2 x SATA3 (IMB-A1002)
- 1 x PCIe x16 (Gen5), 4 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 2 x COM, 2 x SATA3 (IMB-A1003)
- 2 x Realtek Gigabit LAN
- Supports Quad display, 3 x DP 1.2++ , 1 x eDP 1.4b (IMB-A1002)
- Supports Quad display, 4 x DP 1.2++ (IMB-A1003)
- TPM 2.0 onboard IC
- ATX PWR (24+4-pin) (IMB-A1002)
- 12~28V DC-In (Lockable DC Jack) (IMB-A1003)



IMB-A1002



IMB-A1003

SPECIFICATIONS

Form Factor	IMB-A1002	IMB-A1003
Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.5-in, 17.0 cm x 17.0 cm x 3.7 cm)	

Processor System

CPU (IMB-A1002)	AMD EPYC™ 4005/4004 and AMD Ryzen™ 9000/8000/7000 Series Desktop Processors*, up to 65W *The availability of expansion slots may vary by CPU.	
CPU (IMB-A1003)	Supports AMD Ryzen™ 9000/ 8000 / 7000 Series Desktop Processors	
Chipset	AMD Promontory B650	
Socket	AM5	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Dual Channel ECC/non-ECC DDR5 5200 MHz *ECC support may vary by CPU	
Capacity	96GB (48GB per DIMM)	
Socket	2 x 288-pin Long-DIMM	2 x 262-pin SO-DIMM

Graphics

Controller	AMD RDNA™ 2 Architecture	
DisplayPort	DisplayPort 1.2, DP++ Max resolution up to 4096x2160@60Hz	
eDP	eDP 1.4b Max resolution up to 4096x 2160@60Hz	N/A
MultiDisplay	Quad Display	

Expansion Slot

PCIe	1 x PCIe x16 (Gen5)	
M.2 (IMB-A1002)	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe x1, USB 3.0, USB 2.0 and SIM Socket for 4G/5G	
M.2 (IMB-A1003)	1 x M.2 (Key E, 2230) with PCIe Gen 4 x1, USB 2.0 for Wireless	
SIM Socket	1 x Socket connected to M.2 Key B	N/A

Audio

Interface	Realtek ALC897, High Definition Audio. Mic-in, Line-out
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8111H with 10/100/1000 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O	IMB-A1002	IMB-A1003
DisplayPort	3 x DP 1.2++	4 x DP 1.2++
Ethernet	2 x 1 Gigabit LAN	
USB	6 x USB 3.2 Gen2	4 x USB 3.2 Gen 2 2 x USB 2.0
Audio	2 (Mic-in, Line-out)	

Internal Connector

USB (IMB-A1002)	3 x USB 2.0 (1 x 2.54 pitch header, 1 x USB 2.0 Type-A vertical con)	
USB (IMB-A1003)	2 x USB 3.2 Gen1 2 x USB 2.0 (1 x 2.54 pitch header)	
COM (IMB-A1002)	COM1, COM2 (RS-232/422/485)	
COM (IMB-A1003)	COM1, COM2 (RS-232/422/485/TTL 5V/ccTalk, switch by Jumper setting)	
eDP	1	N/A

Storage

M.2	1 x M.2 Key M (2242/2280) with PCIe Gen4 x4, SATA3 and USB 2.0	1 x M.2 Key M (2242/2280) with PCIe Gen4 x4, and USB 2.0
SATA	2 x SATA3 (6Gb/s)	

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

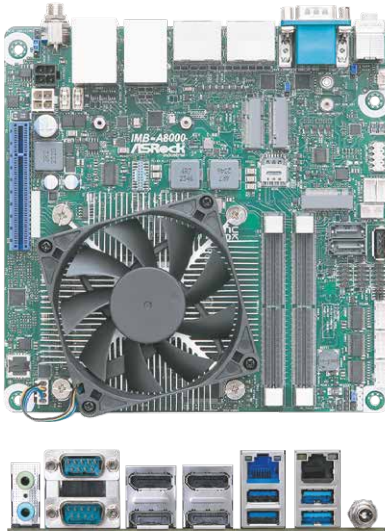
Input PWR	ATX PWR (24+4-pin)	12~28V DC-In (Lockable DC Jack)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready	

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

IMB-A8000

Mini-ITX Motherboard



KEY FEATURES

- AMD Ryzen™ Embedded 8000 Series processors
- 2 x 262-pin ECC/non-ECC SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x8 (Gen4), 1 x USB 3.2 Gen2, 3 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key B, 1 x M.2 Key M, 1 x M.2 Key E, 5 x COM, 2 x SATA3, 1 x ccTalk
- 1 x Realtek Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Quad display, 4 x DP 1.4a
- 12~28V DC-In (Lockable DC Jack)

SPECIFICATIONS

Form Factor

Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.6-in, 17.0 cm x 17.0 cm x 4.1 cm)
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Processor System

CPU	AMD Ryzen™ Embedded 8000 SoC processors -IMB-A8000P (PRO 8845HS, 8/16, 3.8GHz, 35-54W) -IMB-A8000S (PRO 8645HS, 6/12, 4.3GHz, 35-54W) -IMB-A8000M (PRO 8840U, 8/16, 3.3GHz, 15-30W) -IMB-A8000V (PRO 8640U, 6/12, 3.5GHz, 15-30W)
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel ECC/non-ECC DDR5 5600 MHz
Capacity	96 GB (48 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	AMD RDNA™ 3
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad Display

Expansion Slot

PCIe	1 x PCIe x8 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.0, USB 2.0 and SIM Socket for 4G/5G
SIM Socket	1 x Socket connected to M.2 Key B

Audio

Interface	Realtek ALC897, High Definition Audio. Line-in, Line-out
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Ethernet

Controller/ Speed	LAN1: Realtek® RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek® RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

DisplayPort	4 x DP 1.4a
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	1 x USB 3.2 Gen2 3 x USB 3.2 Gen1
Audio	2 (Line-in, Line-out)
COM	COM1, COM2 (RS-232/422/485)

Internal Connector

USB	4 x USB 2.0 (2 x 2.00 pitch header, 1 x USB 2.0 Type-A vertical con)
COM	COM3, COM4, COM5 (RS-232)
cc Talk	1
SATA PWR Output	1
GPU Card PWR Input	1

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	2 x SATA3 (6Gb/s)

Security

TPM	AMD FW TPM
-----	------------

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12~28V DC-In with 4-pin wafer PWR cable or DC Jack (Screw type)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

IMB-1317, IMB-X1317, IMB-X1317-10G

Micro-ATX Motherboard



IMB-1317

IMB-X1317

IMB-X1317-10G

SPECIFICATIONS

Form Factor	IMB-1317	IMB-X1317, IMB-X1317-10G
Dimensions (LxWxH)	Micro-ATX (9.6-in x 9.6-in x 1.81-in, 24.4 cm x 24.4 cm x 4.61 cm)	
Processor System		
CPU	Intel® Core™ Ultra processors (Arrow Lake-S), up to 125W	
Chipset	Intel® Q870	Intel® W880
Socket	LGA1851	
BIOS	AMI SPI 256 Mbit	

Memory		
Technology	Dual Channel DDR5 5600 MHz	Dual Channel ECC/non-ECC DDR5 5600 MHz
Capacity	192GB (48GB per DIMM)	
Socket	4 x 288-pin Long-DIMM	

Graphics	
VGA	Intel® X® LPG Graphics
HDMI	HDMI 2.1 TMDS Max resolution up to 7680x4320@60Hz
DisplayPort	DisplayPort 2.1/1.4a, DP++ Max resolution up to 4096x2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1200@60Hz (Connector shared with LVDS)
MultiDisplay	Quad display (Included 2 output from Type-C)

Expansion Slot	
PCIe	2 x PCIe Gen5 Slots (PCIe1/PCIe4:single at x16(PCIe1); dual at x8 (PCIe1) / x8 (PCIe4)) (PCIe1: Support Riser card x8/x8) 2 x PCIe x4 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket	1 x SIM socket connected to M.2 key B

Audio	
Interface	Realtek ALC897 HD, High Definition Audio. Line-In, Line-Out, Mic-In

Ethernet		
Controller/ Speed (IMB-1317)	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps	
Controller/ Speed (IMB-X1317,IMB-X1317-10G)	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps LAN3: Intel® I210AT with 10/100/1000 Mbps LAN4: Intel® I210AT with 10/100/1000 Mbps LAN5: Marvell AQc113 with 10/100/1000/2500/5000/10000 Mbps (IMB-X1317-10G)	
Connector	2 x RJ-45	4 x RJ-45 (IMB-X1317) 5 x RJ-45 (IMB-X1317-10G)

KEY FEATURES

- Intel® Core™ Ultra processors (Arrow Lake-S) with Q870 chipset (IMB-1317)
- Intel® Core™ Ultra processors (Arrow Lake-S) with W880 chipset (IMB-X1317/IMB-X1317-10G)
- 4 x 288-pin CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz , up to 192GB (48GB per DIMM) (IMB-1317)
- 4 x 288-pin ECC/non-ECC CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz , up to 192GB (48GB per DIMM) (IMB-X1317/IMB-X1317-10G)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 2 x PCIe x4 (Gen4), 2 x USB4/Thunderbolt™4, 7 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 1 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 6 x COM, 8 x SATA3
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (IMB-1317)
- 3 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (IMB-X1317)
- 3 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN (IMB-X1317-10G)
- Supports Quad display, 1 x HDMI 2.1 TMDS, 2 x DP 2.1 (2 from Type C), 1 x DP 1.4a, 1 x LVDS or eDP
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX Power (24+8+8-pin)

Rear I/O	IMB-1317	IMB-X1317, IMB-X1317-10G
HDMI	1 x HDMI 2.1 TMDS	
DisplayPort	1 x DP 1.4a++	
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	3 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN 1 x 10 Gigabit LAN (IMB-X1317-10G)
USB	7 x USB 3.2 Gen2 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.	
Audio	3 (Mic-in, Line-in, Line-out)	
COM	COM1 (RS-232/422/485)	

