

Cocreate an Intelligent World



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Mini PC & Industrial Motherboard Catalog

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

■ Fanned Embedded BOX PC

05	NUCS Ultra 300 Box Series
06	NUCS Ultra 100 BOX Series, NUCS Ultra 200 BOX Series
07	NUC Ultra 300 Box Series
08	NUC Ultra 100 BOX Series, NUC Ultra 200 BOX Series
09	NUC BOX-N97/D5
10	Ryzen™ AI Max 300 BOX Series
11	4X4 BOX AI300 Series, 4X4 BOX AI400 Series
12	DSF-A6000

■ Fanless Embedded BOX PC

13	iBOX Ultra 200 Series
14	iBOX Ultra 100 Series
15	iBOX-N97 R2/D5
16	iBOX-260J

■ Mini-ITX Motherboard

17	IMB-1246, IMB-1247
18	IMB-1248-WV, IMB-1249-WV
19	IMB-1241, IMB-1242
20	IMB-1250-WV, IMB-1251-WV
21	IMB-1011J-WV, IMB-1012J-WV
22	IMB Ryzen™ AI Max 300 Motherboard Series
23	IMB-A1002, IMB-A1003
24	IMB-A8000

■ Micro-ATX Motherboard

25	IMB-1317, IMB-X1317, IMB-X1317-10G
26	IMB-A1302

■ ATX Motherboard

27	IMB-1715, IMB-X1715, IMB-X1715-10G
28	IMB-XA1901, IMB-XA1901-10G
29	IMB-A1700

■ EATX Motherboard

30	IMB-X1904, IMB-X1904-10G
31	IMB-X1900, IMB-X1900-10G
32	IMB-X1902, IMB-X1902-10G

■ SBC Motherboard

33	SBC-375, SBC-377
34	SBC-371, SBC-371-2H, SBC-373-WT
35	SBC-263J, SBC-264
36	SBC-260J, SBC-261J
37	SBC-262M-WT, SBC-265M-WT

■ NUC Motherboard

38	NUC Ultra 300 Motherboard Series
39	NUC Ultra 100 Motherboard Series, NUC Ultra 200 Motherboard Series
40	NUC-N97/D5

■ 4X4 Motherboard

41	4X4 AI300 Motherboard Series, 4X4 AI400 Motherboard Series
----	--

■ Pico-ITX Motherboard

42	SOM-P104
----	----------

About ASRock Industrial

ASRock Industrial Computer Corporation, a subsidiary of ASRock Inc. under Pegatron Group, was established in 2018 and specializes in industrial motherboards, embedded systems, and robust edge AIoT platforms. Committed to delivering secure and open edge AI computing solutions, the company leverages strengths in edge AI computing, industrial cybersecurity, and open architecture to serve manufacturing, commercial, and retail applications worldwide.

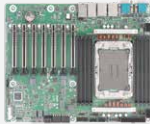
As a global leader in industrial computing, ASRock Industrial is IEC 62443-certified and collaborates closely with leading partners, including AMD, FIDO, Intel, NVIDIA, OPAF, and UAO to advance innovation at the edge. Driven by the vision to co-create an intelligent world, ASRock Industrial continues to advance smart applications across CARES verticals – Commerce, Automation, Robotics, Entertainment, and Security.

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
				
AI System	Logistics Automation	Industrial Robot	Game Streaming Service	Cybersecurity
KIOSK	Factory Automation	Service Robot	Arcade Game	Video Surveillance
Digital Signage	Process Automation	Humanoid Robot	Slot Machines	OT Security

Industrial Motherboard

					
	EATX	ATX	Micro-ATX		
 					
		ATX	Micro-ATX	Mini-ITX	SBC
					
				Mini-ITX	SBC
 					
		ATX	Micro-ATX	Mini-ITX	
					
				Mini-ITX	
					
					
				Mini-ITX	

and Mini PC Lineup

						
NUC		COM Express	NUC BOX	NUCS BOX	iBOX	
						
NUC	Pico-ITX	COM Express	NUC BOX		iBOX	
						
					AI BOX	
						
4X4					4X4 BOX	
						
4X4			4X4 BOX		iBOX	DSF-A6000



KEY FEATURES

- Intel® Core™ Ultra Series 3 Processors (Panther Lake-H)
- 2 x 262-pin SO-DIMM DDR5 7200MHz up to 128GB (64GB per DIMM)
- 1 x USB4/Thunderbolt™4, 5 x USB 3.2 Gen2, 2 x M.2 Key M, 1 x M.2 Key E (Wi-Fi 7 Module)
- 1 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 1 x DP 2.1 (from Type-C), 1 x DP 1.4a (from Type-C)
- Intel® PTT
- Supports Intel® vPro, VMD RAID 0/1
- 19V/120W Power Adapter
- 117.5 x 110.0 x 38mm(4.63" x 4.33" x 1.50"), Slim Type Fanned Barebone

SPECIFICATIONS

Processor System

CPU	Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 7200 MHz
Capacity	128GB (64 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

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

Expansion Slot

M.2/ WLAN	1 x Wi-Fi 7 + BT 5.4
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Audio

Interface	Realtek ALC256, High Definition Audio.
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Ethernet

Controller/ Speed	Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro
Connector	1 x RJ-45

Storage

M.2	1 x M.2 (KEY M, 2280) with PCIe Gen5 x4 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

Front I/O

USB	2 x USB 3.2 Gen2 (Type A) 1 x USB4/Thunderbolt™ 4 (Supports DP2.1 display output) 1 x USB3.2 Gen2x2 (Type-C, Supports DP1.4a display output) *For Thunderbolt support, please refer to support list.
Audio	1 (headphone & microphone jack)

Rear I/O

HDMI	2 x HDMI 2.1
Ethernet	1 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	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 ~ 40°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

Mechanical

Mounting	VESA mount
Dimensions (L x W x H)	117.5 x 110.0 x 38mm(4.63" x 4.33" x 1.50")
Weight	Net Weight:1.0Kg

Others

OS Support	Windows 10/11
TPM	Intel® PTT
Certifications	CE, FCC
Packing List	1 x 19V/120W Power Adapter 1 x VESA mount bracket



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	



KEY FEATURES

- Intel® Core™ Ultra Series 3 Processors (Panther Lake-H)
- 2 x 262-pin SO-DIMM DDR5 7200MHz up to 128GB (64GB per DIMM)
- 1 x USB4/Thunderbolt™4, 4 x USB3.2 Gen2, 2 x M.2 Key M, 1 x M.2 Key E (Wi-Fi 7 Module)
- 2 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 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/120W Power Adapter
- 117.5 x 110.0 x 49mm (4.63" x 4.33" x 1.93"), Fanned Barebone

SPECIFICATIONS

Processor System

CPU	Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 7200 MHz
Capacity	128GB (64 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Graphics
HDMI	HDMI 2.1 Max resolution up to 7680x4320@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/ WLAN	1 x Wi-Fi 7 + BT 5.4 (M.2 Key E, 2230 PCIe 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: 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, 2242/2280) with PCIe Gen5 x4 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

Front I/O

USB	1 x USB 3.2 Gen2 (Type A) 1 x USB4/Thunderbolt™ 4 (Supports DP 2.1 display output) 1 x USB3.2 Gen2x2 (Type-C, Supports DP1.4a display output) *For Thunderbolt support, please refer to support list.
Audio	1 (headphone & microphone jack)

Rear I/O

HDMI	2 x HDMI 2.1
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	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 ~ 40°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

