

Solution / Product Application

Automation

IOT

Edge Computing

5G

HMI



ABOUT > BIOSTAR

BIOSTAR, is a professional brand dedicated to the production of motherboards, gaming motherboards, SSD, graphics cards, industrial computing systems, IoT, crypto mining equipment, healthcare solutions and motor start battery. Since its establishment in 1986, **BIOSTAR** has become a major motherboard supplier in the IT industry. In order to pursue the best quality and aesthetic design, **BIOSTAR** has invested heavily in ID design, equipment, global marketing research as well as R&D. With a constant emphasis on quality, **BIOSTAR** always seeks to improve beyond better and race to the future.

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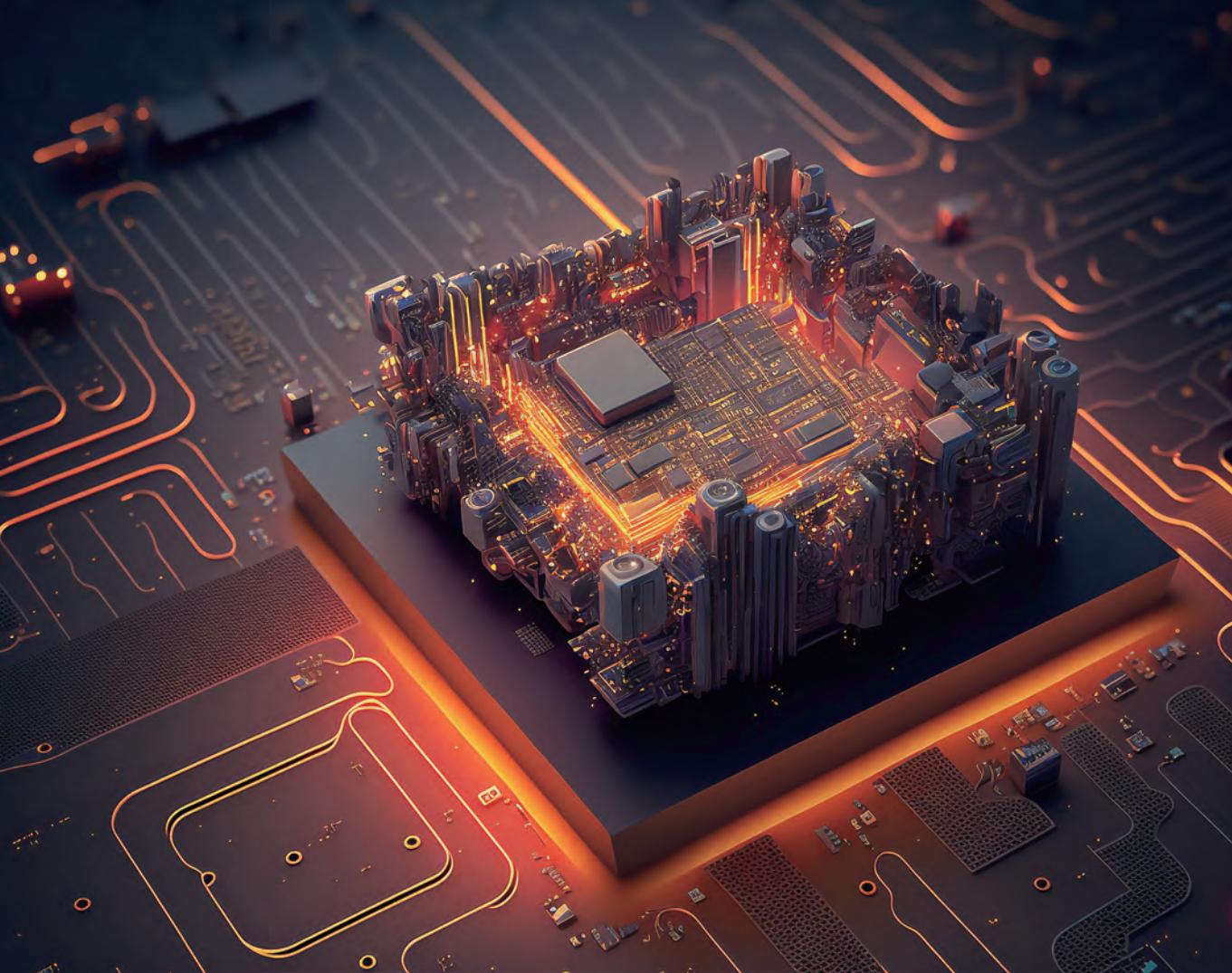
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WHY > BIOSTAR

Flexible Logistic Control

Overseas warehouses for on-time delivery

Excellent R&D Team

Built to order and short developing lead time

Global Branding and Services

Taiwan Top 20 International brand, Worldwide service centers, Strong financial support

Platinum Role in Industry

Intel, AMD direct account with massive and up-to-date support

Advanced Quality

Multi-awarded and recommended by global media and reviewers



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Automation

Automation describes a wide range of technologies that reduce human labor force in process, with the advancement of automation technology, enterprises come to introduce the automation application for the workplace. It literally assists the customers to effectively improve the speed and efficiency of automated production and product yield, besides, it enhances the productivity and the competitiveness. Other than these advantages, it reduces the labor costs.

Automation enables smart factories and autonomous vehicles to transform an intelligent world. It is widely applied to various fields, such as IT automation, technology automation, network automation, industrial automation, agricultural automation, military application and so on. It has been achieved by various means, inevitably we need more flexible I/O for multi device connectors and various specifications to meet the requirements. BIOSTAR can make it, and achieve your needs.





IOT

IOT means “Internet of Things (IoT)”, it refers to the collective network of connected devices and the technologies that can help the communications technology of the cloud and the devices. In simplest terms, the Internet of Things is a network of physical objects that are connected to the Internet, so that they can exchange data and information”, such as the connected car, smart switch, smart lighting system and so on.

Additionally, Internet of Things (IoT) can distinguish IOT from IIOT. IIOT means “Industrial Internet of Things”, such as manufacturing, logistics, transportation and retail industry. From the few points above, IoT application links with our life very closely. In order to improve the productivity, efficiency and service; find more IoT technologies in a growing number of places, especially in industry; enable the concept of the smart home to become reality, even the infrastructure of an entire smart city. To realize the vision, BIOSTAR specialize in supplying the stable systems.

Edge Computing

Edge computing is a type of computing network architecture, its computation moves as close to the source of data as possible, it can enable not only to process at greater speeds and volumes, reduce latency and bandwidth use, but also lead to greater action-led results in real time.

Edge computing has high applicability in Internet of Things field, especially Industrial Internet of Things (IIoT). For edge computing, it brings much more conveniences and advantages to our life. Besides the acceleration of the digital transformation in industry and manufacturer, edge computing technology enable more innovations to artificial intelligence and machine learning. To realize the vision, BIOSTAR specialize in supplying the stable systems.





5G

With the rapid development of science and technology, gradually we have more requirements in the speed of network transmission, therefore 5G rolls out. 5G is the fifth generation of mobile data technology, which is designed to expedite the speed, reduce the latency, and improve the resiliency of wireless services. The technology is a great leap forward in terms of bringing new market developments and growth opportunities, and it significantly improves our network connection.

Besides, it can enhance the digital experience through machine learning (ML) automation; most importantly, it performs a new network connecting virtually with everyone and everything together, including the machines, objects, and devices.



HMI

Industrial control systems progress continuously, Human-Machine Interface (HMI) is a user interface which connects the users to the machine, computer program or system. It's a design method of HMI, and it ensures the high speed and interaction with efficiency. It enhances not only the visibility of factory operation, but also the safety during up and running. Operators and users increasingly prefer to high-performance. In light of the points above, HMI plays a key role in the stable and efficient running of the factories and manufacturing.