Internal Connector	
USB	1 x USB 2.0 (1 x 2.54 pitch header) 2 x USB 3.2 Gen1 vertical Con 1 x USB4/Thunderbolt™4 vertical con. (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
COM	COM2 (RS-232/422/485) COM3 (RS-232/TTL 5V/ccTalk) (Switch by Jumper setting) COM4, COM5, COM6 (RS-232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
Speaker Header	1
Thunderbolt header	1

Storage	
M.2	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen4 x4 for SSD
SATA	8 x SATA3 (6Gb/s)
RAID	Intel® VMD RAID 0/1/5/10 **supported by identical interface (PCIe or SATA) PCIe interface: 2 x M.2 Key M SATA interface: SATA port

Security	
TPM	TPM 2.0 onboard IC

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements	
Input PWR	ATX PWR (24+8+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

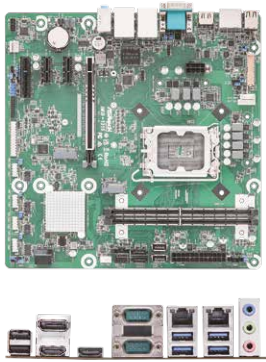
Environment	
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

IMB-1315, IMB-1318

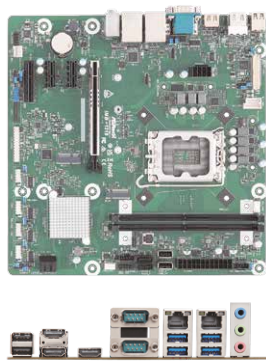
Micro-ATX Motherboard

KEY FEATURES

- Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with H610 chipset
- 2 x 288-pin Long-DIMM DDR5 4800/5600 MHz, up to 96GB (48 GB per DIMM)
- 1 x PCIe x16 (Gen5), 1 x PCIe x4 (Gen3), 2 x PCIe x1 (Gen3), 4 x USB 3.2 Gen1, 6 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 6 x COM, 4 x SATA3
- 2 x Intel 1 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x HDMI 1.4b, 1 x DP 1.4a, 1 x LVDS or eDP (IMB-1315)
- Supports Triple display, 3 x HDMI 1.4 (IMB-1318)
- TPM 2.0 onboard IC (IMB-1315)
- ATX PWR (8+24 Pin)



IMB-1315



IMB-1318

SPECIFICATIONS

Form Factor	IMB-1315	IMB-1318
Dimensions (IMB-1315)	Micro-ATX (9.6-in x 9.6-in x 1.56-in, 24.4 cm x 24.4 cm x 3.97 cm)	
Dimensions (IMB-1318)	Micro-ATX (9.6-in x 9.6-in x 1.58-in, 24.4 cm x 24.4 cm x 4.02 cm)	
Processor System		
CPU	Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 65W	
Chipset	H610	
Socket	LGA 1700	
BIOS	AMI SPI 256 Mbit	
Memory		
Technology	Dual Channel DDR5 4800/5600 MHz* * Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ.	
Capacity	96GB (48GB per DIMM)	
Socket	2 x 288-pin Long-DIMM	
Graphics		
Controller	Intel® UHD Graphics	
HDMI (IMB-1315)	HDMI 1.4b: Max resolution up to 4096 x 2160@30Hz HDMI 2.0b: Max resolution up to 4096 x 2160@60Hz	
HDMI (IMB-1318)	HDMI 1.4 Max resolution up to 4096 x 2160@30Hz	
DisplayPort (IMB-1315)	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz	
LVDS (IMB-1315)	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)	
LVDS (IMB-1318)	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP) (BOM option)	
eDP (IMB-1315)	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)	
eDP (IMB-1318)	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS) (BOM option)	
MultiDisplay	Triple Display	
Expansion Slot		
PCIe	1 x PCIe x16 (Gen5) 1 x PCIe x4 (Gen3) 2 x PCIe x1 (Gen3)	
M.2	1 x M.2 (Key E, 2230) with CNVi for Wireless	
Audio		
Interface	Realtek ALC897 HD, High Definition Audio. Line-In, Line-Out, Mic-In	
Ethernet		
Controller/ Speed (IMB-1315)	LAN1: Intel® I210AT with 10/100/1000Mbps(Optional: supports PoE) LAN2: Intel® I219V with 10/100/1000 Mbps	
Controller/ Speed (IMB-1318)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I219V with 10/100/1000 Mbps	
Connector	2 x RJ-45	

Rear I/O	IMB-1315	IMB-1318
HDMI	1 x HDMI 2.0b 1 x HDMI 1.4b	3 x HDMI 1.4
DisplayPort (IMB-1315)	1 x DP++	
Ethernet	2 x 1 Gigabit LAN	
USB	4 x USB 3.2 Gen1 2 x USB 2.0	
Audio	3 (Line-In/Line-Out/Mic-In)	
Serial Port	COM1 (RS-232/422/485), COM2 (RS-232)	

Internal Connector

USB	4 x USB 2.0 (1 x 2.54 pitch header, 2 x USB 2.0 Type-A vertical connector)	
COM	COM3, COM4, COM5, COM6 (RS-232)	
Parallel	1 (shared with GPIO)	
GPIO	8 x GPI, 8 x GPO (shared with LPT header)	
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)	1 (Connector with LVDS/eDP signal, switch by BIOS) (BOM option)
Speaker Header	1	
PS/2	1	
Thunderbolt header	1	

Storage

M.2	1 x M.2 (Key M, 2242/2280/25110) with PCIe Gen3 x1 for SSD
SATA	4 x SATA3 (6Gb/s)

Security

TPM	TPM 2.0 onboard IC	TPM Header
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	ATX PWR (24+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

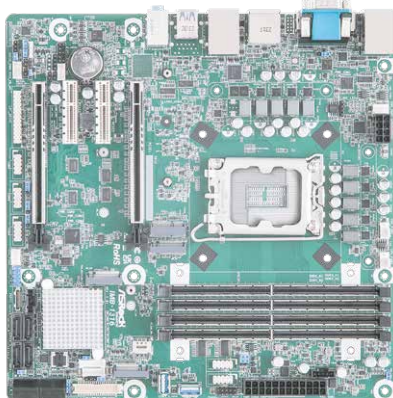
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

IMB-1316, IMB-X1316, IMB-X1316-10G

Micro-ATX Motherboard

KEY FEATURES

- Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with Q670 chipset (IMB-1316)
- Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S) Core™ Processors with W680 chipset (IMB-X1316, IMB-X1316-10G)
- 4 x 288-pin Long-DIMM DDR5 4400/5600 MHz, 192GB (48GB per DIMM) (IMB-1316)
- 4 x 288-pin ECC/non-ECC Long-DIMM DDR5 4400/5600 MHz, up to 192GB (48GB per DIMM) (IMB-X1316, IMB-X1316-10G)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 2 x PCIe x4 (Gen4), 1 x USB 3.2 Gen2x2, 6 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 4 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 6 x COM, 8 x SATA3 (IMB-1316)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 2 x PCIe x4 (Gen4), 1 x USB 3.2 Gen2x2, 7 x USB 3.2 Gen2, 4 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 6 x COM, 8 x SATA3 (IMB-X1316, IMB-X1316-10G)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (IMB-1316, IMB-X1316)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN (IMB-X1316-10G)
- Supports Quad display, 2 x HDMI 2.0b, 1 x DP 1.4a, 1 x LVDS
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+24 Pin)



IMB-1316
IMB-X1316

IMB-X1316-10G

SPECIFICATIONS

Form Factor	IMB-1316	IMB-X1316, IMB-X1316-10G
Dimensions	Micro-ATX (9.6-in x 9.6-in x 1.4-in, 24.4 cm x 24.4 cm x 3.6 cm)	
Processor System		
CPU	Intel® Core™ Processor Series 2 (Bartlett Lake-S) and 14th/13th/12th Gen (Raptor Lake-S Refresh/ Raptor Lake-S/Alder Lake-S) Core™ Processors, up to 125W	
Chipset	Intel® Q670	Intel® W680
Socket	LGA1700	
BIOS	AMI SPI 256 Mbit	
Memory		
Technology (IMB-1316)	Dual Channel DDR5 4400/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *For DDR5 5600 support refer to memory support list	
Technology (IMB-X1316,IMB-X1316-10G)	Dual Channel ECC/non-ECC DDR5 4400/5600 MHz* *Actual memory frequency depends on the CPU types and DRAM modules, for more information refer to https://www.asrockind.com/en-gb/index.php?route=newsblog/faq&faq_id=90 technical FAQ *For DDR5 5600 support refer to memory support list	
Capacity	192GB (48GB per DIMM)	
Socket	4 x 288-pin Long-DIMM	
Graphics		
Controller	Intel® UHD Graphics	
HDMI	2 x HDMI 2.0b Max resolution up to 4096x2160@60Hz	
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz	
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz	
MultiDisplay	Quad Display	
Expansion Slot		
PCIe	2 x PCIe Gen5 Slots (PCIe1/PCIe4:single at x16(PCIe1); dual at x8 (PCIe1) / x8 (PCIe4)) (PCIe1: Support riser card x8/x8) 2 x PCIe4 (Gen4)* *If using PCIe8/x16 card on PCIe2/PCIe4 slot, M.2 Key M2(M2_M2) and M.2 Key E(M2_E1) are limited to install.	
M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB3.2 Gen1, USB 2.0 and SIM for 4G/5G	
SIM Socket	1 x SIM Socket connected to M.2 Key B	
Audio		
Interface	Realtek ALC897, High Definition Audio. Line-in, Line-out, Mic-in	
Ethernet		
Controller/ Speed (IMB-1316)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, support vPro LAN2: Intel® I210AT with 10/100/1000 Mbps	
Controller/ Speed (IMB-X1316,IMB-X1316-10G)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, support vPro LAN2: Intel® I210AT with 10/100/1000 Mbps LAN3: Marvell AQc113 with 10/100/1000/2500/10000 Mbps (IMB-X1316-10G)	
Connector	2 x RJ-45 (IMB-1316/IMB-X1316) 3 x RJ-45 (IMB-X1316-10G)	