Mechanical

Mounting	VESA mount
Dimensions (L x W x H)	117.5 x 110.0 x 49mm (4.63" x 4.33" x 1.93")
Weight	Net Weight:1.0Kg

Others

OS Support	Windows 10/11
TPM	Intel® PTT
Certifications	CE, FCC
Packing List	1 x 19V/120W Power Adapter 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	

NUC BOX-N97/D5

Fanned Embedded BOX PC



KEY FEATURES

- Intel® Alder Lake-N Processors N97
- 1 x 262-pin SO-DIMM DDR5 4800 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 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 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~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 ~ 40°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

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

Ryzen™ AI Max 300 BOX Series

AI BOX-A395, AI BOX-A388

Fanned BOX PC



KEY FEATURES

- AMD Ryzen™ AI Max 300 Series (Strix Halo)
- Supports up to 128GB LPDDR5x-8000 memory
- 2 x USB4, 1 x USB 3.2 Gen2 Type C, 2 x USB 3.2 Gen2, 2 x USB 2.0
- 1 x M.2 Key E (WiFi7 Module)+2 x M.2 Key M
- 1 x Realtek 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 3 x DP 2.1 (2 from USB4, 1 from Type-C)
- 1 x Mic-in, 1 x Line-out
- TPM 2.0 onboard IC
- Supports RAID 0/1
- 1 x FLEX ATX
- 200 x 100 x 232mm (7.87" x 3.94" x 9.13"), Fanned Barebone

SPECIFICATIONS

Processor System

CPU	AMD Ryzen™ AI Max 300 Series - AI BOX-A395 (AMD Ryzen™ AI Max+395, 16C, Boost up to 5.1GHz) - AI BOX-A388 (AMD Ryzen™ AI Max+388, 8C, Boost up to 5.0GHz)
Chipset	N/A
BIOS	AMI SPI 256 Mbit

Memory

Technology	Onboard LPDDR5 up to 8000 MT/s
Capacity	AI BOX-A395: 128GB AI BOX-A388: 64GB

Graphics

Controller	AMD Radeon™ 8060S Graphics
HDMI	HDMI 2.1 Max resolution up to 7680x4320@60Hz
DisplayPort	DisplayPort 2.1 Max resolution up to 7680x4320@60Hz
MultiDisplay	Quad display (included 3 outputs from Type-C)

Expansion Slot

M.2/ WLAN	1 x Wi-Fi 7 802.11be+ BT 5.4
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Audio

Interface	Realtek ALC897, High Definition Audio.
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Ethernet

Controller/ Speed	LAN1: Marvell AQC113 with 10/100/1000/2500/5000/10000 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD 1 x M.2 (Key M, 2280) with PCIe Gen4 x4 for SSD
SATA	Supports RAID 0/1

Front I/O

USB	2 x USB2.0
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Rear I/O

HDMI	2 x HDMI 2.1
Ethernet	1 x 10 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB4 (5V/3A, supports DP 2.1 output) 1 x USB 3.2 Gen2 (Type C, 5V/3A, supports DP 2.1 output) 2 x USB 3.2 Gen2
Audio	2 (headphone & microphone jack)

Watchdog Timer

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

Power Requirements

Input PWR	AC Input: 100-240V AC Input Frequency: 47Hz to 63Hz
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% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

Mechanical

Mounting	Aluminum housing
Dimensions (L x W x H)	200 x 100 x 232mm (7.87" x 3.94" x 9.13")

Others

OS Support	Windows 11
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC



Model	4X4 BOX AI300 Series	4X4 BOX AI400 Series
Chipset/ CPU	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)	AMD Ryzen™ AI 400 Series *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.
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	Supports Quad 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 DP 1.4a display output)	
USB 3.2	Front: 1 x USB 3.2 Gen2 (Type-A) Rear: 2 x USB 3.2 Gen1 (Type-A)	Front: 1 x USB 3.2 Gen2 (Type-A)
USB 2.0	N/A	Rear: 2 x USB 2.0
LAN	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Audio	1 (headphone & microphone jack)	
Security	AMD FWTPM	
Power	12V~24V DC-In Jack	
Operating Temperature	0°C ~ 40°C	
OS Support	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	

DSF-A6000

Fanned Embedded BOX PC



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 SO-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% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

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/120W Power Adapter (Core Ultra 7) 1 x 19V/90W Power Adapter (Core Ultra 5) 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
-----	---

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
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% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

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



KEY FEATURES

- Intel® Alder Lake-N SoC Processor N97
- 1 x 262-pin SO-DIMM DDR5 4800 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
Chipset	iBOX-N97 R2/D5 (N97, QC, Max Speed Up to 3.6GHz, 12W)
BIOS	SoC
	AMI SPI 256 Mbit

Memory

Technology	Single 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 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 Gen3 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~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)	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

iBOX-260J

Fanless Embedded BOX PC



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	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

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

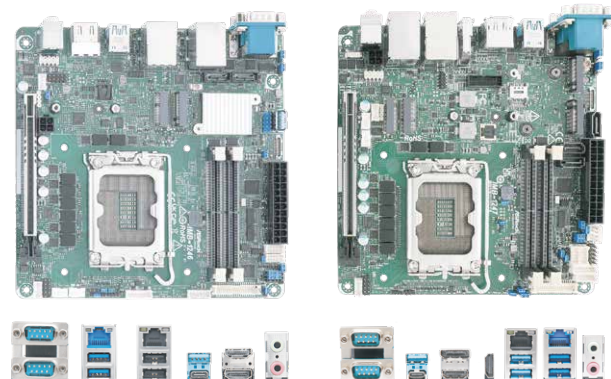
OS Support	Windows 10/11
TPM	TPM 2.0 onboard IC
Certifications	CE, FCC
Packing List	1 x 19V/65W Power Adapter 1 x Wall mount kit

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 128GB (64GB 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, 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, 1 x DP 2.1 (from Type-C), 1 x LVDS or eDP (IMB-1246)
- Supports Quad display, 2 x HDMI 2.1, 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 *The Performance of CPUs over 65W will be limited due to power design	
Chipset	Intel® H810	Intel® Q870
Socket	LGA1851	
BIOS	AMI SPI 256 Mbit	
Memory		
Technology	Dual Channel DDR5 5600/6400 MHz *Only CSO-DIMM can support up to 6400 MHz	
Capacity	128GB (64GB per DIMM)	
Socket	2 x 262-pin SO-DIMM	
Graphics		
Controller	Intel® X® LPG Graphics	
HDMI	HDMI 2.1 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	
Audio		
Interface	Realtek ALC897, High Definition Audio. Line-out, Mic-in	
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® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps	
Connector	2 x RJ-45	
Rear I/O		
HDMI	2 x HDMI 2.1	
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, 3042/2280) 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	

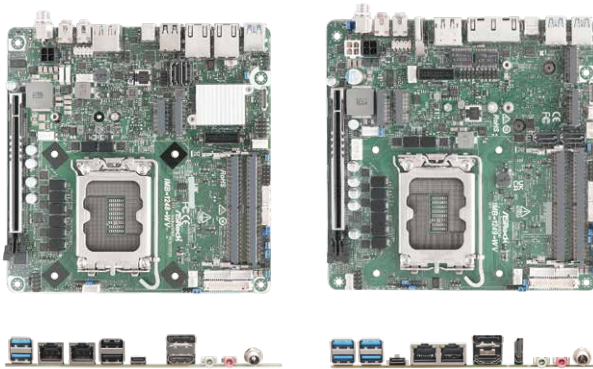
Security		
TPM	TPM Header, Intel® PTT	TPM 2.0 onboard IC
Watchdog Timer		
Output	From Super I/O to drag RESETCON#	
Interval	256 Segments, 0, 1, 2, ...255sec	