Our Partners





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Industrial Motherboards >>>

BIELK-PAT



Feature Of Product

- Intel® Elkhart Lake SOC Processor Series
- Supports display output: LVDS/HDMI/VGA
- DDR4 3200MHZ SO-DIMM, max 32GB
- Intel 2 x 2.5GbE LAN
- 4 x USB2.0, 2 x USB3.2
- 8 bit GPIO, 4 x COM ports
- 1 x SATAIII
- 1 x Mini-PCIe (WiFi/Bluetooth)
- 1 x M.2 key-M 2242/2280 (SSD storage)
- 1 x M.2 key-B 3042/3052 slot (3G/4G/5G)



Technical Information

Model Name		BIELK-PAT
Processor Options		Intel® J6412/J6413/J6426/X6413E (Elkhart Lake)
Chipset		None
BIOS		AMI 128Mbit SPI Flash ROM BIOS
Form factor		146x102 mm
System Memory	Sockets	2x DDR4 3200 SO-DIMM
	Max. Capacity	Up to 32GB
USB 2.0	USB 2.0 Internal	2 x USB2.0
	USB 2.0 External	2 x USB2.0
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	2xUSB3.0
Expansion Slot		1 x M.2 (key B, 3042/3052) with PCIE + USB3.0 , support 4G/5G 1 x SIM slot 1 x M.2 (Key M 2242/2280) with PCIe x2 or SATA option, support NVMe/SATA SSD 1 x Full size Mini-PCIe with USB 2.0 &PCIe for wireless module
Storage	Expansion	1 x SATAIII
Networking	LAN	2 x 2.5 GbE RJ45 connectors
	Controller	2 x Intel® I225V
Audio	Codec	ALC897
	IO connector	1 x 2*5-pin wafer , support Line in/Line-out / Mic in 1 x 1*4-pin wafer, support 2x 2W speakers
Serial Interface	Serial Standard	4 x COM: 2 x D-sub 9 pin connector, support RS232/RS422/RS485 with 0/5V/12V 2 x 2*5 pins headers, support RS232
Others IO	Others IO (internal)	1 x 1*3-pin DC FAN 1 x 2*5 8-bit Digital IO 1 x 3-pin Clear CMOS Jumper 1 x 1*3-pin select AT/ATX mode 1 x 6-pin PS/2 (Keyboard&Mouse) 1 x 2*5-pin Front panel header 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x LVDS 1 x HDMI 1 x VGA (D-sub 15 pin connector)
TPM	Support / Not	None
Power supply	DC power	1 x 1*2-pin 9~24V DC-in power connector
	ATX power	None
Edge IO		1 x HDMI 2 x USB3.0 2 x USB2.0 2 x RJ45 (GbE) 1 x VGA (D-sub 15 pin connector)
Operating temperature		0°C ~ 60°C Humidity : 5% ~ 90% (Wide Range Temperature -40°C ~ 75°C Humidity : 10% ~ 90% by function option)
OS Support		Windows 10 Linux Ubuntu

Industrial Motherboards >>>

BIADN-IHT



Feature Of Product

- Intel® Alder Lake N SOC Processor Series
- Supports display output: LVDS or eDP (option)/ 2xHDMI/DP
- DDR4 3200MHZ SO-DIMM, max 16GB
- Intel 2 x GbE, RTL8111H-CG LAN
- 6 x USB2.0, 4 x USB3.2
- 8-bit GPIO, 6 x COM ports
- 1 x SATAIII
- 1 x M.2 key-M 2242/2280 (SSD storage)
- 1 x M.2 key-B 3042/3052 slot (3G/4G/5G)
- 1 x M.2 key-E 2230 slot (WiFi/Bluetooth, includes CNVi)

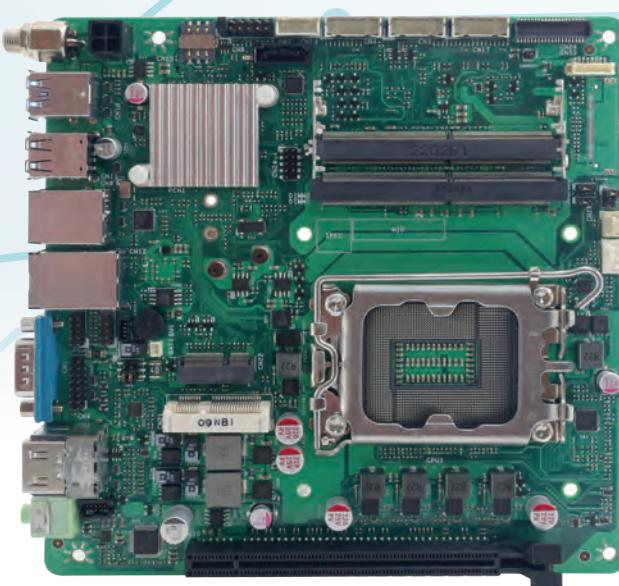


Technical Information

Model Name		BIADN-IHT
Processor Options		Intel® N50/N97/N200/i3-N305 CPU (Alder Lake N)
Chipset		None
BIOS		AMI 256Mbit SPI Flash ROM BIOS
Form factor		170 x 170 mm
System Memory	Sockets	1 x DDR4 1600 MHz SO-DIMM
	Max. Capacity	Up to 16GB
USB 2.0	USB 2.0 Internal	4 x USB2.0
	USB 2.0 External	2 x USB2.0
USB 3.0	USB 3.0 Internal	2 x USB3.2 (colay with M.2 keyB)
	USB 3.0 External	2 x USB3.2 Gen2
Expansion Slot		<p>1 x M.2 (key E 2230) w/ 1x USB 2.0 + 1 x PClex1, support Intel CNVi 1 x M.2 (key B 3042/3052) with PClex1+USB3.2 & SIM Card Slots (by ME to PIC-Ex2), colay with internal 2 x USB3.2 Gen1 (default is M.2 key B PClex1 + USB3.2) 1 x M.2 (Key M type 2242/2280) w/ PClex1, SATA or PCIE2 ,SATA (opt) (cloay with 1x HDD SATA)</p>
Storage	Expansion	1 x SATAIII (by BOM opt.)
Networking	LAN	2 x GbE, RJ45 connectors
	Controller	2 x RTL8111H-CG GbE LAN
Audio	Codec	ALC897
	IO connector	1 x Audio Jack (Line-Out) 1 x 2*5 pin wafer box, support Line-In/Mic in/Speaker
Serial Interface	Serial Standard	<p>6 x COM: 2 x 2*5 pin header, support RS232/RS422/RS485 with RI/5/12V 4 x 2*5 pin header, support RS232 with RI/5/12V</p>
Others IO	Others IO (internal)	<p>1 x 2*7 pin Front panel pin header 1 x 1*4 pin-header for CPU Fan (Smart Fan) 1 x 1*3 pin clear CMOS 1 x SIM slot 1 x 1*3 pin SYSTEM Fan (Smart Fan) 1 x Buzzer 1 x 1*5 pin box header for SMBus</p>
Digital I/O		8 bit
Display	Interface	<p>1 x eDP or LVDS 2 x HDMI 1 x TypeC (support TypeC full function)</p>
TPM	Support / Not	Support SLB9670 TPM 2.0 on board Module (option)
Power supply	DC power	DC-IN 9~24V or Type C PD (9-20V)(either one)
	ATX power	None
Edge IO		<p>1 x DC 9~24V Jack 2 x HDMI 1 x TypeC(USB3.2/PD/DP) 2 x USB3.2 Gen2 2 x RJ45 (GbE) 1 x Audio Jack (Line-out) 2 x USB2.0</p>
Operating temperature		0°C ~ 60°C Humidity : 5% ~ 90%
OS Support		Windows 10 Linux Ubuntu

Industrial Motherboards >>>

BIH61-IHP



Feature Of Product

- Intel® 12th & 13th Gen. Core™ Processor Series
- Supports display output: LVDS or eDP (option) / 2 x HDMI/VGA
- DDR4 3200MHZ SO-DIMM, max 64GB
- Intel 1 x GbE, 1 x 2.5GbE LAN
- 5 x USB2.0, 2 x USB3.2
- 8-bit GPIO, 4 x COM ports
- 1 x SATAIII
- 1 x PCIEx16
- 1 x Mini-PCIe (WiFi/Bluetooth/SATA storage, by optional)
- 1 x M.2 key-B 2242/3042/3052 slot (3G/4G/5G or storage, by optional)
- 1 x M.2 key-E 2230 slot (WiFi/Bluetooth, includes CNVi)