Rear I/O		IMB-1316	IMB-X1316, IMB-X1316-10G
HDMI	2 x HDMI 2.0b		
DisplayPort	1 x DP 1.4a++		
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN 1 x 10 Gigabit LAN (IMB-X1316-10G)	
USB	2 x USB 2.0 5 x USB 3.2 Gen2 1 x USB 3.2 Gen2x2 (Type C, 5V/3A)		
Audio	3 (Mic-in, Line-in, Line-out)		
COM	COM1 (RS-232/422/485)		
Internal Connector			
USB	1 x USB 3.2 Gen1 vertical Con 1 x USB 3.2 Gen2 vertical Con 2 x USB 2.0 (1 x 2.54 pitch header)	2 x USB 3.2 Gen2 vertical Con 2 x USB 2.0 (1 x 2.54 pitch header)	
COM	COM2 (RS-232/422/485) COM3, COM4, COM5, COM6 (RS-232)		
Parallel	1 (shared with GPIO)		
GPIO	8 x GPI, 8 x GPO (shared with LPT header)		
LVDS	1		
PS2	1 x PS2 header		
Thunderbolt header	1 (only PCIe3 support)		
Storage			
M.2	1 x M.2 (Key M, 2242/2280/25110) with PCIe Gen4 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x4 for SSD		
SATA	8 x SATA3 (6Gb/s)		
RAID	Intel® VMD RAID 0/1/5/10 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M1/2 or 2* M.2 Key M SATA interface: SATA port		
Security			
TPM	TPM 2.0 onboard IC		
Watchdog Timer			
Output	From Super I/O to drag RESETCON#		
Interval	256 Segments, 0, 1, 2, ...255sec		
Power Requirements			
Input PWR	ATX PWR (8+24 Pin)		
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready		
Environment			
Operating Temp	-20°C ~ 70°C		
Storage Temp	-40° C ~ 85° C		
Operating Humidity	5% ~ 90% (non-condensing)		
Storage Humidity	5% ~ 90% (non-condensing)		

IMB-A1302

Micro-ATX Motherboard

Coming Soon

KEY FEATURES

- AMD Ryzen™ 9000/8000/7000 Series Processors with B650 Chipset
- 4 x 288-pin ECC/non-ECC U-DIMM DDR5 5600 MHz, up to 256GB (64GB per DIMM)
- 1 x PCIe x16 (Gen5), 2 x PCIe x4 (Gen4), 7 x USB 3.2 Gen2, 5 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 2 x COM, 2 x SATA3
- 1 x Realtek 1 Gigabit LAN, 4 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.0, 1 x VGA
- TPM 2.0 onboard IC
- Supports DASH, RAID 0/1
- ATX PWR

SPECIFICATIONS

Form Factor	
Dimensions	Micro-ATX (9.6-in x 9.6-in x 1.58-in, 24.4 cm x 24.4 cm x 4.02 cm)

Processor System

CPU	Supports AMD EPYC™ 4004 and AMD Ryzen™ 9000/8000/7000 Series Desktop Processors, up to 170W
Chipset	AMD B650
Socket	AM5
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel ECC/non-ECC DDR5 5600 MHz
Capacity	256 GB (64 GB per DIMM)
Socket	4 x 288-pin Long-DIMM

Graphics

Controller	AMD RDNA™ 2 Architecture
HDMI	HDMI 2.0 Max resolution up to 4096x2160@60Hz
VGA	Max resolution up to 1920x1080@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP) (BOM option)
eDP	Max resolution up to 1920 x 1200@60Hz (Connector shared with LVDS) (BOM option)
MultiDisplay	Quad Display

Expansion Slot

PCIe	1 x PCIe x16 (Gen5, Support riser card x8/x8) 2 x PCIe x4 (Gen4)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1 and USB 2.0 for Wireless

Audio

Interface	Realtek ALC897, High Definition Audio. Line-in, Line-out, Mic-in
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Ethernet

Controller/ Speed	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I226V with 10/100/1000/2500 Mbps LAN3: Intel® I226V with 10/100/1000/2500 Mbps LAN4: Intel® I226V with 10/100/1000/2500 Mbps LAN5: Realtek RTL8111FP with 10/100/1000 Mbps
Connector	5 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.0
VGA	1
Ethernet	1 x 1 Gigabit LAN 4 x 2.5 Gigabit LAN
USB	6 x USB 3.2 Gen2
Audio	3 (Mic-in, Line-in, Line-out)
COM	COM1 (RS-232/422/485)

Internal Connector

USB	1 x USB 3.2 (Type-A vertical con) 5 x USB 2.0 (2 x 2.54 pitch header, 1 x USB 2.0 Type-A vertical con)
COM	COM2 (RS-232/TTL5V/ ccTALK)
LVDS	1 (Optional, Connector with LVDS/eDP signal, switch by BIOS)

Storage

M.2	1 x M.2 (Key M, 3042/2280/25110) with PCIe Gen5 x4, SATA3 and USB 2.0 for SSD
SATA	2 x SATA3 (6Gb/s)
RAID	Intel® SATA RAID 0/1

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

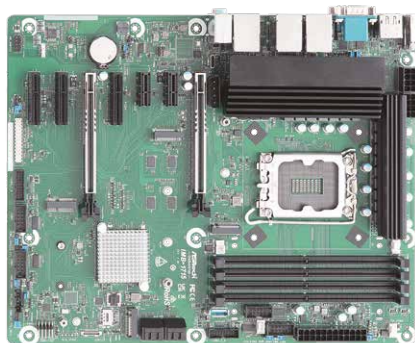
Input PWR	ATX PWR (24+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

IMB-1715, IMB-X1715, IMB-X1715-10G

ATX Motherboard



IMB-1715
IMB-X1715

IMB-X1715-10G

KEY FEATURES

- Intel® Core™ Ultra processors (Arrow Lake-S) with Q870 chipset (IMB-1715)
- Intel® Core™ Ultra processors (Arrow Lake-S) with W880 chipset (IMB-X1715/IMB-X1715-10G)
- 4 x 288-pin CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz, up to 192GB (48GB per DIMM) (IMB-1715)
- 4 x 288-pin ECC/non-ECC CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz, up to 192GB (48GB per DIMM) (IMB-X1715/IMB-X1715-10G)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 2 x PCIe x4 (Gen4), 2 x PCIe x1 (Gen4) (IMB-1715)
- 1 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 3 x PCIe x4 (Gen4), 2 x PCIe x1 (Gen4) (IMB-X1715/IMB-X1715-10G)
- 2 x USB4/Thunderbolt™4, 6 x USB 3.2 Gen2, 4 x USB 3.2 Gen1, 1 x M.2 Key B, 1 x M.2 Key E, 2 x M.2 Key M, 6 x COM, 4 x SATA3
- 2 x Intel 1 Gigabit LAN (IMB-1715/IMB-X1715)
- 2 x Intel 1 Gigabit LAN, 1 x Marvell 10 Gigabit LAN (IMB-X1715-10G)
- Supports Quad display, 2 x HDMI 2.1 TMDS, 2 x DP 2.1 (2 from Type C), 1 x DP 1.4a
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX Power (24+8+8-pin)

SPECIFICATIONS

Form Factor	IMB-1715	IMB-X1715/ IMB-X1715-10G
Dimensions (LxWxH)	ATX (12-in x 9.6-in x 1.81-in, 30.5 cm x 24.4 cm x 4.61 cm)	

Processor System

CPU	Intel® Core™ Ultra processors (Arrow Lake-S), up to 125W	
Chipset	Intel® Q870	Intel® W880
Socket	LGA1851	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Dual Channel DDR5 5600 MHz	Dual Channel ECC/non-ECC DDR5 5600 MHz
Capacity	192GB (48GB per DIMM)	
Socket	4 x 288-pin Long-DIMM	

Graphics

Controller	Intel® Xe® LPG Graphics	
HDMI	HDMI 2.1 TMDS Max resolution up to 7680x4320@60Hz	
DisplayPort	DisplayPort 2.1/1.4a, DP++ Max resolution up to 4096x2160@60Hz	
MultiDisplay	Quad display (Included 2 output from Type-C)	

Expansion Slot

PCIe (IMB-1715)	2 x PCIe Gen5 Slots (PCIe1/PCIe5:single at x16(PCIe1); dual at x8 (PCIe1) / x8 (PCIe5)) (PCIe1: Support Riser card x8/x8) 2 x PCIe x4 (Gen4) 2 x PCIe x1 (Gen4)	
PCIe (IMB-X1715 / IMB-X1715-10G)	2 x PCIe Gen5 Slots (PCIe1/PCIe5:single at x16(PCIe1); dual at x8 (PCIe1) / x8 (PCIe5)) (PCIe1: Support Riser card x8/x8) 3 x PCIe x4 (Gen4) 2 x PCIe x1 (Gen4)	
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 2.0	

Audio

Interface	Realtek ALC897 HD, High Definition Audio. Line-In, Line-Out, Mic-In	
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Ethernet

Controller/ Speed (IMB-1715)	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I210AT with 10/100/1000 Mbps	
Controller/ Speed (IMB-X1715 / IMB-X1715-10G)	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I210AT with 10/100/1000 Mbps LAN3: Marvell AQOC113 with 10/100/1000/2500/5000/10000 Mbps (IMB-X1715-10G)	
Connector	2 x RJ-45	2 x RJ-45 (IMB-X1715) 3 x RJ-45 (IMB-X1715-10G)

Rear I/O	IMB-1715	IMB-X1715 / IMB-X1715-10G
HDMI	2 x HDMI 2.1 TMDS	
DisplayPort	1 x DP 1.4a++	
Ethernet	2 x 1 Gigabit LAN	2 x 1 Gigabit LAN 1 x 10 Gigabit LAN (IMB-X1715-10G)
USB	5 x USB 3.2 Gen2 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.	
Audio	3 (Mic-in, Line-in, Line-out)	
COM	COM1, COM2 (RS-232/422/485)	