Power Requirements		
Input PWR	ATX PWR (24+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 128GB (64GB 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 Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (IMB-1249-WV)
- Supports Triple display, 1 x HDMI 2.1, 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, 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	128GB (64GB per DIMM)	
Socket	2 x 262-pin SO-DIMM	

Graphics

Controller	Intel® X® LPG Graphics	
HDMI	HDMI 2.1 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

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® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 2.1	2 x HDMI 2.1
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 (2 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 and USB 2.0 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 Intel® PTT	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

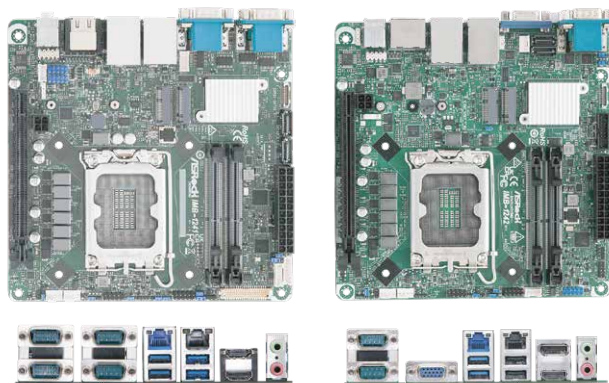
Operating Temp	-20°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

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	

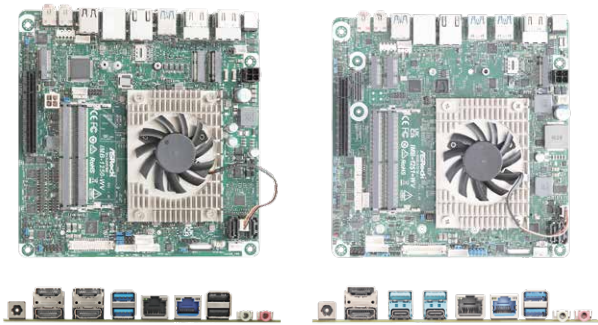
Environment

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

IMB-1250-WV, IMB-1251-WV

Mini-ITX Motherboard

KEY FEATURES



IMB-1250-WV

IMB-1251-WV

- Intel® Core™ Ultra processors (Arrow Lake-H) (IMB-1250-WV)
- Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) (IMB-1251-WV)
- 2 x 262-pin CSO-DIMM DDR5 6400 MHz, up to 96GB (48GB per DIMM) (IMB-1250-WV)
- 2 x 262-pin SO-DIMM DDR5 7200 MHz, up to 128GB (64GB per DIMM) (IMB-1251-WV)
- 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-1250-WV)
- 1 x PCIe x8 (Gen5), 2 x USB 3.2 Gen2x2, 1 x USB 3.2 Gen2, 1 x USB 3.2 Gen1, 2 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-1251-WV)
- 1 x Intel 1 Gigabit LAN, 1 Realtek 2.5 Gigabit LAN
- Supports Quad display, 4 x HDMI 2.1 TMDS, 1 x LVDS or eDP (IMB-1250-WV)
- Supports Quad display, 2 x HDMI 2.1, 2 x DP 1.4 a (2 from Type-C), 1 x LVDS or eDP (IMB-1251-WV)
- OOB Function (optional) (IMB-1251-WV)
- Supports Intel® vPro Essentials, VMD RAID 0/1 (IMB-1250-WV)
- Supports Intel® vPro, VMD RAID 0/1 (IMB-1251-WV)
- Supports Intel® MIPI CSI2 (IMB-1250-WV)
- 12~28V DC-In

SPECIFICATIONS

Form Factor	IMB-1250-WV	IMB-1251-WV
Dimensions	Mini-ITX (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 (IMB-1250-WV)	Intel® Core™ Ultra processors (Arrow Lake-H) IMB-1250P-WV (Ultra7 255H, 6P+8E) IMB-1250M-WV (Ultra5 225H, 4P+8E)	
CPU (IMB-1251-WV)	Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.	
BIOS	AMI SPI 256 Mbit	
Memory		
Technology	Dual Channel DDR5 6400 MHz	Dual Channel DDR5 7200 MHz
Capacity	96GB (48GB per DIMM)	128GB (64GB per DIMM)
Socket	2 x 262-pin SO-DIMM	
Graphics		
Controller	Intel® Arc™ 140T graphics (255H) Intel® Arc™ 130T graphics (225H)	Intel® Graphics
HDMI (IMB-1250-WV)	Max resolution up to 7680x4320@60Hz (HDMI0/1) Max resolution up to 4096x2160@60Hz (HDMI2/3)	
HDMI (IMB-1251-WV)	HDMI 2.1 Max resolution up to 7680x4320@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	Quad display (Included 2 output from Type-C)
Expansion Slot		
PCIe	1 x PCIe x8 (Gen5)	
M.2 (IMB-1250-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	
M.2 (IMB-1251-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 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, High Definition Audio.	
Ethernet		
Controller/ Speed (IMB-1250-WV)	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps	
Controller/ Speed (IMB-1251-WV)	LAN1: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN3: Intel® I210AT with 10/100/1000 Mbps (optional, by using AI-M2-OOB module)	
Connector	2 x RJ-45	2 x RJ-45 (3 x RJ-45 optional, by using AI-M2-OOB module)
Rear I/O		
HDMI	4 x HDMI 2.1 TMDS	2 x HDMI 2.1
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 1 Gigabit LAN (optional, by using AI-M2-OOB module)

Rear I/O	IMB-1250-WV	IMB-1251-WV
USB	2 x USB 2.0 2 x USB 3.2 Gen2	3 x USB 3.2 Gen1 1 x USB 3.2 Gen2 2 x USB 3.2 Gen2x2 (Type-C, 5V/3A, support DP 1.4a display output)
Audio	2 (Mic-In/Line-Out)	
DC Jack	1 DC-in	
Internal Connector		
USB	4 x USB 2.0 (2 x 2.00mm pitch header)	2 x USB 2.0 (1 x 2.00mm pitch header)
COM	COM3, COM4, COM5 (RS-232/422/485)	
GPIO	N/A	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 (MIPI CSI2)	N/A
OOB Header	N/A	1
GPIO1 Header (IMB-1251-WV)	1 (*Recommend using DSC-8DIO001-WT module to support 8DIs/8DOs with sink/ source isolation 36V for 8DIO SKU)	
Storage		
M.2 (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	
M.2 (IMB-1251-WV)	1 x M.2 (Key M, 2242/2280) with PCIe Gen5 x4, USB 2.0 for SSD 1 x M.2 (Key M, 2242/2280/22110) with PCIe Gen4 x4 for SSD	
SATA	2 x SATA3 (6Gb/s)	
RAID	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 Intel® PTT	
Watchdog Timer		
Output	From Super I/O to drag RESETCON#	
Interval	256 Segments, 0, 1, 2, ...255sec	
Power Requirements		
Input PWR (IMB-1250)	12~28V DC-In with 4-pin plug PWR cable or DC Jack	
Input PWR (IMB-1251)	12~28V DC-In with 4-pin plug PWR cable or DC Jack 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)	

The specification is subject to change without notice. Any configuration other than original product specification is not guaranteed.