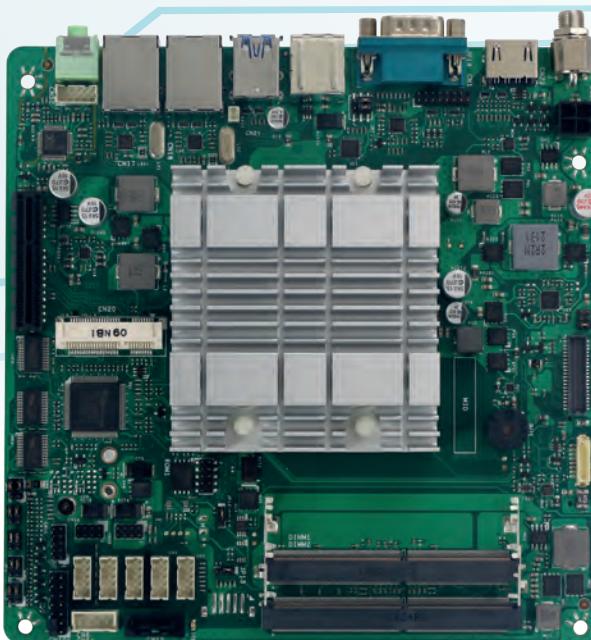


Technical Information

Model Name		BIH61-IHP
Processor Options		12 th /13 th Generation Intel® Core™ Processors (Alder Lake-S), LGA1700
Chipset		Intel H610 Express Chipset
BIOS		AMI 256Mbit SPI Flash ROM BIOS
Form factor		170 x 170 mm
System Memory	Sockets	2 x DDR4 3200 MHz SO-DIMM
	Max. Capacity	Up to 64G
USB 2.0	USB 2.0 Internal	3 x USB2.0
	USB 2.0 External	2 x USB2.0
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	2 x USB3.0
Expansion Slot		1 x PCIEx16 slot 1 x Mini-Pcie, support SATA + PCIe or USB3.0 + PCIe signal by BOM option 1 x M.2 keyB(2242/3042/3052) with PCIe + USB2.0 or SATA & USB2.0 signal by BOM option 1 x M.2 (key E 2230)with PCIEx1 and USB2.0 Intel CNVI support (For WIFI/BT) 1 x SIM slot
Storage	Expansion	1 x SATAIII
Networking	LAN	1 x 2.5 GbE, RJ45 connector 1 x GbE, RJ45 connector
	Controller	1 x Intel® i219V 1 x Intel® i225V
Audio	Codec	ALC897
	IO connector	1 x Audio Jack (Line-Out) 1 x 2*5-pin wafer box, support Line-In/Mic in/Speaker.
Serial Interface	Serial Standard	4 x COM: 1 x D-sub 9 pin connector, support RS232/RS422/RS485 with RI/5/12V 3 x 2*5 pin header, support RS232
Others IO	Others IO (internal)	1 x 1*4 pin header for CPU FAN (Smart Fan) 1 x 1*3 pin System FAN (Smart Fan) 1 x 1*3 pin clear CMOS 1 x SIM slot 1 x 2*6 pin Front panel pin header 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x eDP or LVDS 2 x HDMI 1 x VGA (2*8pin wafer Box header)
TPM	Support / Not	Support SLB9670 TPM 2.0 on board Module (option)
Power supply	DC power	DC-IN 12~24V
	ATX power	1 x 2*2 pin 12V DC power (ATX connector)
Edge IO		None 1 x DC 12~24V Jack 2 x HDMI 2 x USB3.1 2 x RJ45 (GbE) 1 x COM (D-sub 9 pin connector, support RS232/422/485) 1 x Audio Jack (Line-out) 2 x USB2.0
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 10 / Linux Ubuntu

Industrial Motherboards >>>

BIELK-IHT



Feature Of Product

- Intel® Elkhart Lake SOC Processor Series
- Supports display output: LVDS or eDP (option)/ HDMI/VGA
- DDR4 3200MHZ SO-DIMM, max 32GB
- Realtek 2 x Gbe LAN
- 6 x USB2.0, 2 x USB 3.2
- 8-bit GPIO, 6 x COM ports
- 1 x SATAIII
- 1 x PCIE4
- 1 x Mini-PCIe (WiFi/Bluetooth/SATA storage, by optional)
- 1 x M.2 key-B 2242/3042/3052 slot (3G/4G/5G)



Technical Information

Model Name		BIELK-IHT
Processor Options		Intel® J6412/J6413/J6426/X6413E (Elkhart Lake)
Chipset		None
BIOS		AMI 256Mbit SPI Flash ROM BIOS
Form factor		170*170 mm
System Memory	Sockets	2 x DDR4 3200 MHz SO-DIMM
	Max. Capacity	Up to 32G
USB 2.0	USB 2.0 Internal	4 x USB2.0
	USB 2.0 External	2 x USB2.0
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	2x USB3.0
Expansion Slot		1 x full size Mini PCI-E, support PCIe+USB2.0 or SATA by BOM option. 1 x M.2 (key B 2242/3042/3052) with PCIe+USB3.1 or SATA+PCIe signal by BOM option. 1 x PClex4 Slot with PClex2 Signal 1 x SIM Slot
Storage	Expansion	1 x SATAIII
Networking	LAN	2 x GbE, RJ45 connectors
	Controller	2 x RTL8111H-CG
Audio	Codec	ALC897
	IO connector	1 x 2*5-pin box header for MIC-in, LINE-in, SPK-out 1 x Audio Jack (Line-out)
Serial Interface	Serial Standard	6 x COM: 1 x D-sub 9 pin connector, support RS232/422/485 with RI/5V/12V 1 x 2*5 pins headers, support RS232/422/485 with RI/5V/12V 4 x 2*5 pins headers, support RS232 with RI/5V/12V
Others IO	Others IO (internal)	1 x 2*8 pin header, Support VGA display 1 x 2*7 pin Front panel pin header 1 x 2*5 8-bit Digital IO 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x LVDS or eDP 1 x HDMI 1 x VGA (2*8pin wafer Box header)
TPM	Support / Not	Support TPM 2.0 module
Power supply	DC power	DC-IN 9~20V (9-24 by option) 1 x 2*2 pin 12V DC power (ATX connector)
	ATX power	None
Edge IO		1 x DC 9~20V Jack (9-24 by option) 1 x HDMI 2 x USB3.0 2 x USB2.0 2 x RJ45 (GbE) 1 x Audio Jack(Line out)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 10 IoT / Linux Ubuntu

Industrial Motherboards >>>

BICMA-IHP



Feature Of Product

- Intel® 10th Gen. Core™ Processor Series
- Supports display output: LVDS or eDP (option)/DP/HDMI
- DDR4 2933 MHZ SO-DIMM, max 64GB
- Intel 2 x GbE LAN
- 5 x USB2.0, 4 x USB3.2
- 8-bit GPIO, 4 x COM ports
- 2 x SATAIII
- 1 x PCIE4
- 1 x M.2 key-M 2242/2260/2280 slot (for SSD)
- 1 x M.2 key-E 2230 slot (WiFi/Bluetooth, includes CNVi)