Internal Connector

USB	4 x USB 3.2 Gen1 (2 x USB 3.2 header) 1 x USB 3.2 Gen2 vertical Con 1 x USB4/Thunderbolt™4 (5V/3A, supports DP 2.1 display output) * For Thunderbolt support, please refer to support list.
COM	COM3 (RS-232/TTL 5V/ccTalk, switch by Jumper setting) COM4, COM5, COM6 (RS-232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)

Storage

M.2	1 x M.2 (Key M, 2242/2280/22110/25110) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	4 x SATA3 (6Gb/s)
RAID	Intel® VMD RAID 0/1/5/10 ***supported by identical interface (PCIe or SATA) PCIe interface: 2 x M.2 Key M SATA interface: SATA port

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

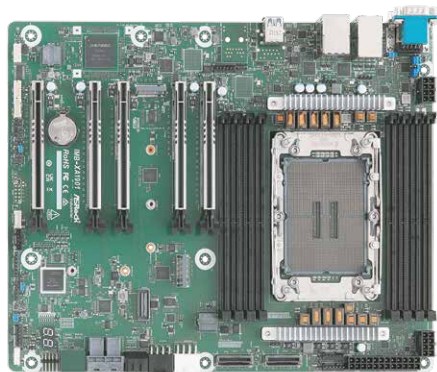
Input PWR	ATX PWR (24+8+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

IMB-XA1901, IMB-XA1901-10G

ATX Motherboard



IMB-XA1901



IMB-XA1901-10G

KEY FEATURES

- Intel® Xeon® 6700P/6500P/6700E Series processors
- 8 x 288-pin ECC RDIMM/RDIMM-3DS DDR5 6400 MHz, up to 1TB
- 2 x PCIe x16 (Gen5), 3 x PCIe x8 (Gen5), 2 x MCIO, 2 x USB 3.2 Gen1, 4 x USB 2.0, 2 x M.2 Key M, 2 x COM, 2 x U.2, 2 x SATA3
- 2 x Intel 1 Gigabit LAN (IMB-XA1901)
- 2 x Intel 1 Gigabit LAN, 2 x Marvell 10 Gigabit LAN (IMB-XA1901-10G)
- Supports 1 x VGA
- Remote management (IPMI)
- TPM 2.0 onboard IC
- Supports RAID 0/1
- ATX PWR (8+8+24 Pin)

SPECIFICATIONS

Form Factor	IMB-XA1901	IMB-XA1901-10G
Dimensions	ATX (12-in x 9.6-in x 1.4-in, 30.5 cm x 24.4 cm x 3.6 cm)	

Processor System

CPU	Intel® Xeon® 6700P/6500P/6700E Series processors
Socket	LGA4710
BIOS	AMI SPI 512 Mbit

Management

BMC Controller	ASPEED AST2600
IPMI	1 x Realtek RTL8211 for dedicated management GLAN

Memory

Technology	Eight Channel ECC DDR5 6400 MHz
Capacity	1TB
Socket	8 x 288-pin RDIMM/RDIMM-3DS

Graphics

VGA	1 x VGA from ASPEED AST2600 Max resolution up to 1920x1200@60Hz
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Expansion Slot

PCIe	PCIe5: PCIe Gen5 x16 PCIe4: PCIe Gen5 x8 PCIe3: PCIe Gen5 x8 PCIe2: PCIe Gen5 x16 PCIe1: PCIe Gen5 x8
MCIO	2 x MCIO with PCIe Gen5 x8 (supported with R1S CPU)

Ethernet

Controller/ Speed (IMB-XA1901)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps
Controller/ Speed (IMB-XA1901-10G)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps LAN3: Marvell AQC113 with 10/100/1000/2500/5000/10000 Mbps LAN4: Marvell AQC113 with 10/100/1000/2500/5000/10000 Mbps
Connector	2 x RJ-45

Rear I/O

Ethernet	2 x 10 Gigabit LAN (IMB-XA1901-10G) 2 x 1 Gigabit LAN 1 x Dedicated IPMI
USB	2 x USB 3.2 Gen1 2 x USB 2.0
VGA	1
COM	COM1 (RS-232/422/485)

Internal Connector	IMB-XA1901	IMB-XA1901-10G
USB	2 x USB 2.0 (1 x 2.54 pitch header)	
COM	COM2 (RS-232)	

Storage

M.2	1 x M.2 (Key M, 2242/2280/25110) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen5 x4 for SSD
U.2	2 x U.2 with PCIe Gen4 x4
SATA	2 x SATA3
RAID	RAID 0/1 PCIe interface: M.2 Key M SATA interface: SATA port

Security

TPM	TPM2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	1 x 24-pin ATX PWR connector 2 x 8-pin 12V PWR connector 1 x 8-pin and 1 x (6+2)-pin 12V PWR connector for PCIe
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

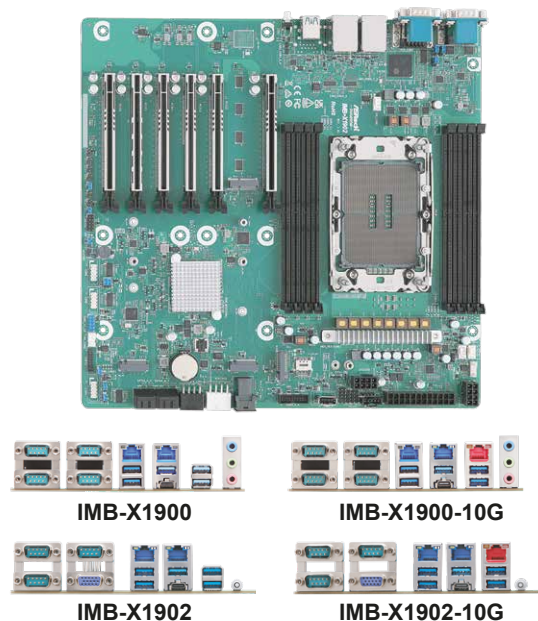
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

IMB-X1900, IMB-X1900-10G, IMB-X1902, IMB-X1902-10G

EATX Motherboard

KEY FEATURES

- Intel® Xeon® W-3500/3400 and W-2500/2400 Series Processors with W790 chipset
- 8 x 288-pin ECC RDIMM/RDIMM-3DS DDR5 4400/4800 MHz, up to 2TB
- 1 x PCIe x16 (Gen5), 3 x PCIe x16 (Gen4), 1 x PCIe x8 (Gen4), 1 x PCIe x4 (Gen4) (IMB-X1900, IMB-X1900-10G)
- 4 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 1 x PCIe x4 (Gen4) (IMB-X1902, IMB-X1902-10G)
- 1 x USB 3.2 Gen2x2, 5 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 3 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 6 x COM
- 8 x SATA3 (IMB-X1900, IMB-X1900-10G)
- 1 x U.2, 4 x SATA3 (IMB-X1902, IMB-X1902-10G)
- 2 x Intel 2.5 Gigabit LAN (IMB-X1900, IMB-X1902)
- 2 x Intel 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN (IMB-X1900-10G, IMB-X1902-10G)
- TPM 2.0 onboard IC
- Support Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+8+24 Pin)



SPECIFICATIONS

Form Factor	IMB-X1900, IMB-X1900-10G	IMB-X1902, IMB-X1902-10G
Dimensions	EATX (12-in x 11.7-in x 1.6-in, 30.5 cm x 29.7 cm x 4.0 cm)	
Processor System		
CPU	Intel® Xeon® W-3500/3400 and W-2500/2400 Series Processors	
Chipset	Intel® W790	
Socket	LGA4677	
BIOS	AMI SPI 256 Mbit	

Memory		
Technology	Quad Channel ECC/non-ECC DDR5 4400/4800 MHz* *1DPC 4800 MHz Natively for Xeon® W9, Xeon® W7 and Xeon® W5 2DPC 4400 MHz Natively for Xeon® W9, Xeon® W7 and Xeon® W5 Supports 4400 MHz Natively for Xeon® W3, W5-3423 and W5-3433	
Capacity	2TB	
Socket	8 x 288-pin RDIMM/RDIMM-3DS	

Graphics		
VGA	N/A	Max resolution up to 1920 x 1200@60Hz

Expansion Slot		
PCIe (IMB-X1900, IMB-X1900-10G)	PCIe1: PCIe Gen5 x16 PCIe2: PCIe Gen4 x16 PCIe3/PCIe4: single at Gen4 x16 (PCIe4); dual at Gen4 x8 (PCIe3) / x8 (PCIe4) PCIe5: PCIe Gen4 x4 PCIe6: PCIe Gen5 x16	
PCIe (IMB-X1902, IMB-X1902-10G)	PCIe1: PCIe Gen5 x16 PCIe2: PCIe Gen5 x16 PCIe3/PCIe4: single at Gen5 x16 (PCIe4); dual at Gen5 x8 (PCIe3) / x8 (PCIe4) PCIe5: PCIe Gen4 x4 PCIe6: PCIe Gen4 x16	
M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G	
SIM Socket	1 x SIM socket connected to M.2 key B	

Audio		
Interface (IMB-X1900, IMB-X1900-10G)	Realtek ALC897 HD, High Definition Audio. Line-In, Line-Out, Mic-In	

Ethernet		
Controller/ Speed (IMB-X1900, IMB-X1900-10G)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps LAN3: Marvell AQc113 with 10/100/1000/2500/5000/10000 Mbps (IMB-X1900-10G)	
Controller/ Speed (IMB-X1902, IMB-X1902-10G)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps LAN3: Marvell AQc113 with 10/100/1000/2500/5000/10000 Mbps (IMB-X1902-10G)	
Connector	2 x RJ-45 (IMB-X1900) 3 x RJ-45 (IMB-X1900-10G)	2 x RJ-45 (IMB-X1902) 3 x RJ-45 (IMB-X1902-10G)

Rear I/O	IMB-X1900, IMB-X1900-10G	IMB-X1902, IMB-X1902-10G
Ethernet	1 x 10 Gigabit LAN (IMB-X1900-10G) 2 x 2.5 Gigabit LAN	1 x 10 Gigabit LAN (IMB-X1902-10G) 2 x 2.5 Gigabit LAN
USB	5 x USB 3.2 Gen2 1 x USB 3.2 Gen2x2 (Type-C, 5V/3A)	
Audio	3 (Line-In/Line-Out/Mic-In)	N/A
COM	COM3, COM4 (RS-232) COM1, COM2 (RS-232/422/485)	COM3 (RS-232) COM1, COM2 (RS-232/422/485)
UID	N/A	1 x UID button with LED