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

Mini-ITX Motherboard

KEY FEATURES

- Intel® Alder Lake-N Processors N97
- 1 x 262-pin SO-DIMM DDR5 4800 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)
- Supports Intel® MIPI CSI2 (IMB-1011J-WV)
- ATX-PWR (24+4-pin) and 9~28V DC-In co-design (IMB-1011J-WV)
- 9~28V DC-In (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 DDR5 4800 MHz	
Capacity	32GB	
Socket	1 x 262-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 (MIPI CSI2)	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% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

IMB Ryzen™ AI Max 300 Motherboard Series

IMB-A395, IMB-A388
Mini-ITX Motherboard

Coming Soon

KEY FEATURES

- AMD Ryzen™ AI Max 300 Series (Strix Halo)
- Supports up to 128GB LPDDR5x-8000 memory
- 2 x USB4, 1 x USB 3.2 Gen2 Type C, 2 x USB 3.2 Gen2, 2 x USB 2.0
- 1 x M.2 Key E, 2 x M.2 Key M, 1 x MCIO, 1 x COM
- 1 x Realtek 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 3 x DP 2.1 (2 from USB4, 1 from Type-C)
- 1 x Mic-in, 1 x Line-out
- TPM 2.0 onboard IC
- Support RAID 0/1
- ATX PWR

SPECIFICATIONS

Form Factor

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

CPU	AMD Ryzen™ AI Max 300 Series -IMB-A395 (AMD Ryzen™ AI Max+395, 16C, Max Speed up to 5.1GHz) -IMB-A388 (AMD Ryzen™ AI Max+388, 8C, Max Speed up to 5.0GHz)
Socket	N/A
BIOS	AMI SPI 256 Mbit

Memory

Technology	Onboard LPDDR5 up to 8000 MT/s
Capacity	IMB-A395: 128GB IMB-A388: 64GB

Graphics

Controller	AMD Radeon™ 8060S Graphics
HDMI	HDMI 2.1 Max resolution up to 7680x4320@60Hz
DisplayPort	DisplayPort 2.1 Max resolution up to 7680x4320@60Hz
MultiDisplay	Quad display (included 3 outputs from Type-C)

Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen4 x1 and USB 2.0 for Wireless
MCIO	1 x MCIO with PCIe Gen4x4

Audio

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

Controller/ Speed	LAN1: Marvell AQC113 with 10/100/1000/2500/5000/10000 Mbps LAN2: Realtek RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.1
Ethernet	1 x 10 Gigabit LAN 1 x 2.5 Gigabit LAN
USB	2 x USB4 (5V/3A, supports DP 2.1 output) 1 x USB3.2 Gen2 (Type C ,5V/3A, supports DP 2.1) 2 x USB 3.2 Gen2
Audio	2 (Mic-in, Line-out)

Internal Connector

USB	2 x USB 2.0 (1 x 2.54 pitch header)
COM	COM1(RS-232/422/485)

Storage

M.2	1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD 1 x M.2 (Key M, 2280) with PCIe Gen4 x4 for SSD
RAID	Support 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

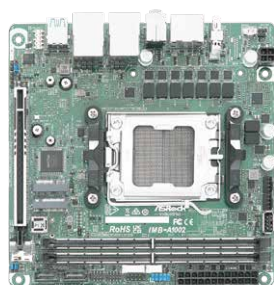
Operating Temp	0°C ~ 70°C
Storage Temp	-40° C – 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

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
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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)
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	256GB (64GB per DIMM)	
Socket	4 x 288-pin Long-DIMM	

Graphics

VGA	Intel® Xe LPG Graphics
HDMI	HDMI 2.1 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
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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 256GB (64GB per DIMM) (IMB-1317)
- 4 x 288-pin ECC/non-ECC CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz , up to 256GB (64GB 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, 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	
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
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Watchdog Timer

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

Power Requirements

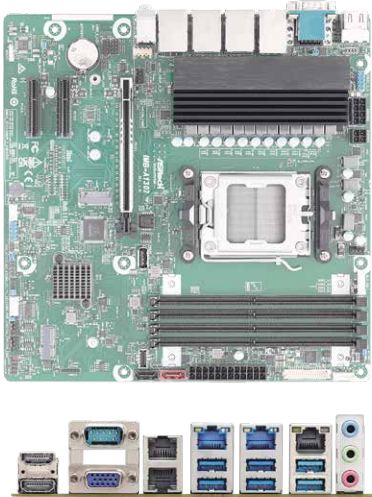
Input PWR	ATX PWR (24+8+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

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-A1302

Micro-ATX Motherboard



KEY FEATURES

- AMD EPYC™ 4005/4004 and 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, 6 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, 1 x LVDS or eDP (BOM option)
- 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)
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Processor System

CPU	Supports AMD EPYC™ 4005/4004 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 1920x1200@60Hz (Connector shared with eDP) (BOM option)
eDP	Max resolution up to 1920x1200@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-out, Mic-in, Line-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 Gen2 (Type-C Header) 6 x USB 2.0 (3 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, 2230/2280/3042) with PCIe Gen4 x4, SATA3 and USB 2.0 for SSD
SATA	2 x SATA3 (6Gb/s) (1 x shared with Key M)
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

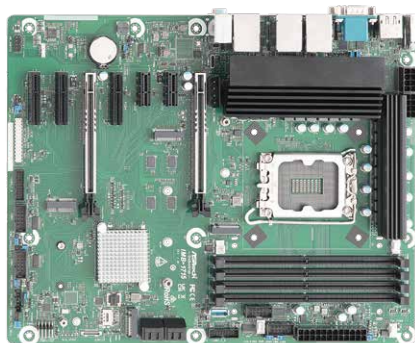
Input PWR	ATX PWR (24+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

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 256GB (64GB per DIMM) (IMB-1715)
- 4 x 288-pin ECC/non-ECC CU-DIMM DDR5 6400 MHz, U-DIMM DDR5 5600 MHz, up to 256GB (64GB 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, 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	256GB (64GB per DIMM)	
Socket	4 x 288-pin Long-DIMM	

Graphics

Controller	Intel® Xe® LPG Graphics
HDMI	HDMI 2.1 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 AQc113 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	
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

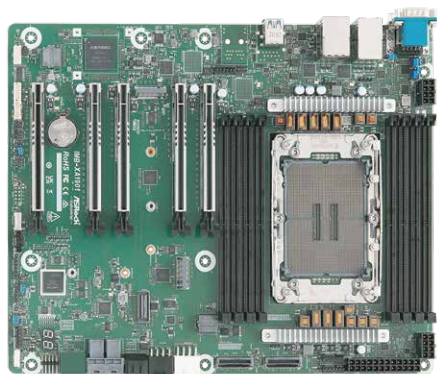
Input PWR	ATX PWR (24+8+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

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)

Coming Soon

KEY FEATURES

- AMD EPYC™ 4005/4004 and 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), 1 x PCIe x8 (Gen5), 1 x PCIe x4 (Gen4), 4 x PCIe x1 (Gen4), 7 x USB 3.2 Gen2, 8 x USB 2.0, 1 x M.2 Key M, 6 x COM, 4 x SATA3
- 1 x Intel® 1 Gigabit LAN, 1 x Intel® 2.5 Gigabit LAN, 2 x Realtek® 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.0b, 2 x DP 1.2++ (1 from Type-C header)
- TPM 2.0 onboard IC
- Supports RAID 0/1/10
- ATX PWR

SPECIFICATIONS

Form Factor

Dimensions	ATX (12-in x 9.6-in x 1.81-in, 30.5 cm x 24.4 cm x 4.61 cm)
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Processor System