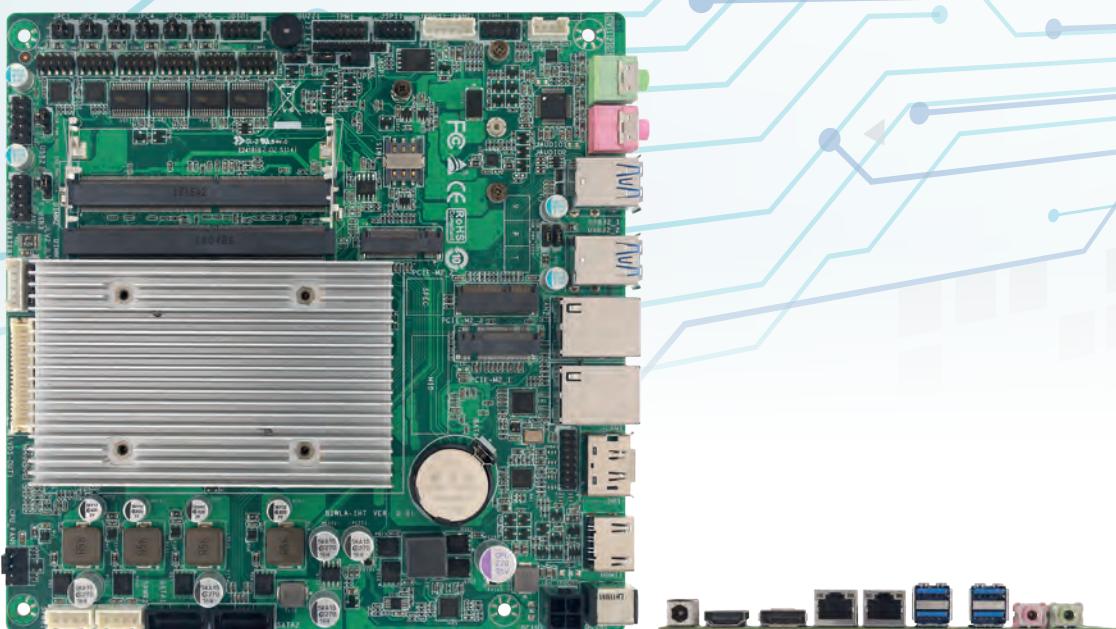


Technical Information

Model Name		BICMA-IHP
Processor Options		10 th / 11 th Generation Intel® Core™ Processors (Comet Lake-S/Rocket Lake-S), LGA 1200
Chipset		Intel Q470E/H420E Express Chipset
BIOS		AMI 256Mbit SPI Flash ROM BIOS
Form factor		170*170 mm
System Memory	Sockets	2 x DDR4 2933 MHz SO-DIMM
	Max. Capacity	Up to 64G
USB 2.0	USB 2.0 Internal	5 x USB2.0
	USB 2.0 External	None
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	4 x USB3.0
Expansion Slot		1 x PCI-E x4 slot 1 x M.2 (key M, 2242/2260/2280) with PCI-E x4 and SATA for NVME 1 x M.2 (key E 2230) with PCI-E x1 and USB2.0 for Intel CNVI support
Storage	Expansion	2 x SATAIII
Networking	LAN	2 x GbE, RJ45 connectors
	Controller	1 x Intel® i211-AT 1 x Intel® i219-LM
Audio	Codec	ALC897
	IO connector	2 x Audio Jack, support Line out/Mic in 1 x 1*4 pin 2.0 pitch wafer box for 2 x 2W/4ohm speakers
Serial Interface	Serial Standard	4 x COM: 1 x 2*5 pins header, supports RS232/RS422/RS485 3 x 2*5 pins headers, support RS232
Others IO	Others IO (internal)	1 x 1*4 pin CPU FAN header 1 x 2*7pins TPM module header 1 x 1*3pin clear CMOS header 1 x 2*5 pin Front panel pin header 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x DP 1 x LVDS or eDP 1 x HDMI
TPM	Support / Not	Supports TPM 2.0 module
Power supply	DC power	1 x 12V DC Jack 1 x 2*2 pins 12V DC power (ATX connector)
	ATX power	None
Edge IO		2 x RJ45 (GbE) 1 x HDMI 1 x DP 4 x USB3.0 1 x DC 12V Jack 2 x Audio Jack (Mic-in/Line-out)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 10

Industrial Motherboards >>>

BIWLA-IHT



Feature Of Product

- Intel® 8th Gen. Core™ U Processor Series
- Supports display output: LVDS or eDP (option)/ HDMI/DP/VGA
- DDR4 2400 MHZ SO-DIMM, max 64GB
- Intel 2 x Gbe LAN
- 4 x USB 2.0, 4 x USB 3.2
- 8-bit GPIO, 6 x COM ports
- 2 x SATAIII
- 1 x M.2 key-M 2242/2260/2280 (SSD storage)
- 1 x M.2 key-B (3G/4G/5G)
- 1 x M.2 key-E 2230 slot (WiFi/Bluetooth)

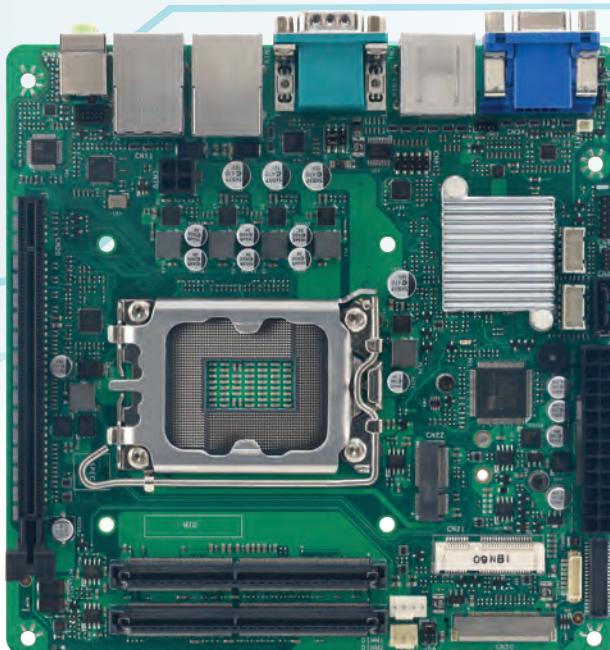


Technical Information

Model Name		BIWLA-IHT
Processor Options		Intel® 4305UE/i3-8145UE/i5-8365UE/i7-8665UE (Whiskey Lake U CPU)
Chipset		None
BIOS		AMI 128Mbit SPI Flash ROM BIOS
Form factor		170*170 mm
System Memory	Sockets	2 x DDR4 2400 MHz SO-DIMM
	Max. Capacity	Up to 64G
USB 2.0	USB 2.0 Internal	4 x USB2.0
	USB 2.0 External	None
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	4 x USB3.0
Expansion Slot		1 x M.2 (key M, 2242/2260/2280) with PCI-E x4 and SATA for NVME 1 x M.2 (key B), support PCI-E and USB 1 x Micro SIM socket, connected to M.2 key B 1 x M.2 (key E 2230) with PCI-E x1 and USB2.0 for wireless and Intel CNVI support
Storage	Expansion	2 x SATAIII
Networking	LAN	2 x GbE, RJ45 connectors
	Controller	1 x Intel I211 (colay I210) 1 x Intel I219-LM
Audio	Codec	ALC897/888S
	IO connector	1 x 1*4 pin 2.0 pitch wafer box pin header fo SPK-out 2 x Audio Jack, support Line out/Mic in
Serial Interface	Serial Standard	6 x COM: 2 x 2*5 pins headers, support RS232/422/485 4 x 2*5 pins headers, support RS232
Others IO	Others IO (internal)	1 x 1*4 pin CPU Fan header 1 x 1*6 pin header for PS/2 1 x 1*2 pin clear CMOS header 1 x 2*5 pin Front panel pin header 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x LVDS or eDP 1 x HDMI 1 x DP 1 x VGA
TPM	Support / Not	Supports TPM 2.0 module
Power supply	DC power	1 x 12~28V DC Jack 1 x 2*2 pin 12V DC power (ATX connector)
	ATX power	None
Edge IO		1 x 12~28V DC Jack 2 x RJ45 (GbE) 1 x HDMI 1 x DP 4 x USB3.0 2 x Audio Jack (Mic-in/Line-out)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 10 / Linux Ubuntu

Industrial Motherboards >>>

BIH60-IHP



Feature Of Product

- Intel® 12th & 13th Gen. Core™ Processor Series
- Support display output: LVDS or eDP(by optional)/DP++/HDMI/VGA
- DDR4 3200MHZ SO-DIMM, max 64GB
- Intel 1 x GbE, 1 x 2.5GbE LAN
- 5 x USB2.0, 2 x USB3.2
- 8-bit GPIO, 4 x COM ports
- 1 x SATAIII
- 1 x PCIEx16,
- 1 x Mini-PCIe (WiFi/Bluetooth/SATA storage, by optional)
- 1 x M.2 key-B 2242/3042/3052 slot (3G/4G/5G or storage, by optional)
- 1 x M.2 key-E 2230 slot (WiFi/Bluetooth, includes CNVi)