Internal Connector		
USB	2 x USB 3.2 Gen1 (1 x USB 3.2 header) 2 x USB 2.0 (1 x 2.54 pitch header) 1 x USB 2.0 (vertical con)	
COM	COM5, COM6 (RS-232)	COM4, COM5, COM6 (RS-232)
GPIO	4 x GPI, 4 x GPO	

Storage		
M.2	1 x M.2 (Key M, 2242/2280/25110) with PCIe Gen4 x4 and SATA3 for SSD 1 x M.2 (Key M, 2260/2280/25110) with PCIe Gen4 x4 for SSD	
U.2	N/A	1 x U.2 with PCIe Gen4 x4
SATA	8 x SATA3, SATA3_0 shared with M.2 Key M1	4 x SATA3, SATA3_4 shared with M.2 Key M1
RAID	Intel® VMD RAID 0/1/5/10 **supported by identical interface (PCIe or SATA) PCIe interface: M.2 Key B + M.2 Key M1/2 or 2* M.2 Key M SATA interface: SATA port	

Security		
TPM	TPM 2.0 onboard IC	

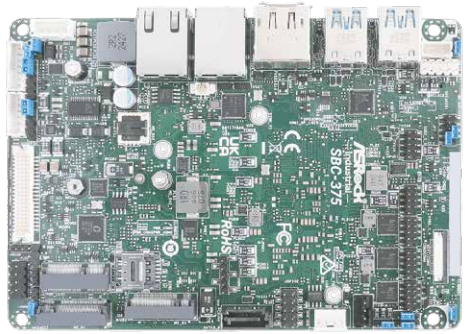
Watchdog Timer		
Output	From Super I/O to drag RESETCON#	
Interval	256 Segments, 0, 1, 2, ..., 255sec	

Power Requirements		
Input PWR	1 x 24-pin ATX PWR connector 2 x 8-pin 12V PWR connector 1 x 8-pin and 1 x (6+2)-pin 12V PWR connector for PCIe	
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready	

Environment		
Operating Temp	-20°C ~ 70°C	
Storage Temp	-40°C ~ 85°C	
Operating Humidity	0% ~ 95% (non-condensing)	
Storage Humidity	0% ~ 95% (non-condensing)	

SBC-375

3.5"SBC Motherboard



KEY FEATURES

- Intel® Core™ Ultra processors (Meteor Lake-H)
- 1 x 262-pin SO-DIMM DDR5 5600 MHz, up to 48GB
- 1 x PCIe x1 (Gen3), 2 x USB 3.2 Gen2x2, 2 x USB 3.2 Gen2, 4 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 1 x M.2 Key B, 3 x COM, 1 x SATA3
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN
- Supports Quad display, 1 x HDMI 2.1 TMDS, 3 x DP 1.4a (2 from Type-C), 1 x LVDS or eDP
- TPM 2.0 onboard IC
- Supports Intel® vPro, VMD RAID 0/1
- 12~36V DC-In PWR/ 12V DC-In only (BOM option)

SPECIFICATIONS

Form Factor

Dimensions	3.5"SBC (5.8-in x 4-in x 0.94-in, 14.7 cm x 10.2 cm x 2.40 cm)
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Processor System

CPU	Intel® Core™ Ultra processors (Meteor Lake-H) SBC-375P (Ultra7 155H, 6P+8E) SBC-375M (Ultra5 125H, 4P+8E)
BIOS	AMI SPI 256 Mbit

Memory

Technology	Single Channel DDR5 5600 MHz
Capacity	48GB
Socket	1 x 262-pin SO-DIMM

Graphics

Controller	Intel® Arc™ Graphics
HDMI	HDMI 2.1 Max resolution up to 4096 x 2160@60Hz
DisplayPort	DP 1.4a Max resolution up to 4096 x 2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Quad display (Included 2 output from Type-C)

Expansion Slot

PCIe	1 x PCIe x1 Gen3 (supports up to 10W)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen4 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G
SIM Socket	1 x SIM socket connected to M.2 key B

Audio

Interface	Realtek ALC256 HD, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I210AT with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.1 TMDS
DisplayPort	1 x DP 1.4a
Ethernet	1 x 1 Gigabit LAN, 1 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 2 x USB 3.2 Gen2 x2 (Type-C, 5V/3A, support DP 1.4a display output)

Internal Connector

USB	4 x USB 2.0 (2 x 2.00mm pitch header)
COM	COM3, COM4, COM5 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1
MIPI Camera Header	1

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD 1 x M.2 (Key M, 2242) with PCIe Gen4 x4 for SSD
SATA	1 x SATA3 (6Gb/s)
RAID	Intel® VMD RAID 0/1 **supported by PCIe interface PCIe interface: M.2 Key B + M.2 Key M1/2 or 2* M.2 Key M

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12~36V DC-In with 4-pin wafer PWR cable 12V DC-In only (BOM option)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

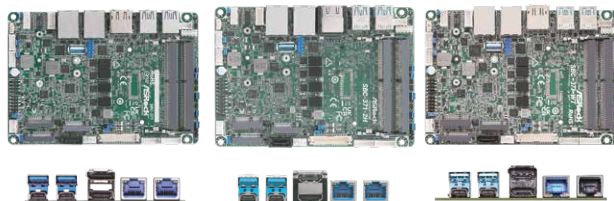
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

SBC-371, SBC-371-2H, SBC-373-WT

3.5"SBC Motherboard

KEY FEATURES

- Intel® 13th Gen Raptor Lake-P Processors
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 64 GB (32GB per DIMM)
- 1 x PCIe x1 (Gen3), 2 x USB 3.2 Gen2x2, 3 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 1 x M.2 Key B, 3 x COM, 1 x SATA3
- 2 x Intel 2.5 Gigabit LAN (SBC-371 & SBC-371-2H)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (SBC-373-WT)
- Supports Quad display, 1 x HDMI 2.0b (SBC-371), 1 x HDMI 2.0a (SBC-373-WT), 3 x DP 1.4a (2 from Type-C), 1 x LVDS or eDP
- Supports Quad display, 2 x HDMI 2.0b, 2 x DP 1.4a (2 from Type-C), 1 x LVDS or eDP (SBC-371-2H)
- TPM 2.0 onboard IC
- Supports Intel® vPro (SBC-371P/SBC-371M/SBC-371P-2H/SBC-371M-2H/SBC-373P-WT/SBC-373M-WT), VMD RAID 0/1
- 12~36V DC-In PWR/ 12V DC-In only (BOM option)



SBC-371

SBC-371-2H

SBC-373-WT

SPECIFICATIONS

Form Factor	SBC-371, SBC-371-2H	SBC-373-WT
Dimensions	3.5"SBC (5.8-in x 4-in x 0.94-in, 14.7 cm x 10.2 cm x 2.40 cm)	
Processor System		
CPU (SBC-371, SBC-371-2H)	Intel® 13th Gen Raptor Lake-P Core™ Processors SBC-371P, SBC-371P-2H (i7-1365UE, 2P+8E) SBC-371M, SBC-371M-2H (i5-1335UE, 2P+8E) SBC-371V, SBC-371V-2H (i3-1315UE, 2P+4E)	
CPU (SBC-373-WT)	Intel® 13th Gen Raptor Lake-P Core™ Processors SBC-373P-WT (i7-1365URE, 2P+8E) SBC-373M-WT (i5-1345URE, 2P+8E) SBC-373V-WT (i3-1315URE, 2P+4E)	
BIOS	AMI SPI 256 Mbit	

Memory		
Technology	Dual Channel DDR4 3200 MHz	
Capacity	64GB (32GB per DIMM)	
Socket	2 x 260-pin SO-DIMM	

Graphics		
Controller	Intel® Iris® Xe Graphics	
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz	HDMI 2.0a Max resolution up to 4096 x 2160@60Hz
DisplayPort	DisplayPort 1.4a Max resolution up to 4096x2160@60Hz (SBC-371)	DisplayPort 1.4a Max resolution up to 4096x2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)	
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)	
MultiDisplay	Quad display (Included 2 output from Type-C)	

Expansion Slot	
PCIe	1 x PCIe x1 Gen3 (supports up to 10W)
M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1 or SATA3 and USB 3.2 Gen1 and USB 2.0 and SIM for 4G/5G
SIM Socket	1 x SIM Socket connected to M.2 Key B

Audio	
Interface	Realtek ALC256 HD, High Definition Audio. Line-out, Mic-in

Ethernet	
Controller/ Speed (SBC-371, SBC-371-2H)	SBC-371P/SBC-371M/ SBC-371P-2H/SBC-371M-2H LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps SBC-371V/ SBC-371V-2H LAN1: Intel® I226LM with 10/100/1000/2500 Mbps LAN2: Intel® I226V with 10/100/1000/2500 Mbps

Ethernet	SBC-371, SBC-371-2H	SBC-373-WT
Controller/ Speed (SBC-373-WT)	SBC-373P-WT/SBC-373M-WT LAN1: Intel® I226IT with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I210IT with 10/100/1000 Mbps SBC-373V-WT LAN1: Intel® I226IT with 10/100/1000/2500 Mbps LAN2: Intel® I210IT with 10/100/1000 Mbps	
Connector	2 x RJ-45	

Rear I/O		
HDMI	1 x HDMI 2.0b (SBC-371) 2 x HDMI 2.0b (SBC-371-2H)	1 x HDMI 2.0a
DisplayPort	1 x DP1.4a (SBC-371)	1 x DP1.4a
Ethernet	2 x 2.5 Gigabit LAN	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 2 x USB 3.2 Gen2x2 (Type-C, 5V/3A, support DP1.4a display output)	

Internal Connector	
USB	1 x USB 3.2 Gen2 (Type A connector) 2 x USB 2.0 (1 x 2.54 pitch header)
COM	COM1, COM3, COM4 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1