CPU	Supports AMD EPYC™ 4005/4004 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 *ECC support may vary by CPU
Capacity	256 GB (64 GB per DIMM)
Socket	4 x 288-pin Long-DIMM

Graphics

Controller	AMD RDNA™ 2 Architecture
HDMI	HDMI 2.0b Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.2, DP++ Max resolution up to 4096x2160@60Hz
MultiDisplay	Quad Display (Included 1 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) 1 x PCIe x4 (Gen4) 4 x PCIe x1 (Gen4)
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Audio

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

Controller/ Speed	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I226V with 10/100/1000/2500 Mbps LAN3: Realtek® RTL8125BG with 10/100/1000/2500 Mbps LAN4: Realtek® RTL8125BG with 10/100/1000/2500 Mbps
Connector	4 x RJ-45

Rear I/O

HDMI	2 x HDMI 2.0b
DisplayPort	1 x DP 1.2++
Ethernet	1 x 1 Gigabit LAN 3 x 2.5 Gigabit LAN
USB	7 x USB 3.2 Gen2 1 x USB 2.0
Audio	3 (Mic-in, Line-in, Line-out)
COM	COM1 (RS-232/422/485)

Internal Connector

USB	1 x USB 2.0 (Type-A vertical con) 6 x USB 2.0 (3 x USB 2.0 header) 1 x USB 3.2 Gen2 (Type-C header, 5V/3A, supports DP 1.2 display output)
COM	COM2 (RS-232/422/485) COM3, COM4, COM5, COM6 (RS-232)

Storage

M.2	1 x M.2 (Key M, 3042/2280/25110) with PCIe Gen4 x4 and USB 2.0 for SSD
SATA	4 x SATA3 (6Gb/s)
RAID	Support RAID 0/1/10

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

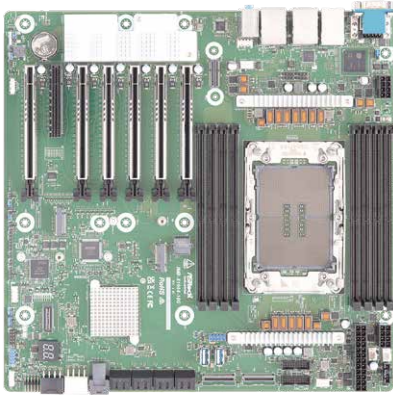
Input PWR	ATX PWR (24+8-pin)
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

IMB-X1904, IMB-X1904-10G

EATX Motherboard



IMB-X1904



IMB-X1904-10G

KEY FEATURES

- Intel® Xeon® 600 Processors with W890 chipset
- 8 x 288-pin ECC RDIMM/RDIMM-3DS DDR5 5200 MHz, up to 2TB
- 6 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 4 x USB 3.2 Gen2, 6 x USB 3.2 Gen1, 3 x USB 2.0, 2 x M.2 Key M, 2 x COM, 1 x U.2, 2 x MCIO, 8 x SATA3
- 2 x Intel 1 Gigabit LAN (IMB-X1904)
- 2 x Intel 10 Gigabit LAN, 2 x Intel 1 Gigabit LAN (IMB-X1904-10G)
- Supports 1 x VGA
- TPM 2.0 onboard IC
- OOB Function (optional)
- Support Intel® vPro, RAID 0/1/5/10
- ATX PWR (8+8+24 Pin)

SPECIFICATIONS

Form Factor	IMB-X1904	IMB-XA1904-10G
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® 600 Processors
Chipset	Intel® W890
Socket	LGA4710
BIOS	AMI SPI 256 Mbit

Memory

Technology	Quad Channel ECC DDR5 5200 MHz
Capacity	2TB
Socket	8 x 288-pin RDIMM/RDIMM-3DS

Graphics

VGA	1 x VGA from Silicon Motion SM750 Max resolution up to 1920 x 1200@60Hz
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Expansion Slot

PCIe	PCIe7: PCIe Gen5 x16 PCIe6: PCIe Gen5 x16 PCIe5: PCIe Gen5 x16 (supported with Expert SKU) PCIe4: PCIe Gen5 x16 PCIe3: PCIe Gen5 x16 (supported with Expert SKU) PCIe2: PCIe Gen5 x8 PCIe1: PCIe Gen5 x16
MCIO	2 x MCIO with PCIe Gen5 x8 (supported with Expert SKU)

Audio

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

Controller/ Speed (IMB-XA1904)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I219LM with 10/100/1000 Mbps, supports vPro
Controller/ Speed (IMB-XA1904-10G)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I219LM with 10/100/1000 Mbps, supports vPro LAN3: Intel® E610-XAT2 with 10/100/1000/2500/5000/10000 Mbps LAN4: Intel® E610-XAT2 with 10/100/1000/2500/5000/10000 Mbps
Connector	2 x RJ-45

Rear I/O	IMB-XA1904	IMB-XA1904-10G
VGA	1	
Ethernet	2 x 1 Gigabit LAN	2 x 10 Gigabit LAN 2 x 1 Gigabit LAN
USB	4 x USB 3.2 Gen2	
Audio	3 (Line-In/Line-Out/Mic-In)	
COM	COM1 (RS-232)	

Internal Connector

USB	2 x USB 3.2 Gen1 (vertical con) 4 x USB 3.2 Gen1 (2 x USB 3.2 header) 3 x USB 2.0 (2 x 2.54 pitch header)
COM	COM2 (RS-232)
GPIO	4 x GPI, 4 x GPO
OOB Header	1 *Recommend using AI-M2-OOB module to support OOB function

Storage

M.2	1 x M.2 (Key M, 2242/2280/3052/25110) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/2280) with PCIe Gen4 x4 for SSD
U.2	1 x U.2 with PCIe Gen4 x4
SATA	8 x SATA3
RAID	Intel® SATA RAID 0/1/5/10* *VROC Key is required to configure RAID

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

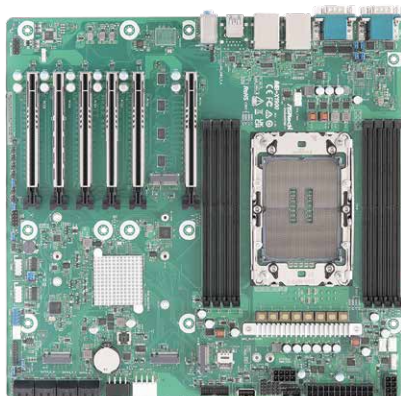
Input PWR	1 x 24-pin ATX PWR connector 2 x 8-pin 12V PWR connector 1 x 8-pin and 1 x (6+2)-pin 12V PWR connector for PCIe
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

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

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), 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
- 2 x Intel 2.5 Gigabit LAN (IMB-X1900)
- 2 x Intel 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN (IMB-X1900-10G)
- TPM 2.0 onboard IC
- Support Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+8+24 Pin)



IMB-X1900



IMB-X1900-10G

SPECIFICATIONS

Form Factor	IMB-X1900	IMB-X1900-10G
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

Expansion Slot

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

Controller/ Speed (IMB-X1900)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps
Controller/ Speed (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
Connector	2 x RJ-45

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

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)
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
SATA	8 x SATA3, SATA3_0 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
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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

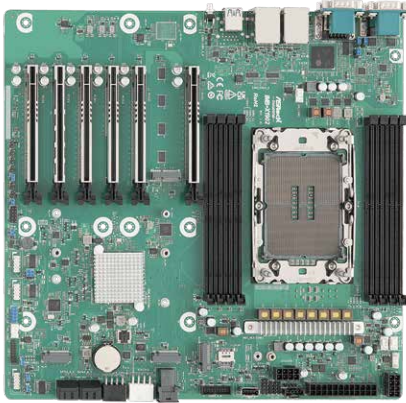
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	0% ~ 95% (non-condensing)
Storage Humidity	0% ~ 95% (non-condensing)