Technical Information

Model Name		BIH60-IHP
Processor Options		12 th Generation Intel® Core™ Processors (Alder Lake-S), LGA1700
Chipset		Intel H610 Express Chipset
BIOS		AMI 256Mbit SPI Flash ROM BIOS
Form factor		170 x 170 mm
System Memory	Sockets	2 x DDR4 3200 MHz SO-DIMM
	Max. Capacity	Up to 64G
USB 2.0	USB 2.0 Internal	1 x USB2.0
	USB 2.0 External	4 x USB2.0
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	2 x USB3.0
Expansion Slot		1 x PCIEX16 Slot 1 x Mini-Pcie, support SATA+PCIe or USB3.0+PCIe signal by BOM option 1 x M.2 (key B 2242/3042/3052) with PCIe+USB2.0 or SATA+USB2.0 signal by BOM option: 1 x M.2 (key E 2230) with PCIEx1 and USB2.0 Intel CNVI support. (For WIFI/BT) 1 x SIM slot
Storage	Expansion	1 x SATAIII
Networking	LAN	1 x 2.5 GbE, RJ45 connector / 1 x GbE, RJ45 connector
	Controller	1 x Intel® i219V / 1 x Intel® i225V
Audio	Codec	ALC897
	IO connector	1 x 2*5-pin 2.0mm wafer box for Line-In, , SPK-out 2 x Audio jacks(Line out/Mic in)
Serial Interface	Serial Standard	4 x COM: 1 x D-sub 9 pin connector, support RS232/RS422/RS485 with RI/5/12V 1 x D-sub 9 pin connector, support RS232 2 x 2*5 pin header, support RS232
Others IO	Others IO (internal)	1 x 1*4pin CPU Fan (Smart Fan) 1 x 1*3pin System Fan (Smart Fan) 1 x 2*5-pin audio (Mic-in, Line-In, speaker) 1 x Buzzer 1 x 1*3 pin clear CMOS 1 x 2*7 pin header power button, Reset button, HDD Led, power LED 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x eDP or LVDS 1 x DP++ 1 x HDMI 1 x VGA (D-sub 15 pin connector)
TPM	Support / Not	Support SLB9670 TPM 2.0 on board Module (option)
Power supply	DC power	None
	ATX power	Supports 1 x ATX power 24 pin header / 1 x 12V ATX 4P connector
Edge IO		2 x RJ45 (GbE) 4 x USB2.0 2 x Audio Jack (Line-out/Mic-in) 1 x DP + 2 x USB3.0 1 x HDMI 1 x VGA (D-sub 15 pin connector) 2 x COM (D-sub 9 pin connector, support RS232/422/485)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 10 / Linux Ubuntu

Industrial Motherboards >>>

BIQ67-AHP



Feature Of Product

- Intel® 12th & 13th Gen. Core™ Processor Series
- Supports display output: VGA/HDMI/DP++
- DDR4 3200MHZ LONG-DIMM, max 128 GB
- Intel 1 x GbE, 1 x 2.5GbE LAN
- 4 x USB 2.0, 8 x USB 3.2
- 8-bit GPIO, 6 x COM ports
- 3 x SATAIII
- Expansion slot: 1 x PCIEx16, 1 x PCIEx8, 3 PCIEx4, 2 x PCI slot
- 1 x M.2 key-M 2242/2280 slot (SATA SSD)
- 1 x M.2 key-B 3042/3052 slot (3G/4G/5G)
- 1 x M.2 key-E 2230 slot (WiFi/Bluetooth)

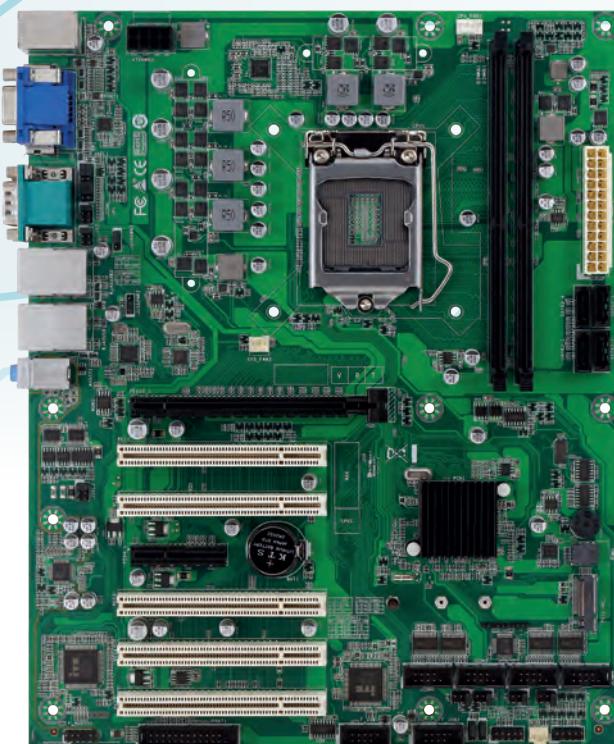


Technical Information

Model Name		BIQ67-AHP
Processor Options		Intel® Alder Lake-S for LGA1700 Socket CPU (Max TDP at 125W)
Chipset		Intel Q670 Express Chipset
BIOS		AMI 256Mbit SPI Flash ROM BIOS
Form factor		305 x 244 mm
System Memory	Sockets	4 x DDR4 3200 MHz U-DIMM
	Max. Capacity	Up to 128G
USB 2.0	USB 2.0 Internal	4x USB2.0
	USB 2.0 External	None
USB 3.0	USB 3.0 Internal	2x USB3.2
	USB 3.0 External	6x USB3.2 Gen2
Expansion Slot		1 x PCI-E Gen4x 16 (PCI-E share to PCI-E Gen4 x8 slot) 1 x PCI-E Gen4x 8 (by PClex16 slot) 3 x PClex4 2 x PCI slot 1 x M.2 (key M 2242/2280)with PCIE Gen4x4 and SATAIII 1 x M.2 (key B 3042/3052)with PCIe x1 + USB3.0 w/ SIM card slot 1 x M.2 (key E 2230)with PCIEx1 and USB2.0 Intel CNVI support. (For WIFI/BT)
Storage	Expansion	3 x SATAIII
Networking	LAN	1x 2.5 GbE, RJ45 connector 1x GbE, RJ45 connector
	Controller	1 x Intel® i219LM / 1 x Intel® i226LM
Audio	Codec	ALC897
	IO connector	3 x Audio jack (Line in/Line out//Mic in) 1 x 2*5 pin audio header, support Mic in/Line-Out
Serial Interface	Serial Standard	6 x COM: 2 x D-sub 9 pin connector, support RS232/RS422/RS485 with RI/5/12V 4 x 2*5 pin header, support RS232 with RI/5/12V
Others IO	Others IO (internal)	1 x 1*4 pin CPU FAN (Smart Fan) 3 x 1*4 pin System Fan(Smart Fan) 1 x 2*10 Digital IO 1 x 1*3 pin clear CMOS 1 x 2*5 pin header, support power button, Reset button, HDD Led, power LED , Reset LED 1 x Buzzer
Digital I/O		16 bit
Display	Interface	1 x DP++ 2 x HDMI 1 x VGA (D-sub 15 pin connector)
TPM	Support / Not	Support SLB9670 TPM 2.0 on board Module (option)
Power supply	DC power	None
	ATX power	1 x 24 pin ATX power connector 1 x 2*4 pin ATX power connector
Edge IO		2 x RJ45 (GbE) 6 x USB3.2 1 x PS2 1 x VGA (D-sub 15 pin connector) 2 x HDMI 1 x DP++ 2 x COM (D-sub 9 pin connector, support 2x RS232/422/485) 3 x Audio Jack (Line-in/Line out/Mic in)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 10 / Linux Ubuntu