Storage	
M.2	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen4 x4 for SSD
SATA	1 x SATA3 (6Gb/s)
RAID	Intel® VMD RAID 0/1 **supported by PCIe interface PCIe interface: M.2 Key B + M.2 Key M

Security	
TPM	TPM 2.0 onboard IC

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements	
Input PWR	12~36V DC-In with 4-pin wafer PWR cable 12V DC-In only (BOM option)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

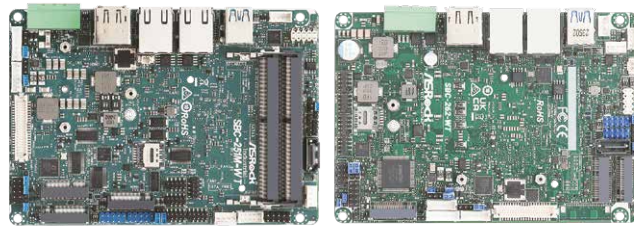
Environment		
Operating Temp	-20°C ~ 70°C	-40°C ~85°C
Storage Temp	-40°C ~ 85°C	
Operating Humidity	5% ~ 90%	
Storage Humidity	5% ~ 90%	

SBC-251M-WT, SBC-262M-WT

3.5"SBC Motherboard

KEY FEATURES

- Intel® Elkhart Lake Processors X6413E (SBC-251M-WT)
- Intel® Amston Lake Processors X7433RE (SBC-262M-WT)
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB (16GB per DIMM) (SBC-251M-WT)
- 1 x 262-pin SO-DIMM DDR5 4800 MHz, up to 48GB (SBC-262M-WT)
- 2 x USB 3.2 Gen2, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 4 x COM, 1 x SATA3
- 2 x Intel 1 Gigabit LAN (SBC-251M-WT)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (SBC-262M-WT)
- Intel® TCC and TSN support for Real-Time Computing (SBC-262M-WT)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4b, 1 x LVDS or eDP (SBC-251M-WT)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4b, 1 x LVDS, 1 x eDP (SBC-262M-WT)
- TPM 2.0 onboard IC
- 9~36V DC-In



SBC-251M-WT

SBC-262M-WT

SPECIFICATIONS

Form Factor	SBC-251M-WT	SBC-262M-WT
Dimensions(SBC-251M-WT)	3.5"SBC (5.8-in x 4-in x 0.98-in, 14.7 cm x 10.2 cm x 2.49 cm)	
Dimensions(SBC-262M-WT)	3.5"SBC (5.8-in x 4-in x 1.03-in, 14.7 cm x 10.2 cm x 2.6 cm)	

Processor System

CPU	Intel® Elkhart Lake Processors X6413E, QC, Max Speed Up to 3.0GHz, 9W	Intel® Amston Lake Processors X7433RE, QC, Max Speed Up to 3.4GHz, 9W
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Dual Channel DDR4 3200 MHz	Single Channel DDR5 4800 MHz
Capacity	32GB (16GB per DIMM)	48GB
Socket	2 x 260-pin SO-DIMM	1 x 262-pin SO-DIMM

Graphics

Controller	Intel® Iris® Xe Graphics	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz	
DisplayPort	DP 1.4b Max resolution up to 4096 x 2160@60Hz	
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)	Dual channel 24 bit up to 1920 x 1200@60Hz
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)	eDP 1.4b Max resolution up to 4096x2160@60Hz
MultiDisplay	Triple display	

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.2 Gen1, USB2.0 and SIM for 4G/5G
SIM Socket	1 x SIM Socket connected to M.2 Key B

Audio

Interface	Realtek ALC256 HD, High Definition Audio
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Ethernet

Controller/ Speed (SBC-251M-WT)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps
Controller/ Speed (SBC-262M-WT)	LAN1: Intel® I226IT with 10/100/1000/2500 Mbps, supports TSN LAN2: Intel® I210IT with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O	SBC-251M-WT	SBC-262M-WT
HDMI	1 x HDMI 2.0b	
DisplayPort	1 x DP 1.4a	
Ethernet	2 x 1 Gigabit LAN	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2	
Power In	1 x Phoenix Connector	

Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)	
COM	COM1, COM2, COM4 (RS-232) COM3 (RS-232/422/485)	COM3, COM4 (RS-232) COM1, COM2 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO	
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)	1
eDP	N/A	1
SATA PWR Output	1	
Speaker Header	1	
MIPI Camera Header	N/A	1
CAN Bus	2 x CAN Bus (1 x 2.00 pitch header)	N/A

Storage

M.2 (SBC-251M-WT)	1 x M.2 (Key M, 2242/2260/ 2280) with PCIe Gen3 x2 and SATA3 for SSD
M.2 (SBC-262M-WT)	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 and SATA3 for SSD
SATA	1 x SATA3 (6Gb/s)

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

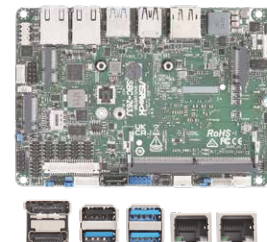
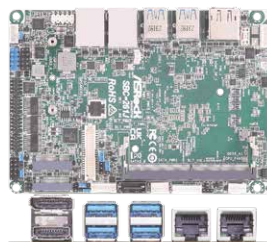
Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	9~36V DC-In
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

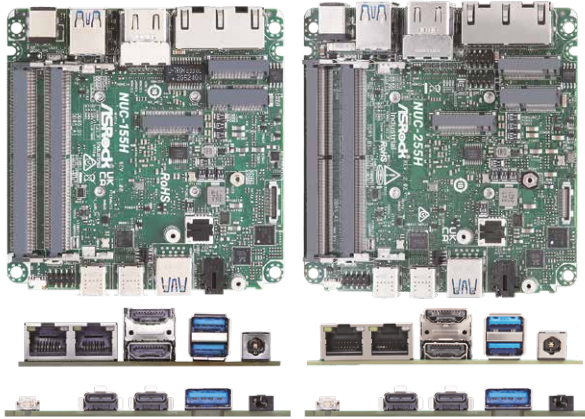
Operating Temp	-40°C ~ 85°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%



Model	SBC-260J		SBC-261J		SBC-263J	
Chipset/ CPU	Intel® Alder Lake-N Processors N97, QC, Max Speed Up to 3.6GHz, 12W					
Form Factor	3.5"SBC (5.8-in x 4-in x 0.94-in, 14.7 cm x 10.2 cm x 2.60 cm)					
Memory	Single Channel DDR4 3200 MHz		Single Channel DDR5 4800 MHz			
DIMM Slot	1 x 260-pin SO-DIMM		1 x 262-pin SO-DIMM			
Capacity	32GB					
DP	1 x DP 1.4a		1 x DP 1.4b			
HDMI	1 x HDMI 2.0b					
LVDS/eDP	1 x LVDS or eDP					
VGA	1		N/A			
M.2 Key M	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1 and SATA3 for SSD		1 x M.2 (Key M, 2242/2260/2280) with PCIe x1 and SATA3 and USB 2.0 for SSD		1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 and SATA3 for SSD	
M.2 Key E	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless					
M.2 Key B	1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G		N/A		1 x M.2 (Key B, 3042/3052) with USB 3.2 Gen1, USB 2.0 and SIM for 4G/5G	
SATA	1 x SATA3 (6Gb/s)					
USB 3.2	Rear: 2 x USB 3.2 Gen2		Rear: 4 x USB 3.2 Gen2		Rear: 3 x USB 3.2 Gen2	
USB 2.0	Internal: 4 x USB 2.0 (2 x 2.54 pitch header)		Internal: 2 x USB 2.0 (1 x 2.54 pitch header)		Internal: 2 x USB 2.0 (1 x 2.54 pitch header) Rear: 1 x USB 2.0	
GPIO	4 x GPI, 4 x GPO					
LAN	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps		LAN1: Realtek RTL8111H with 10/100/1000 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps		LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps	
COM Port	Internal: COM3, COM4 (RS-232) COM1, COM2 (RS-232/422/485)		Internal: COM2, COM3, COM4 (RS-232) COM1 (RS-232/422/485)			
TPM	TPM 2.0 onboard IC		Intel® PTT			
Power	9~36V DC-In with 4-pin wafer PWR		12V DC-In		9~36V DC-In 12V DC-In only (BOM option)	
Operating Temperature	-20°C ~ 70°C					

NUC Ultra 100 Series, NUC Ultra 200 Series

NUC Motherboard



NUC Ultra 100 Series

NUC Ultra 200 Series

SPECIFICATIONS

Form Factor	NUC Ultra 100 Series	NUC Ultra 200 Series
Dimensions	NUC (4.09-in x 4.02-in x 1.5-in, 10.4 cm x 10.2 cm x 3.8 cm)	

Processor System

CPU (NUC Ultra 100 Series)	Intel® Core™ Ultra processors (Meteor Lake-H/U) NUC-155H (Ultra 7 155H, 6P+8E) NUC-125H (Ultra 5 125H, 4P+8E)
CPU (NUC Ultra 200 Series)	Intel® Core™ Ultra processors (Arrow Lake-H/U) NUC-255H (Ultra 7 255H, 6P+8E) NUC-225H (Ultra 5 225H, 4P+8E)
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 5600 MHz	Dual Channel DDR5 6400 MHz
Capacity	96GB (48 GB per DIMM)	
Socket	2 x 262-pin SO-DIMM	

Graphics

Controller	Intel® Arc™ Graphics
HDMI	HDMI 2.1 TMDs Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 2.1/ 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Max 4 display (Included 2 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless
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Audio

Interface	Realtek ALC256, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Front I/O

USB	1 x USB 3.2 Gen2 (Type A) 1 x USB4/Thunderbolt™ 4 (5V/3A, Supports DP 2.1 display output) 1 x USB3.2 gen2x2 (Type-C, 5V/3A, Supports DP1.4a display output) *For Thunderbolt support, please refer to support list.
Audio	1 (headphone & microphone jack)