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
- 4 x PCIe x16 (Gen5), 1 x PCIe x8 (Gen5), 1 x PCIe x4 (Gen4), 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, 1 x U.2, 4 x SATA3
- 2 x Intel 2.5 Gigabit LAN (IMB-X1902)
- 2 x Intel 2.5 Gigabit LAN, 1 x Marvell 10 Gigabit LAN (IMB-X1902-10G)
- Supports 1 x VGA
- TPM 2.0 onboard IC
- Support Intel® vPro, VMD RAID 0/1/5/10
- ATX PWR (8+8+24 Pin)



IMB-X1902



IMB-X1902-10G

SPECIFICATIONS

Form Factor	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	1 x VGA from Silicon Motion SM750 Max resolution up to 1920 x 1200@60Hz
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Expansion Slot

PCIe	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 Gen5 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

Ethernet

Controller/ Speed (IMB-X1902)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I226V with 10/100/1000/2500 Mbps
Controller/ Speed (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
Connector	2 x RJ-45

Rear I/O	IMB-X1902	IMB-X1902-10G
VGA	1	
Ethernet	2 x 2.5 Gigabit LAN	1 x 10 Gigabit LAN 2 x 2.5 Gigabit LAN
USB	5 x USB 3.2 Gen2 1 x USB 3.2 Gen2x2 (Type-C, 5V/3A)	
COM	COM3 (RS-232) COM1, COM2 (RS-232/422/485)	
UID	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	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	1 x U.2 with PCIe Gen4 x4
SATA	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
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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

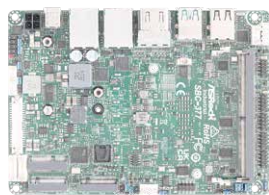
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

SBC-375, SBC-377

3.5"SBC Motherboard

KEY FEATURES

- Intel® Core™ Ultra processors (Meteor Lake-H) (SBC-375)
- Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) (SBC-377)
- 1 x 262-pin SO-DIMM DDR5 5600 MHz, up to 48GB (SBC-375)
- 2 x 262-pin SO-DIMM DDR5 7200 MHz, up to 128GB (64GB per DIMM) (SBC-377)
- 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 (SBC-375)
- 1 x USB 3.2 Gen2x2, 2 x USB 3.2 Gen2, 6 x USB 2.0, 1 x M.2 Key E, 2 x M.2 Key M, 3 x COM (SBC-377)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (SBC-375)
- 2 x Intel 2.5 Gigabit LAN (SBC-377)
- Supports Quad display, 1 x HDMI 2.1 TMDS, 3 x DP 1.4a (2 from Type-C), 1 x LVDS or eDP (SBC-375)
- Supports Quad display, 2 x HDMI 2.1, 1 x DP 1.4a (1 from Type-C), 1 x LVDS or eDP, 1 x eDP 1.4b (SBC-377)
- TPM 2.0 onboard IC
- Supports Intel® MIPI CSI2
- Supports Intel® vPro, VMD RAID 0/1
- 12~36V DC-In
- Supports Type-C PD 100W (SBC-377)



SBC-375

SBC-377

SPECIFICATIONS

Form Factor	SBC-375	SBC-377
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-375)	Intel® Core™ Ultra processors (Meteor Lake-H) SBC-375P (Ultra7 155H, 6P+8E) SBC-375M (Ultra5 125H, 4P+8E)	
CPU (SBC-377)	Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Single Channel DDR5 5600 MHz	Dual Channel DDR5 7200 MHz
Capacity	48GB	128GB (64GB per DIMM)
Socket	1 x 262-pin SO-DIMM	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Arc™ Graphics	
HDMI	HDMI 2.1 TMDS Max resolution up to 4096 x 2160@60Hz	HDMI 2.1 Max resolution up to 7680x4320@60Hz
DisplayPort	DP 1.4a Max resolution up to 4096 x 2160@60Hz	N/A
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)	
eDP (SBC-375)	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)	
eDP (SBC-377)	eDP 1.4b Max resolution up to 4096x2160@60Hz Max resolution up to 1920 x 1080@60Hz (one eDP single connector shared with LVDS)	
MultiDisplay (SBC-375)	Quad display (Included 2 output from Type-C)	
MultiDisplay (SBC-377)	Quad display (Included 1 output from Type-C)	

Expansion Slot

PCIe	1xPCIex1 Gen3 (supports up to 10W)	N/A
M.2 (SBC-375)	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	
M.2 (SBC-377)	1 x M.2 (Key E, 2230) with PCIe Gen4 x1, USB 2.0 and CNVi for Wireless	
SIM Socket	1 x SIM socket connected to M.2 key B	N/A

Audio

Interface	Realtek ALC256 HD, High Definition Audio
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Ethernet

Controller/ Speed (SBC-375)	LAN1: Intel® I226LM with 10/100/1000/2500 Mbps, supports vPro LAN2: Intel® I210AT with 10/100/1000 Mbps
Controller/ Speed (SBC-377)	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

Rear I/O	SBC-375	SBC-377
HDMI	1 x HDMI 2.1 TMDS	2 x HDMI 2.1
DisplayPort	1 x DP 1.4a	N/A
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen2 2 x USB 3.2 Gen2x2 (Type-C, 5V/3A, support DP 1.4a display output)	2 x USB 2.0 2 x USB 3.2 Gen2 1 x USB 3.2 Gen2x2 (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)	
eDP	N/A	1
SATA PWR Output	1	
Speaker Header	1	
MIPI Camera Header	1 (MIPI CSI2)	

Storage

M.2 (SBC-375)	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	
M.2 (SBC-377)	1 x M.2 (Key M, 2242/2280) with PCIe Gen5 x4 for SSD 1 x M.2 (Key M, 2242/3052) with PCIe Gen4 x4 for SSD	
SATA	1 x SATA3 (6Gb/s)	N/A
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	Intel® VMD RAID 0/1 **supported by PCIe interface PCIe interface: 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 (SBC-375)	12~36V DC-In with 4-pin wafer PWR cable 12V DC-In only (BOM option)
Input PWR (SBC-377)	12~36V DC-In with 4-pin wafer PWR cable 12V DC-In only (BOM option) USB Type-C PD (Power Delivery) 100W
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)

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-263J, SBC-264J

3.5"SBC Motherboard

KEY FEATURES

- Intel® Alder Lake-N SoC Processors N97
- 1 x 262-pin SO-DIMM DDR5 4800 MHz, up to 32GB
- 3 x USB 3.2 Gen2, 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, 1 x SATA3 (SBC-263J)
- 3 x USB 3.2 Gen2, 5 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 (SBC-264J)
- 2 x Intel 1 Gigabit LAN (SBC-263J)
- 2 x Realtek 2.5 Gigabit LAN (SBC-264J)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4b, 1 x LVDS or eDP (SBC-263J)
- Supports Triple display, 2 x HDMI 2.0b, 1 x LVDS or eDP (SBC-264J)
- 9~36V DC-In



SBC-263J

SBC-264J

SPECIFICATIONS

Form Factor	SBC-263J	SBC-264J
Dimensions	3.5"SBC (5.8-in x 4-in x 1.02-in, 14.7 cm x 10.2 cm x 2.60 cm)	