Industrial Motherboards >>>

BIH11-AHB



Feature Of Product

- Intel® 6th / 7th / 8th Gen. Core™ Processor Series
- Supports display output: VGA/HDMI/DP++
- DDR4 2400MHZ LONG-DIMM, max 32GB
- Intel 1 x GbE, 1 x 2.5GbE LAN
- 6 x USB2.0, 4 x USB3.2
- 8-bit GPIO, 6 x COM ports
- 4 x SATAIII
- Expansion slot: 1 x PCIEx16, 1 x PCIEx4, 5 x PCI slot
- 1 x M.2 key-M 2242/2260/2280 slot (SATA SSD)



Technical Information

Model Name		BIH11-AHB
Processor Options		6 th / 7 th / 8 th Generation Intel® Core™ Processors (Skylake-S/ Kabylake-S/ Cofflake-S), LGA1151
Chipset		Intel H110 Express Chipset
BIOS		AMI 64Mbit SPI Flash ROM BIOS
Form factor		ATX 305 x 244 mm
System Memory	Sockets	2x DDR4 2400 Long-DIMM
	Max. Capacity	Up to 32GB
USB 2.0	USB 2.0 Internal	4xUSB 2.0
	USB 2.0 External	2 xUSB 2.0
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	4 x USB 3.0
Expansion Slot		1 x PCI-E X16 Slot 1 x PCI-E X4 Slot 5 x PCI Slot 1 x M.2 (KEY M 2242/2260/2280)socket for SATA SSD (share with 1x SATA)
Storage	Expansion	4 x SATA III
Networking	LAN	1 x 2.5 GbE RJ45 connector 1 x GbE, RJ45 connector
	Controller	1 x INTEL I225-V 1 x INTEL I219-V
Audio	Codec	ALC897
	IO connector	3 x Audio Jack , support Line in/Line-out / Mic in 1 x 2*5 pin headers, support Line-out , Mic-in
Serial Interface	Serial Standard	6 x COM: 1 x D-sub 9 pin connector, support RS232/RS422/RS485 with RI/5V/12V 1 x D-sub 9 pin connector, support RS232 with RI/5V/12V 4 x 2*5 pins headers, support RS232 with RI/5V/12V
Others IO	Others IO (internal)	1 x 2*5 pin Front panel pin header 1 x 2*5 8-bit Digital IO 1 x 2*13 pins Parallel port box-header 1 x 1*4 pins , CPU PWM-Smart FAN header 2 x 1*3 pins , System DC-FAN header 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x VGA (D-sub 15 pin connector) 1 x HDMI 1 x DP++
TPM	Support / Not	Support SLB9670 TPM 2.0 on board Module (option)
Power supply	DC power	None
	ATX power	Supports 1 x ATX power 24 pin header / 1 x 12V ATX 4P connector
Edge IO		1 x PS/2 Keyboard 1 x VGA (D-sub 15 pin connector) 1 x DP++ 1 x HDMI 2 x COM (D-sub 9 pin connector, support 1 x RS232/RS422/RS485, 1xRS232) 4 x USB 3.0 2 x USB 2.0 2 x RJ45 (GbE) 3 x Audio Jack (Line in/Line-out / Mic)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 7, Windows 8.1,Windows 10

Industrial Motherboards >>>

EIB7B-AXI



Feature Of Product

- LGA1155, Supports 3rd Intel Core processor with Intel B75 chipset, TDP: 95W
- Supports display output : VGA/DVI-D
- DDR3 LONG-DIMM, max 32GB
- Intel 2 x GbE LAN
- 9 x USB2.0, 2x USB3.2
- 8-bit GPIO, 6x COM ports
- 5 x SATAII, 1 x SATAIII
- Expansion slot: 1 x PCIEx16, 1 x PCIEx4, 5 x PCI slot



Technical Information

Model Name		EIB7B-AXI
Processor Options		3rd Generation Intel® Core™ Processors (Ivy Bridge), LGA 1155
Chipset		Intel B75
BIOS		AMI 64Mbit SPI Flash ROM BIOS
Form factor		ATX 305 x 220 mm
System Memory	Sockets	4 x DDR3 1333/1066 LONG-DIMM
	Max. Capacity	Up to 32G
USB 2.0	USB 2.0 Internal	5 x USB 2.0
	USB 2.0 External	4 x USB2.0
USB 3.0	USB 3.0 Internal	None
	USB 3.0 External	2x USB3.0
Expansion Slot		1 x PCI-E X16 Slot / 1 x PCI-E X4 Slot / 5 x PCI Slot
Storage	Expansion	5 x SATAII, 1 x SATAIII
Networking	LAN	2 x GbE, RJ45 connectors
	Controller	2x Intel I211-AT
Audio	Codec	ALC897
	IO connector	1 x 2*5 pins wafer, support Line-out, Mic-in. 3 x Audio Jack, support Line-in/ Line-out / Mic-in.
Serial Interface	Serial Standard	6 x COM: 2 x D-sub 9 pin connector, support RS232/RS422/RS485, mode with 0/5V/12V 4 x 2*5 pins headers, support RS232 with 0/5V/12V
Others IO	Others IO (internal)	1 x 2*5 pin Front panel pin header 1 x 2 x 13 pins Parallel port box-header 4 x 1 x 3pin header, support 5V/ 5V dual switch for USB function. 1 x 1 x 3 pin header, support 5V/ 5V dual switch for PS/2 function. 1 x 1 x 2 pin header, support VGA Dummy Load 4 x 2 x 5 pins, 4 COM box-header (4 xRS-232 with jumper select for 5V/12V @ pin 10) 1 x 1 x 4 pins, CPU Smart-FAN header 2 x 1 x 3 pins, System DC-FAN header 2 x power LEDs 1 x 1 x 3 pin, clear CMOS 1 x Buzzer
Digital I/O		8 bit
Display	Interface	1 x VGA (D-sub 15 pin connector) / 1 x DVI
TPM	Support / Not	Support TPM 1.2 module
Power supply	DC power	None
	ATX power	Supports 1 x ATX power 24 pin header 1 x 12V ATX 4P connector
Edge IO		1 x PS/2 1 x VGA (D-sub 15 pin connector) 1 x DVI-D 2 x COM (D-sub 9pin connector, support 2x RS232/422/485) 4 x USB2.0 2 x USB3.0 2 x RJ45 3 x Audio Jack (Line-in/ Line-out / Mic)
Operating temperature		0 °C ~ 60 °C Humidity : 5% ~ 90%
OS Support		Windows 7, Windows 10

Industrial Motherboards SYSTEM >>>

MS



Feature Of Product

- High processing capability: Elkhart Lake SoC Processor Series
- Small form factor base on 3.5" SBC motherboard
- Multi-Display: HDMI/VGA
- Several storage options incl.
- WiFi/5G/4G/3G/Bluetooth functionality
- Expansion slots for Wireless cards, network cards or Storage cards



Technical Information

Model Name	MS-J6412
Processor Options	Intel® J6412/J6413/J6426/X6413E(Elkhart Lake)
Chipset	None
Graphic	1 x HDMI 1 x VGA
Memory	DDR4 3200Mhz SO-DIMM, up to 32GB
Expansion Slot	1 x M.2 (key B, 3042/3052) with PCIE + USB3.0, support 4G/5G 1 x SIM slot 1 x M.2 (Key M 2242/2280) with PCIe x2, support NVMe/ SATA SSD 1 x Full size Mini-PCIe with USB 2.0 &PCIe
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2) 2 x RS232 (COM3~COM4)
USB	4 x USB3.2 2 x USB2.0
Ethernet	2 x Intel® i225V
Audio	ALC897
External I/O	1 x DC 9~24V Jack. 1 x HDMI 1 x VGA 4 x COM (support 2x RS232/422/485, 2x RS232) 4 x USB3.2 2 x USB2.0 2 x RJ45 (GbE) 1 x Power LED / 1 x HDD LED 1 x Earphone & Mic in (by optional) 1 x Power Key
Dimension (LxWxH)	160 x 120 x 50 mm
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro. Linux Ubuntu 20.04
Accessory	1 x 60W adapter 1 x power cord 1.5m (Option) 1 x SATA cable 1 x Foot stand 1 x Quick Installation Guide