KEY FEATURES

- Intel® Core™ Ultra processors (Meteor Lake-H) (NUC Ultra 100 Series)
- Intel® Core™ Ultra processors (Arrow Lake-U/H) (NUC Ultra 200 Series)
- 2 x 262-pin SO-DIMM DDR5 5600MHz up to 96GB (48GB per DIMM) (NUC Ultra 100 Series)
- 2 x 262-pin CSO-DIMM DDR5 6400MHz up to 96GB (48GB per DIMM) (NUC Ultra 200 Series)
- 1 x USB4/Thunderbolt™ 4, 4 x USB3.2 Gen2, 2 x USB 2.0, 2 x M.2 Key M, 1 x M.2 Key E, 1 x COM, 1 x SATA3
- 2 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1 TMDs, 1 x DP 2.1 (from USB4), 1 x DP 1.4a (from Type-C)
- Intel® PTT
- Supports Intel® vPro, VMD RAID 0/1
- 12V~24V DC-in

Rear I/O	NUC Ultra 100 Series	NUC Ultra 200 Series
HDMI	2 x HDMI 2.1 TMDs	
Ethernet	2 x 2.5 Gigabit LAN	
USB	2 x USB 3.2 Gen2 (Type A)	
DC Jack	1	

Internal Connector

USB	2 x USB 2.0 (1 x 2.00 pitch header)
COM	1 x COM(RS-232/RS-422/RS-485)

Storage

M.2	1 x M.2 (KEY M, 2242) with PCIe Gen4 x4 for SSD 1 x M.2 (KEY M, 2242/2280) with PCIe Gen4 x4 for SSD
SATA	1 x SATA3.0 (6.0 Gb/s)
RAID	Intel® VMD RAID 0/1 **supported by identical interface (PCIe) PCIe interface: 2* M.2 Key M

Security

TPM	Intel® PTT
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ..., 255sec

Power Requirements

Input PWR	12V~24V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

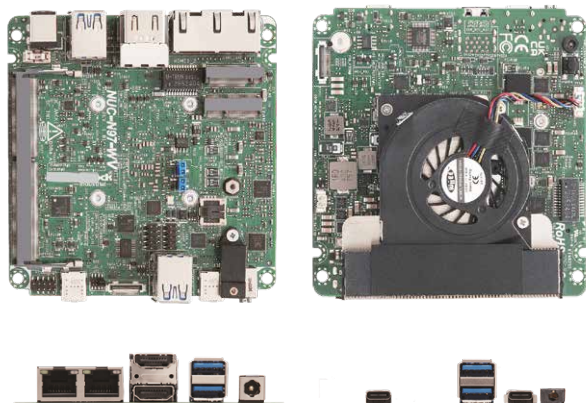
Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

NUC-N97, NUC-N97-WV

NUC Motherboard

KEY FEATURES



- Intel® Alder Lake-N Processors
- 1 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB
- 6 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 1 x COM, 1 x SATA3
- 2 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 2 x HDMI 2.0b, 2 x DP 1.4a (from Type-C)
- TPM 2.0 onboard IC
- 9V~19V DC-In (NUC-N97)
- 9V~24V DC-In (NUC-N97-WV)

SPECIFICATIONS

Form Factor	NUC-N97	NUC-N97-WV
Dimensions	NUC (4.09-in x 4.02-in x 1.4-in, 10.4 cm x 10.2 cm x 3.6 cm)	

Processor System

CPU	Intel® Alder Lake-N Processors N97
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Single Channel DDR4 3200 MHz
Capacity	32GB
Socket	1 x 260-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Triple-Display (Included 2 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe x1, USB 2.0
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Audio

Interface	Realtek ALC256, High Definition Audio
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Front I/O

USB	2 x USB 3.2 Gen2 (Type-A) 2 x USB 3.2 Gen2 (Type-C, 5V/3A, Supports DP1.4a display output)
Audio	1 (headphone & microphone jack)

Rear I/O	NUC-N97	NUC-N97-WV
HDMI	2 x HDMI 2.0b	
Ethernet	2 x 2.5 Gigabit LAN	
USB	2 x USB 3.2 Gen2 (Type-A)	
DC Jack	1	

Internal Connector

USB	2 x USB 2.0 (1 x 2.00 pitch header)
COM	1 x COM (RS-232/RS-422/RS-485)

Storage

M.2	1 x M.2 (KEY M, 2242/2260/2280) with PCIe Gen3 x1 and SATA3 for SSD *M.2 Key M 2280 (Supported by bracket)
SATA	1 x SATA3.0 (6.0 Gb/s)

Security

TPM	TPM 2.0 onboard IC
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	9V~19V DC-In Jack	9V~24V DC-In Jack
Power On	AT/ATX Supported	
	- AT: Directly PWR on as power input ready - ATX: Press button to PWR on after power input ready	

Environment

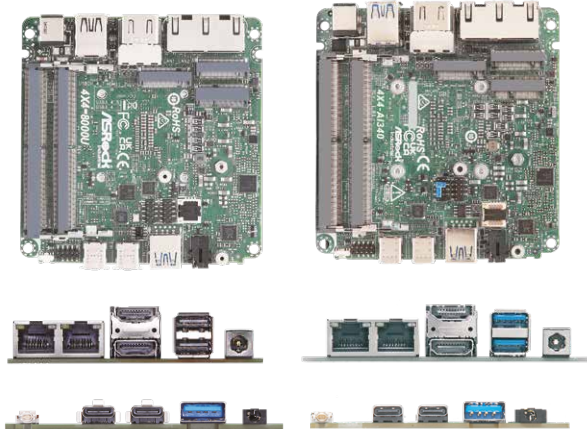
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

4X4 8040 Series, 4X4 AI300 Series

4X4 Motherboard

KEY FEATURES

- AMD Ryzen™ 8040U Series (4X4 8040 Series)
- AMD Ryzen™ AI 300 Series (4X4 AI300 Series)
- 2 x 262-pin SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 2 x USB4, 1 x USB 3.2 Gen2, 2 x USB 2.0 (4X4 8040 Series)
- 2 x USB4, 1 x USB 3.2 Gen2, 2 x USB 3.2 Gen1, 2 x USB 2.0 (4X4 AI300 Series)
- 2 x M.2 Key M, 1 x M.2 Key E
- 1 x Realtek Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 2 x DP 1.4a (from Type-C)
- 12V~24V DC-In



4X4 8040 Series

4X4 AI300 Series

SPECIFICATIONS

Form Factor	4X4 8040 Series	4X4 AI300 Series
Dimensions (LxWxH)	4X4 (4.09-in x 4.02-in x 1.4-in, 10.4 cm x 10.2 cm x 3.6 cm)	

Processor System

CPU (4X4 8040 Series)	AMD Ryzen™ 8040U Series - 4X4-8840U (AMD Ryzen™ 7 8840U, 8Cores, Max Speed up to 5.1GHz) - 4X4-8640U (AMD Ryzen™ 5 8640U, 6Cores, Max Speed up to 4.9GHz)
CPU (4X4 AI300 Series)	AMD Ryzen™ AI 300 Series - 4X4-AI350 (AMD Ryzen™ AI 7 350, 8Cores, Max Speed up to 5.0GHz) - 4X4-AI340 (AMD Ryzen™ AI 5 340, 6Cores, Max Speed up to 4.8GHz)
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 5600 MHz
Capacity	96GB (48 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	AMD Radeon™ Graphics
HDMI	2 x HDMI 2.1 Max resolution up to 7680 x 4320@60Hz
DisplayPort	DisplayPort 1.4a Max resolution up to 4096x2160@60Hz
MultiDisplay	Max 4 display (included 2 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 for Wireless
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Audio

Interface	Realtek ALC256, High Definition Audio
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Ethernet

Controller/ Speed	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Front I/O	4X4 8040 Series	4X4 AI300 Series
USB	1 x USB 3.2 Gen2 (Type-A) 2 x USB4 (Type-C, 5V/3A, supports DP1.4a display output)	
Audio	1 (headphone & microphone jack)	

Rear I/O

HDMI	2 x HDMI 2.1	
Ethernet	1 x 1 Gigabit LAN, 1 x 2.5 Gigabit LAN	
USB	2 x USB 2.0	2 x USB 3.2 Gen1 (Type-A)
DC Jack	1	

Internal Connector

USB	NA	2 x USB 2.0 (1 x 2.00 pitch header)
COM	TTL-3V	NA

Storage

M.2	1 x M.2 (KEY M, 2242/2280) with PCIe Gen4x4 for SSD 1 x M.2 (KEY M, 2242) with PCIe Gen4x4 for SSD	
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Security

TPM	AMD FW TPM
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ..., 255sec

Power Requirements

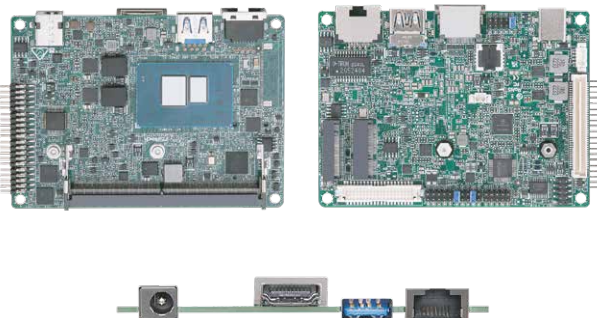
Input PWR	12V~24V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	0°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

KEY FEATURES

- Intel® Alder Lake-N Processors N97
- 1 x 262-pin SO-DIMM DDR5 4800 MHz, up to 32GB
- 1 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 2 x COM
- 1 x MIOe slot
- 1 x Realtek 2.5 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4a, 1 x LVDS or eDP
- 12V DC-In



SPECIFICATIONS

Form Factor

Dimensions	Pico-ITX (3.9-in x 2.8-in x 0.76-in, 10 cm x 7.2 cm x 1.93 cm)
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Processor System

CPU	Intel® Alder Lake-N SoC Processors SOM-P104J (N97, QC, Max Speed Up to 3.6GHz, 12W) *For other CPU SKUs request, please contact regional Sales for availability
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 4800 MHz
Capacity	32GB
Socket	1 x 262-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
DisplayPort	Display Port 1.4a, DP++ Max resolution up to 4096x2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Triple display