Processor System

CPU	Intel® Alder Lake-N SoC 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 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	DP 1.4b Max resolution up to 4096 x 2160@60Hz	N/A
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 Gen3 x1, USB 2.0 and CNVi for Wireless 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, 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 (SBC-263J)	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps
Controller/ Speed (SBC-264J)	LAN1: Intel® RTL8125BG with 10/100/1000/2500 Mbps LAN2: Intel® RTL8125BG with 10/100/1000/2500 Mbps
Connector	2 x RJ-45

Rear I/O	SBC-263J	SBC-264J
HDMI	1 x HDMI 2.0b	2 x HDMI 2.0b
DisplayPort	1 x DP 1.4b	N/A
Ethernet	2 x 1 Gigabit LAN	2 x 2.5 Gigabit LAN
USB	3 x USB 3.2 Gen2 1 x USB 2.0	

Internal Connector

USB (SBC-263J)	2 x USB 2.0 (1 x 2.54 pitch header)	
USB (SBC-264J)	4 x USB 2.0 (2 x 2.54 pitch header)	
COM (SBC-263J)	COM2, COM3, COM4, COM5, COM6 (RS-232) COM1 (RS-232/422/485)	
COM (SBC-264J)	COM2, COM3, COM4 (RS-232) COM1 (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	
I2C Header	N/A	1

Storage

M.2 (SBC-263J)	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 and SATA3 for SSD
M.2 (SBC-264J)	1 x M.2 (Key M, 2242/2280) with PCIe Gen3 x1 and SATA3 and USB 2.0 for SSD
SATA	1 x SATA3

Security

TPM	Intel® PTT	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	9~36V 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

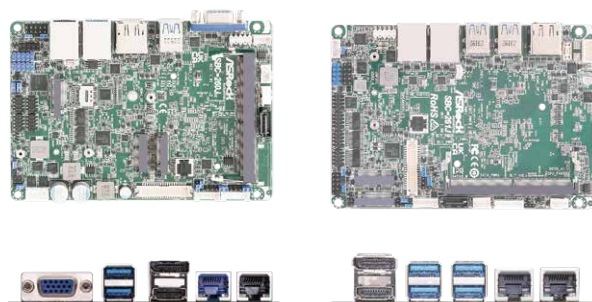
Environment

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

SBC-260J, SBC-261J

3.5"SBC Motherboard

KEY FEATURES



SBC-260J

SBC-261J

- Intel® Alder Lake-N SoC Processors N97
- 1 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB (SBC-260J)
- 1 x 262-pin SO-DIMM DDR5 4800 MHz, up to 32GB (SBC-261J)
- 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 (SBC-260J)
- 4 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 4 x COM, 1 x SATA3 (SBC-261J)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (SBC-260J)
- 2 x Realtek 1 Gigabit LAN (SBC-261J)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4a, 1 x VGA, 1 x LVDS or eDP (SBC-260J)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4b, 1 x LVDS or eDP (SBC-261J)
- TPM 2.0 onboard IC (SBC-260J)
- 9~36V DC-In (SBC-260J)
- 12V DC-In (SBC-261J)

SPECIFICATIONS

Form Factor	SBC-260J	SBC-261J
Dimensions	3.5"SBC (5.8-in x 4-in x 1.02-in, 14.7 cm x 10.2 cm x 2.60 cm)	

Processor System

CPU	Intel® Alder Lake-N SoC 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	Single Channel DDR5 4800 MHz
Capacity	32GB	
Socket	1 x 260-pin SO-DIMM	1 x 262-pin SO-DIMM

Graphics

Controller	Intel® UHD Graphics	
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz	
DisplayPort (SBC-260J)	DP 1.4a Max resolution up to 4096 x 2160@60Hz	
DisplayPort (SBC-261J)	DP 1.4b Max resolution up to 4096 x 2160@60Hz	
VGA	Max resolution up to 1920 x 1200 N/A	
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 (SBC-260J)	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 (SBC-261J)	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 and CNVi for Wireless
SIM Socket (SBC-260J)	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-260J)	LAN1: Intel® I226V with 10/100/1000/2500 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps
Controller/ Speed (SBC-261J)	LAN1: Realtek RTL8111H with 10/100/1000 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O	SBC-260J	SBC-261J
HDMI	1 x HDMI 2.0b	
DisplayPort	1 x DP 1.4a	1 x DP 1.4b
VGA	1	N/A
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	2 x 1 Gigabit LAN
USB	2 x USB 3.2 Gen2	4 x USB 3.2 Gen2

Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)	2 x USB 2.0 (1 x 2.54 pitch header)
COM	COM3, COM4 (RS-232) COM1, COM2 (RS-232/422/485)	COM1 (RS-232/422/485) COM2, COM3, COM4 (RS232)
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 (Optional)	N/A

Storage

M.2 (SBC-260J)	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1 or SATA3 for SSD
M.2 (SBC-261J)	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x1, SATA3 and USB 2.0 for SSD
SATA	1 x SATA3

Security

TPM	TPM 2.0 onboard IC	Intel® PTT
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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	9~36V DC-In with 4-pin wafer PWR	12V DC-In only
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready	

Environment

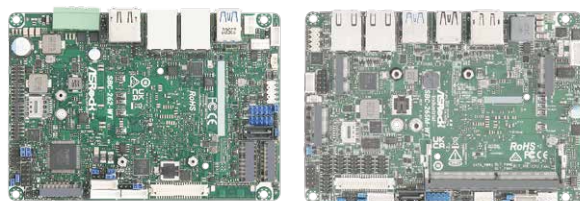
Operating Temp	-20°C ~ 70°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

SBC-262M-WT, SBC-265M-WT

3.5"SBC Motherboard

KEY FEATURES

- Intel® Amston Lake Processors X7433RE
- 1 x 262-pin SO-DIMM DDR5 4800 MHz, up to 48GB
- 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 (SBC-262M-WT)
- 3 x USB 3.2 Gen2, 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, 1 x SATA3 (SBC-265M-WT)
- 1 x Intel 1 Gigabit LAN, 1 x Intel 2.5 Gigabit LAN (SBC-262M-WT)
- 2 x Intel 1 Gigabit LAN (SBC-265M-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, 1 x eDP (SBC-262M-WT)
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4b, 1 x LVDS or eDP (SBC-265M-WT)
- TPM 2.0 onboard IC (SBC-262M-WT)
- Supports Intel® MIPI CSI2 (SBC-262M-WT)
- 9~36V DC-In



SBC-252M-WT



SBC-265M-WT

SPECIFICATIONS

Form Factor	SBC-262M-WT	SBC-265M-WT
Dimensions	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® Amston Lake Processors X7433RE, QC, Max Speed Up to 3.4GHz, 9W	
BIOS	AMI SPI 256 Mbit	

Memory

Technology	Single Channel DDR5 4800 MHz	
Capacity	48GB	
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	DP 1.4b Max resolution up to 4096 x 2160@60Hz	
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	eDP 1.4b Max resolution up to 4096x2160@60Hz	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Triple display	

Expansion Slot

M.2 (SBC-252M-WT)	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
M.2 (SBC-265M-WT)	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, 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-252M-WT)	LAN1: Intel® I226IT with 10/100/1000/2500 Mbps, supports TSN LAN2: Intel® I210IT with 10/100/1000 Mbps
Controller/ Speed (SBC-265M-WT)	LAN1: Intel® I210IT with 10/100/1000 Mbps LAN2: Intel® I210IT with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O	SBC-262M-WT	SBC-265M-WT
HDMI	1 x HDMI 2.0b	
DisplayPort	1 x DP 1.4b	
Ethernet	1 x 1 Gigabit LAN 1 x 2.5 Gigabit LAN	2 x 1 Gigabit LAN
USB	2 x USB 3.2 Gen2	3 x USB 3.2 Gen2 1 x USB 2.0
Power In	1 x Phoenix Connector	N/A