Industrial Motherboards SYSTEM >>>

MT



Feature Of Product

- High processing capability: SoC Processor Series
- Small form factor base on mITX motherboard
- Multi-Display: HDMI/VGA/DP
- Several storage options incl.
- WiFi/5G/4G/3G/Bluetooth functionality
- Expansion slots for Wireless cards, network cards or Storage cards

Technical Information

Model Name	MT-J6412
Processor Options	Intel® J6412/J6413/J6426/X6413E (Elkhart Lake)
Chipset	None
Graphic	1 x HDMI / 1 x VGA
Memory	DDR4 3200Mhz SO-DIMM, up to 32GB
Expansion Slot	1 x full size Mini PCI-E, support PCIe+USB2.0 or mSATA by BOM option. 1 x M.2 (key B 2242/3042/3052) with PCIe+USB3.1 or SATA+PCIe signal by BOM option. 1 x PClex4 Slot with PClex2 Signal 1 x SIM Slot
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2).(Option) / 2 x RS232 (COM3~COM4).(Option)
USB	2 x USB3.2 / 4 x USB2.0
Ethernet	2 x RTL8111H-CG GbE LAN (Support PXE boot form LAN, wake on LAN)
Audio	ALC897
External I/O	1 x DC Jack 9~24V / 1 x HDMI / 1 x VGA / 4 x COM (support 2x RS232/422/485, 2x RS232), by optional / 2 x USB3.2 / 4 x USB2.0 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) / 1 x Power LED / 1 x HDD LED (by optional) 1 x Earphone & MIC Jack / 1 x Power Key
Dimension (LxWxH)	196.5 x 193 x 45 mm
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand 1 x Quick Installation Guide

Model Name	MT-ADN50 / MT-ADN97 MT-ADN200 / MT-ADN305
Processor Options	Intel® N50/N97/N200/i3-N305 CPU (Alder Lake N)
Chipset	None
Graphic	2 x HDMI / 1 x DP
Memory	DDR4 3200Mhz SO-DIMM, up to 16GB
Expansion Slot	1 x M.2 (key E 2230) w/ 1x USB 2.0 + 1 x PClex1, support Intel CNVi 1 x M.2(key B 3042/3052) with PClex1+USB3.2 & SIM Card Slots 1x M.2 (Key M type 2242/2280) w/ PClex1, SATA or PCIE2 ,SATA (opt)
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2).(Option) / 2 x RS232 (COM3~COM4).(Option)
USB	2 x USB3.2 / 4 x USB2.0
Ethernet	2 x RTL8111H-CG GbE LAN
Audio	ALC897
External I/O	1 x DC Jack 9~24V / 2 x HDMI / 1 x DP / 4 x COM (support 2x RS232/422/485, 2x RS232), by optional / 2 x USB3.2 / 4 x USB2.0 / 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) 1 x Power LED / 1 x HDD LED (by optional) / 1 x Earphone & MIC Jack / 1 x Power Key
Dimension (LxWxH)	196.5 x 193 x 45 mm
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand 1 x Quick Installation Guide.

Industrial Motherboards SYSTEM >>>

MT PRO



Feature Of Product

- High processing capability: SoC Processor Series
- Small form factor base on mITX motherboard
- Multi-Display: HDMI/VGA/DP
- Several storage options incl.
- WiFi/5G/4G/3G/Bluetooth functionality
- Expansion slots for Wireless cards, network cards or Storage cards

Technical Information

Model Name	MT PRO-J6412
Processor Options	Intel® J6412/J6413/J6426/X6413E (Elkhart Lake)
Chipset	None
Graphic	1 x HDMI / 1 x VGA
Memory	DDR4 3200Mhz SO-DIMM, up to 32GB
Expansion Slot	1x full size Mini PCI-E, support PCIe+USB2.0 or mSATA by BOM option. 1 x M.2 (key B 2242/3042/3052) with PCIe+USB3.1 or SATA+PCIe signal by BOM option. 1 x PClex4 Slot with PClex2 Signal 1x SIM Slot
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2) / 4 x RS232 (COM3~COM6)
USB	2 x USB3.2 4 x USB2.0
Ethernet	2 x RTL8111H-CG GbE LAN. / Support PXE boot form LAN, wake on LAN.
Audio	ALC897
External I/O	1 x DC Jack 9~24V / 1 x HDMI / 1 x VGA / 6 x COM (support 2x RS232/422/485, 4x RS232) / 2x USB3.2 / 4x USB2.0 / 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) 1 x Power LED / 1 x HDD LED 1 x Earphone & MIC Jack (by optional) / 1 x Power Key
Dimension (LxWxH)	200 x 200 x 50 mm
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand / 1 x Quick Installation Guide

Model Name	MT PRO-ADN50 / MT PRO-ADN97 MT PRO-ADN200 / MT PRO-ADN305
Processor Options	Intel® N50/N97/N200/i3-N305 CPU (Alder Lake N)
Chipset	None
Graphic	2 x HDMI 1 x DP
Memory	DDR4 3200Mhz SO-DIMM, up to 16GB
Expansion Slot	1 x M.2 (key E 2230) w/ 1x USB 2.0 + 1 x PClex1, support Intel CNVi 1 x M.2(key B 3042/3052) with PClex1+USB3.2 & SIM Card Slots 1 x M.2 (Key M type 2242/2280) w/ PClex1, SATA or PCIE2 ,SATA (opt)
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2) / 2 x RS232 (COM3/COM4)
USB	2 x USB 3.2 / 4 x USB2.0
Ethernet	2 x RTL8111H-CG GbE LAN
Audio	ALC897
External I/O	1 x DC 9~24V Jack. / 2 x HDMI / 1 x DP / 4 x COM (support 2x RS232/422/485, 2x RS232) 2x USB3.2 / 4x USB2.0 / 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) 1 x Power LED / 1 x HDD LED / 1 x Earphone & MIC Jack (by optional) / 1 x Power Key
Dimension (LxWxH)	200 x 200 x 50 mm
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand / 1 x Quick Installation Guide

Industrial Motherboards SYSTEM >>>

MP



Feature Of Product

- High processing capability: Core™ i & SoC Processor Series
- Small form factor base on mITX motherboard
- Multi-Display: HDMI/VGA/DP
- Several storage options incl.
- WiFi/5G/4G/3G/Bluetooth functionality
- Expansion slots for Wireless cards, network cards or Storage cards



Technical Information

Model Name	MP-J6412
Processor Options	Intel® J6412/J6413/J6426/X6413E (Elkhart Lake)
Chipset	None
Graphic	1 x HDMI / 1 x VGA (by optional)
Memory	DDR4 3200Mhz SO-DIMM, up to 32GB
Expansion Slot	1 x full size Mini PCI-E, support PCIe+USB2.0 or mSATA by BOM option 1 x M.2 (key B 2242/3042/3052) with PCIe+USB3.1 or SATA+PCIe signal by BOM option 1 x PClex4 Slot with PClex2 Signal 1 x SIM Slot
Storage	1 x SATAIII
Serial Port	1 x RS232/422/485 (COM1) 1 x RS232/422/482, 3 x RS232 (COM2~COM4, by option)
USB	2 x USB3.2 / 4 x USB2.0
Ethernet	2 x RTL8111H-CG GbE LAN
Audio	ALC897
External I/O	1 x DC JACK 9~24V / 1 x HDMI / 1 x VGA (by optional) / 5 x COM (support 1 x RS232/422/485, 4 x RS 232) / 2 x USB3.2 / 4 x USB2.0 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) / 1 x Power LED (by optional) / 1 x HDD LED 1 x Earphone & MIC Jack (by optional) / 1 x Power Key
Dimension (LxWxH)	235 x 185 x 70 mm / 235 x 192 x 100 mm (w/Foot stand)
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand / 1 x Quick Installation Guide