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3x1 and USB 2.0 for Wireless
MIOe	1 (HDMI or DP, 1 x USB 3.2 Gen2, 1 x USB 2.0, 3 x PCIe x1)

Audio

Interface	Realtek ALC897 HD, High Definition Audio. Line-in, Line-out, Mic-in
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Ethernet

Controller/ Speed	Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	1 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.0b
Ethernet	1 x 2.5 Gigabit LAN
USB	1 x USB 3.2 Gen2 (Type A)
DC Jack	1

Internal Connector

USB	2 x USB 2.0 (1 x 2.00 pitch header)
COM	COM1, COM3 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
MIPI Camera Header	1 (Optional)

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen3x1 and SATA3 and USB 2.0 for SSD
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

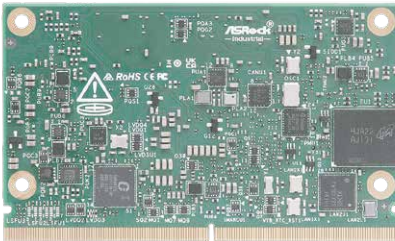
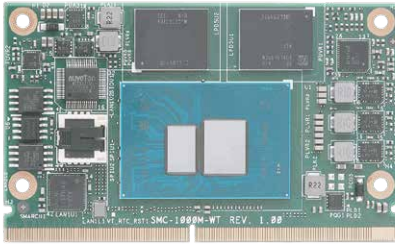
Input PWR	12V DC-In
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

SMC-1001M-WT

SMARC



KEY FEATURES

- Intel® Amston Lake Processors X7433RE
- 2 x 8GB IBECC onboard LPDDR5 4800 MHz
- 4 x PCIe x1 (Gen3), 2 x USB 3.2 Gen2, 6 x USB 2.0, 4 x UART, 1 x SATA3
- 2 x Intel 2.5 Gigabit LAN
- Supports Triple Display, 2 x HDMI 2.0b or DP 1.4, 1 x LVDS or eDP
- 3V~5.25V dc +/- 5%

SPECIFICATIONS

Form Factor

Dimensions	SMARC (3.2-in x 1.96-in x 0.21-in, 8.2 cm x 5.0 cm x 0.55 cm)
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Processor System

CPU	Intel® Amston Lake Processors X7433RE, QC, Max Speed Up to 3.4GHz, 9W
BIOS	AMI SPI 256 Mbit

Memory

Technology	IBECC onboard LPDDR5 4800 MHz
Capacity	16GB

Graphics

Controller	Intel® UHD Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
DisplayPort	DP 1.4 Max resolution up to 4096 x 2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Signal shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Signal shared with LVDS)
MultiDisplay	Triple Display

Expansion Slot

PCIe	4 x PCIe x1 (Gen3)
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Ethernet

Controller/ Speed	2 x Intel® I226IT 10/100/1000/2500 Mbps
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I/O

USB	2 x USB 3.2 Gen2 6 x USB 2.0
COM	4 x UART Ports
GPIO	13 x GPIO
LVDS	DDIA support LVDS
eDP	DDIA support eDP (eDP bypass mode)
DisplayPort	TCPO support DP/HDMI
HDMI	DDIB support HDMI
Ethernet	2
SMBus	1
CAN Bus	2
MIPI CSI	2 (1x4 or 2x2)

Storage

SATA	1 x SATA3 (6Gb/s)
eMMC	eMMC 5.1 (optional)

Security

TPM	TPM 2.0 onboard IC (optional)
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Watchdog Timer

Output Interval	From Super I/O to drag RESETCON# 256 Segments, 0, 1, 2, ...255sec
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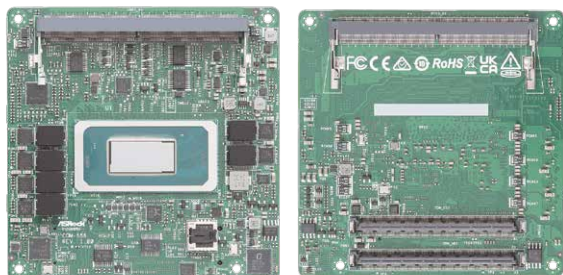
Power Requirements

Input PWR	3V~5.25V dc +/- 5%
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-40°C ~ 85°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

KEY FEATURES



- Intel® Core™ Ultra processors (Meteor Lake-H/U)
- 2 x 262-pin SO-DIMM DDR5 5600 MHz, up to 96GB (48GB per DIMM)
- 1 x PCIe x8 (Gen4) (Support by COM-656P/COM-656M), 1 x PCIe x4 (Gen4), 4 x PCIe x1 (Gen4), 2 x USB4/Thunderbolt™4, 4 x USB3.2 Gen2, 8 x USB2.0, 2 x UART, 2 x SATA3
- 1 x Intel 2.5 Gigabit LAN
- Supports Quad display, 3 x DDI, 1 x VGA (optional), 1 x LVDS or eDP (optional)
- TPM 2.0 onboard IC (optional)
- Supports Intel® vPro, VMD RAID 0/1/5/10
- ATX: 12V±5%/5Vsb±5%
- AT: 12V±5%

SPECIFICATIONS

Form Factor

Dimensions	COM Express Compact Type 6 (3.74-in x 3.74-in x 0.52-in, 9.5 cm x 9.5 cm x 1.3 cm)
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Processor System

CPU	Intel® Core™ Ultra processors (Meteor Lake-H/U) COM-656P (Ultra 7 155H, 6P+8E) COM-656M (Ultra 5 125H, 4P+8E) COM-656PU (Ultra 7 155U, 2P+8E) COM-656MU (Ultra 5 125U, 2P+8E)
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 5600 MHz
Capacity	96 GB (48 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Arc™ Graphics (COM-656P/COM-656M) Intel® Graphics (COM-656PU/COM-656MU)
HDMI	HDMI 2.1 Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 2.1/ 1.4a, DP++ Max resolution up to 4096x2160@60Hz
VGA	Max resolution up to 1920x1200@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz
eDP	eDP1.4b Max resolution up to 4096x2304@60Hz (optional)
MultiDisplay	Quad Display

Expansion Slot

PCIe	1 x PCIe x8 (Gen4) (Support by COM-656P/COM-656M) 1 x PCIe x4 (Gen4) 4 x PCIe x1 (Gen4)
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Ethernet

Controller/ Speed	1 x Intel® I226LM with 10/100/1000/2500 Mbps, support vPro
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I/O

HDMI	DDI1/2 support HDMI/DP (colay USB4/Thunderbolt™4)
DisplayPort	DDI1/2 support HDMI/DP (colay USB4/Thunderbolt™4) DDI3 support DP
VGA	1 (optional)
LVDS	1
eDP	1 (optional)
Ethernet	1 x 2.5 Gigabit LAN
USB	2 x USB4/Thunderbolt™4 (5V/3A, supports DP2.1 display output) 4 x USB 3.2 Gen2 8 x USB 2.0
COM	2 x UART
GPIO	4 x GPI, 4 x GPO

Storage

SATA	2 x SATA3 (6Gb/s)
RAID	SATA: Intel® VMD RAID 0/1 PCIe: Intel® VMD RAID 0/1/5/10
TPM	TPM 2.0 onboard IC (optional)

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

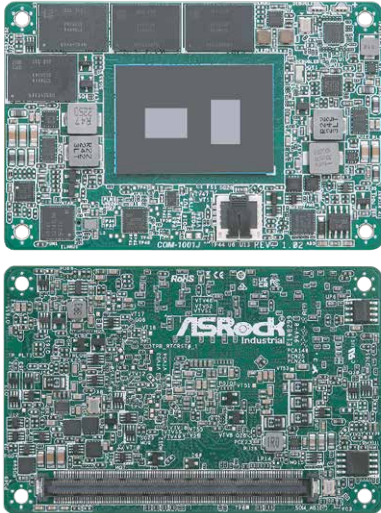
Input PWR	ATX: 12V±5%/5Vsb±5% AT: 12V±5%
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

COM-1001

COM Express Type 10



KEY FEATURES

- Intel® Elkhart Lake Processors J6412
- 4 x 4GB IBECC onboard LPDDR4/4x 3200 MHz
- 4 x PCIe x1 (Gen3), 2 x USB 3.2 Gen2, 8 x USB 2.0, 2 x UART, 2 x SATA3
- 1 x Intel 2.5Gigabit LAN
- Supports Dual Display, 2 x DDI, 1x eDP, 1x DP or HDMI
- ATX: 12V±5%/5Vsb±5%
- AT: 9~20V±5%

SPECIFICATIONS

Form Factor

Dimensions	COM Express Type10 (2.2-in x 3.3-in x 0.32-in, 5.50 cm x 8.40 cm x 0.83 cm)
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Processor System

CPU	Intel® Elkhart Lake Processors J6412, QC, Max Speed Up to 2.6GHz, 10W
BIOS	AMI SPI 256 Mbit

Memory

Technology	IBECC onboard LPDDR4/4x 3200 MHz
Capacity	16GB

Graphics

Controller	Intel® Gen 11 Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
DisplayPort	DP 1.4 Max resolution up to 4096 x 2160@60Hz
eDP	eDP 1.3 Max resolution up to 4096 x 2160@60Hz
MultiDisplay	Dual Display

Expansion Slot

PCIe	4 x PCIe x1 (Gen3)
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Ethernet

Controller/ Speed	1 x Intel® I226V 10/100/1000/2500 Mbps
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I/O

USB	2 x USB 3.2 Gen2, 8 x USB 2.0
COM	Two UART Ports (SoC)
eDP	DDIO support eDP
DisplayPort	DDI1 support DP/HDMI
HDMI	DDI1 support DP/HDMI
Ethernet	1

Internal Connector

GPIO	4 x GPI, 4 x GPO
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Storage

SATA	2 x SATA3 (6Gb/s)
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Security

TPM	TPM 2.0 onboard IC (optional)
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Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ..., 255sec

Power Requirements

Input PWR	ATX: 12V±5%/5Vsb±5% AT: 9~20V±5%
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%