Internal Connector

USB (SBC-262M-WT)	4 x USB 2.0 (2 x 2.54 pitch header)	
USB (SBC-265M-WT)	2 x USB 2.0 (1 x 2.54 pitch header)	
COM (SBC-262M-WT)	COM3, COM4 (RS-232) COM1, COM2 (RS-232/422/485)	
COM (SBC-265M-WT)	COM2, COM3, COM4, COM5, COM6 (RS-232) COM1 (RS-232/422/485)	
GPIO	4 x GPI, 4 x GPO	
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	1 (MIPI CSI2)	N/A

Storage

M.2	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	Intel® PTT
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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	9~36V DC-In	9~36V 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	-40°C ~ 85°C	
Storage Temp	-40°C ~ 85°C	
Operating Humidity	5% ~ 90%	
Storage Humidity	5% ~ 90%	

NUC Ultra 300 Motherboard Series

NUC-PTL

NUC Motherboard

KEY FEATURES

- Intel® Core™ Ultra Series 3 Processors (Panther Lake-H)
- 2 x 262-pin SO-DIMM DDR5 7200MHz up to 128GB (64GB 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
- 2 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x HDMI 2.1, 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

SPECIFICATIONS

Form Factor

Dimensions	NUC (4.09-in x 4.02-in x 1.5-in, 10.4 cm x 10.2 cm x 3.8 cm)
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Processor System

CPU	Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 7200 MHz
Capacity	128GB (64 GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Graphics
HDMI	HDMI 2.1 Max resolution up to 7680x4320@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)

Rear I/O

HDMI	2 x HDMI 2.1
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 Gen5 x4 for SSD
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

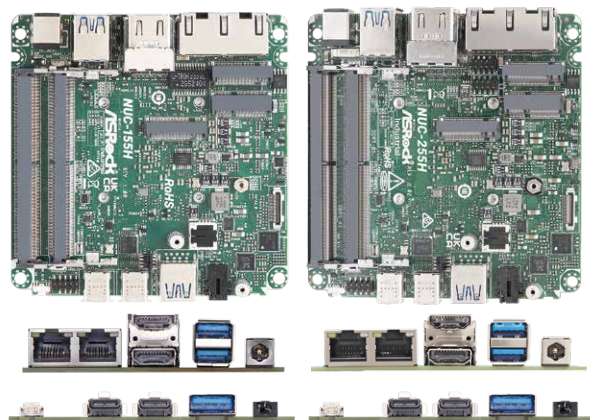
Input PWR	12V~24V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

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

NUC Ultra 100 Motherboard Series, NUC Ultra 200 Motherboard Series

NUC Motherboard



NUC Ultra 100 Series

NUC Ultra 200 Series

KEY FEATURES

- Intel® Core™ Ultra processors (Meteor Lake-U/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 SO-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

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)

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

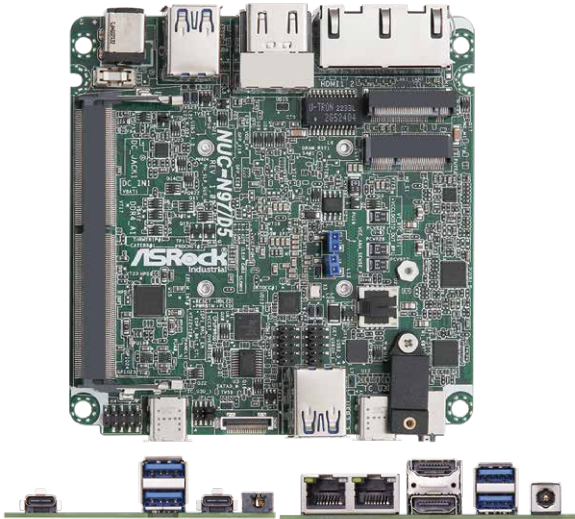
Input PWR	12V~24V DC-In Jack
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

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

NUC-N97/D5

NUC Motherboard



KEY FEATURES

- Intel® Alder Lake-N Processors
- 1 x 262-pin SO-DIMM DDR5 4800 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~24V DC-In

SPECIFICATIONS

Form Factor

Dimensions	NUC (4.09-in x 4.02-in x 1.4-in, 10.4 cm x 10.2 cm x 3.6 cm)
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Processor System

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

Memory

Technology	Single 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 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

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(RS232/422/485)

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~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% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

4X4 AI300 Motherboard Series, 4X4 AI400 Motherboard Series

4X4 Motherboard



4X4 AI300 Series

4X4 AI400 Series

KEY FEATURES

- AMD Ryzen™ AI 300 Series (4X4 AI300 Series)
- AMD Ryzen™ AI 400 Series (4X4 AI400 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 3.2 Gen1, 2 x USB 2.0, 2 x M.2 Key M, 1 x M.2 Key E (4X4 AI300 Series)
- 2 x USB4, 1 x USB 3.2 Gen2, 4 x USB 2.0, 2 x M.2 Key M, 1 x M.2 Key E, 1 x COM (4X4 AI400 Series)
- 1 x Realtek Gigabit LAN, 1 x Realtek 2.5 Gigabit LAN (4X4 AI300 Series)
- 2 x Realtek 2.5 Gigabit LAN (4X4 AI400 Series)
- Supports Quad display, 2 x HDMI 2.1, 2 x DP 1.4a (from Type-C)
- 12V~24V DC-In

SPECIFICATIONS

Form Factor	4X4 AI300 Series	4X4 AI400 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)	4X4 (4.09-in x 4.02-in x 1.45-in, 10.4 cm x 10.2 cm x 3.7 cm)

Processor System

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)
CPU (4X4 AI400 Series)	AMD Ryzen™ AI 400 Series *For detailed CPU SKU availability, please refer to the ASRock Industrial official website.
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	Supports Quad 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 (4X4 AI300 Series)	LAN1: Realtek RTL8125BG with 10/100/1000/2500 Mbps LAN2: Realtek RTL8111H with 10/100/1000 Mbps
Controller/ Speed (4X4 AI400 Series)	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	4X4 AI300 Series	4X4 AI400 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	2 x HDMI 2.1
Ethernet	1 x 1 Gigabit LAN, 1 x 2.5 Gigabit LAN	2 x 2.5 Gigabit LAN
USB	2 x USB 3.2 Gen1 (Type-A)	2 x USB 2.0
DC Jack	1	

Internal Connector

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

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

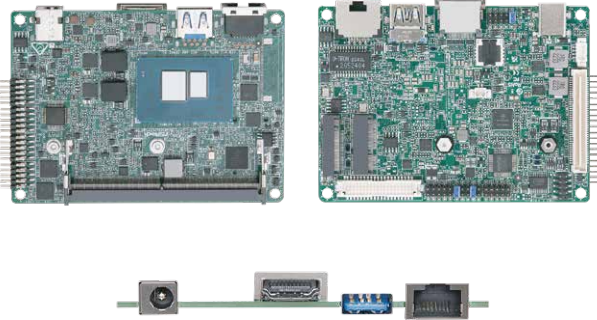
Operating Temp	0°C ~ 70°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)

SOM-P104

Pico-ITX Motherboard

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 Salesfor 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%