Model Name	MP-ADN50 / MP-ADN97 MP-ADN200 / MP-ADN305
Processor Options	Intel® N50/N97/N200/i3-N305 CPU (Alder Lake N)
Chipset	None
Graphic	2 x HDMI / 1 x DP
Memory	DDR4 3200Mhz SO-DIMM, up to 16GB
Expansion Slot	1 x M.2 (key E 2230) w/ 1x USB 2.0 + 1 x PClex1, support Intel CNVi 1 x M.2(key B 3042/3052) with PClex1+USB3.2 & SIM Card Slots 1 x M.2 (Key M type 2242/2280) w/ PClex1, SATA or PCIE2 ,SATA (opt)
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2). / 2 x RS232 (COM3~COM4).
USB	2 x USB3.2 4 x USB2.0
Ethernet	2 x RTL8111H-CG GbE LAN
Audio	ALC897
External I/O	1 x DC 9~24V Jack / 2 x HDMI / 1 x DP / 4 x COM (support 2x RS232/422/485, 2x RS232) 2x USB3.2 / 4x USB2.0 / 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) / 1 x Power LED (by optional) / 1 x HDD LED / 1 x Earphone & MIC Jack (by optional) / 1 x Power Key
Dimension (LxWxH)	235 x 185 x 70 mm / 235 x 192 x 100 mm (w/Foot stand)
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand / 1 x Quick Installation Guide

OUR SOLUTION

Technical Information

Model Name	MP-IH60
Processor Options	12 th Generation Intel® Core™ Processors (Alder Lake-S), LGA1700
Chipset	Intel H610 Express Chipset
Graphic	1 x HDMI / 1 x VGA / 1 x DP
Memory	DDR4 3200Mhz SO-DIMM, up to 64GB
Expansion Slot	<p>1 x PCIEX16 Slot 1 x Mini-Pcie, support SATA & PCIe or USB3.0 & PCIe signal by BOM option 1 x M.2 (key B 2242/3042/3052) with PCIe & USB2.0 or SATA & USB2.0 signal by BOM option 1 x M.2 (key E 2230) with PCIE1 and USB2.0 Intel CNVI support. (For WIFI/BT) 1 x SIM slot</p>
Storage	1 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2)
USB	2 x USB3.2 / 4 x USB2.0
Ethernet	1 x Intel® i225V, 1 x Intel® i219V
Audio	ALC897
External I/O	<p>1 x HDMI / 1 x VGA / 1 x DP / 2 x COM (support 2x RS232/422/485) / 2x USB3.2 4 x USB2.0 / 2 x RJ45 (GbE) / 2 x Audio Jack (Line-out /MIC in) / 1 x 12V DC Jack 1 x Power LED (by optional) / 1 x HDD LED 1 x Earphone & MIC Jack (by optional) / 1 x Power Key</p>
Dimension (LxWxH)	235 x 185 x 70 mm. / 235 x 192 x 100 mm (w/Foot stand)
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	<p>1 x 120W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand / 1 x Quick Installation Guide</p>
Model Name	MP-IH61
Processor Options	12 th Generation Intel® Core™ Processors (Alder Lake-S), LGA1700
Chipset	Intel H610 Express Chipset
Graphic	2 x HDMI / 1 x VGA
Memory	DDR4 3200Mhz SO-DIMM, up to 64GB
Expansion Slot	<p>1 x PCIEX16 slot 1 x Mini-Pcie, support SATA & PCIe or USB3.0 & PCIe signal by BOM option 1 x M.2 keyB(2242/3042/3052) with PCIe & USB2.0 or SATA & USB2.0 signal by BOM option 1 x M.2 (key E 2230) with PCIE1 and USB2.0 Intel CNVI support. (For WIFI/BT) 1 x SIM slot</p>
Storage	1 x SATAIII
Serial Port	1 x RS232/422/485 (COM1) / 3 x RS232 (COM2~COM4)
USB	2 x USB3.2 / 4 x USB2.0
Ethernet	1 x Intel® i225V, 1 x Intel® i219V
Audio	ALC897
External I/O	<p>1 x DC 12~24 V Jack / 2 x HDMI / 1 x VGA / 4 x COM (support 1 x RS232/422/485, 3 x RS 232) / 2x USB3.2 / 4x USB2.0 / 2 x RJ45 (GbE) / 1 x Audio Jack (Line-out) 1 x Power LED (by optional) / 1 x HDD LED / 1 x Earphone & MIC Jack (by optional) 1 x Power Key</p>
Dimension (LxWxH)	235 x 185 x 70 mm / 235 x 192 x 100 mm (w/Foot stand)
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	<p>1 x 120W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand / 1 x Quick Installation Guide</p>

Technical Information

Model Name	MP-H420E
Processor Options	10 th / 11 th Generation Intel® Core™ Processors (Comet Lake-S/Rocket Lake-S), LGA 1200
Chipset	Intel® H420E
Graphic	1 x HDMI / 1 x DP
Memory	DDR4 3200Mhz SO-DIMM, up to 64GB
Expansion Slot	1 x PCI-E x4 slot 1 x M.2 (key M, 2242/2260/2280) with PCI-E x4 and SATA for NVME 1 x M.2 (key E 2230) with PCI-E x1 and USB2.0 for Intel CNVI support
Storage	2 x SATAIII
Serial Port	1 x RS232/422/485 (COM1) 3 x RS232 (COM2~COM4)
USB	4 x USB3.2 4 x USB2.0
Ethernet	1 x Intel® i211-AT, 1 x Intel® i219-V
Audio	ALC897
External I/O	1 x 12V DC Jack / 1 x HDMI / 1 x DP / 4 x COM (support 1 x RS232/422/485, 3 x RS 232) 4 x USB3.2 / 2 x USB2.0 / 2 x RJ45 (GbE) / 1 x Audio Jack (MIC in) 1 x Audio Jack(Line-out) / 1 x Power LED (by optional) / 1 x HDD LED 1 x Earphone & MIC Jack (by optional) / 1 x Power Key
Dimension (LxWxH)	235 x 185 x 70 mm. / 235 x 192 x 100 mm (w/Foot stand)
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 120W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand 1 x Quick Installation Guide
Model Name	MP-4305UE / MP-8145UE MP-8365UE / MP-8665UE
Processor Options	Intel® 4305UE/i3-8145UE/i5-8365UE/i7-8665UE (Whiskey Lake U CPU)
Chipset	None
Graphic	1 x HDMI connectors / 1 x DP connector / 1 x VGA connector
Memory	2 x DDR4 2400 MHz SO-DIMM, up to 64GB
Expansion Slot	1 x PCI-E x4 slot 1 x M.2 (key M, 2242/2260/2280) with PCI-E x4 and SATA for NVME 1 x M.2 (key E 2230) with PCI-E x1 and USB2.0 for Intel CNVI support
Storage	2 x SATAIII
Serial Port	2 x RS232/422/485 (COM1/COM2). 1 x RS232 (COM3).
USB	4 x USB3.2 / 2 x USB2.0
Ethernet	1 x Intel I211 (colay I210) / 1 x Intel I219-LM
Audio	ALC897
External I/O	1 x HDMI / 1 x DP / 3 x COM (support 2 x RS232/422/485, 1 x RS 232) 4 x USB3.2 / 2 x USB2.0 / 2 x Audio jack (Mic-In, Line-Out) 2 x RJ45 (GbE) / 1 x DC Jack / 1 x Power LED (by optional) / 1 x HDD LED 1 x Earphone & MIC Jack (by optional) / 1 x Power Key
Dimension (LxWxH)	235 x 185 x 70 mm / 235 x 192 x 100 mm (w/Foot stand)
Operating temperature	0 °C ~ 40 °C Humidity : 5% ~ 90%
OS Support	Windows 10 Pro / Linux Ubuntu 20.04
Accessory	1 x 60W adapter / 1 x power cord 1.5m (Option) 1 x SATA cable / 1 x Foot stand 1 x Quick Installation Guide



BIOSTAR

FOOD0
FOOD1
FOOD2
FOOD3
FOOD4
FOOD5
FOOD6
FOOD7

820
2.5V

820
2.5V

DLT

330
000

330
000

MOTHERBOARD
CONCEPT

A 2018
1.5V

11
A 2018
1.5V

A 2018
1.5V

640
16V

640
16V

820
2.5V

820
2.5V

630
2.5V

F 0000
2.5V

F 0000
2.5V

A 2018
1.5V

620
2.5V



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