



1090NP-12-M2-4L

Product Features

The 1090NP-12-M2-4L is an ultra-compact embedded motherboard built on the low-power Intel Gemini Lake platform. It integrates 4x 2.5GbE high-speed Ethernet ports and offers versatile storage expansion options, including SATA, M.2, and mSATA. Designed to operate in wide-temperature environments, it delivers excellent networking density, outstanding energy efficiency, and industrial-grade reliability. This makes it an ideal core component for space-constrained network appliances, industrial control gateways, and intelligent edge computing terminals

Application Scenarios



Cybersecurity



IoT Edge Gateway



Industrial Control Automation



Embedded Terminal

Processor	Product Collection	Products formerly Gemini Lake/Gemini Lake-R
	Sockets Supported	FCBGA1090
Memory specifications	Memory Type	2*DDR4 SO-DIMM 260Pin 1.2V
	Maximum Capacity	8GB
	Maximum Frequency	2400 MHz
Storage specifications	SATA	1*SATA 2.0 (3Gb/s)
	M.2	1*M.2 Key-M SSD (PCIe Gen2 x1)
	mSATA	1*mSATA
Network features	Ethernet	4*2.5GbE
	Controller	4*Intel I226V
Extension interface	mPCIe	1*mPCIe
Display functions	Port	1*DP/1*HD
	Chip	Intel HD Graphics
Backplane I/O	Ethernet	4*RJ45
	Console	1*RJ45 COM RS232
	Power supply	1*Jack DC 5.5/2.5mm
	Display	1*DP/1*HD
	USB	2*USB-A 2.0, 2*USB-A 3.0
Onboard I/O	Button	1*Power Button
	SATA	1*SATA Data connector/1*SATA Power socket

	SIM	1*SIM Card slots
	Fan	1*CPU fan power socket
		1*JGPIO
	Pins	1*JCOM RS232 or RS485
		1*F_Panel
Power supply mode	DC	12V
Motherboard size	Specification	120*120 (mm)
Work Environment	Temperature	-20~55℃
	Humidity	5%~90% (Relative humidity, no condensation)



G30S-1090NP -4L

Product Features

The G30S-1090NP-4L is an ultra-compact, fanless industrial PC based on the Intel Gemini Lake low-power platform, featuring an all-metal, ultra-thin chassis. Within its slim and lightweight form factor, it integrates 4x 2.5Gb Ethernet ports and utilizes a completely fanless, passive cooling architecture. With its refined industrial design, quiet and reliable operation, and flexible network scalability, this product is an ideal solution for building space-constrained network access devices, industrial control terminals, and lightweight edge computing applications.

Application Scenarios



Cybersecurity



IoT Edge Gateway



Industrial Control Automation



Embedded Terminal

Processor	Product Collection	Products formerly Gemini Lake/Gemini Lake-R		
	Sockets Supported	FCBGA1090		
	Memory Type	2*DDR4 SO-DIMM		
Memory specifications	Maximum Capacity	8GB		
	Maximum Frequency	2400 MHz		
	SATA	1*SATA 2.0 (3Gb/s)		
Storage specifications	M.2	1*M.2 Key-M SSD		
	mSATA	1*mSATA		
	Front Panel	Ethernet	4*RJ45	
Interface	Power	1*Jack DC_IN		
	Console	1*RJ45 RS232		
	Button	1*Start or Restart		
	Back Panel	USB	2*USB-A 3.0, 2*USB-A 2.0	
		Display	1*DP/1*HD	
		Antenna hole	2*Reserved	
Extension interface	mPCIe	1*mPCIe		
Cooling Method	Passive Cooling, Fanless (Need air flow)			
System Specifications	Chassis Size	136*126*40 (mm)		
	Weight	Equipment Weight 0.65 KG; Package Weight 1.25 KG (including accessories)		
Power Mode	DC	12V 4A or Higher		
Work Environment	Temperature	0~50℃		
	Humidity	5%~90% (Relative humidity, no condensation)		



G48S-1090NP -4L

Product Features

The G48S-1090NP-4L is an ultra-compact, fanless industrial PC based on the Intel Gemini Lake low-power platform, featuring an all-metal, ultra-thin chassis. Within its slim and lightweight form factor, it integrates 4x 2.5Gb Ethernet ports and utilizes a completely fanless, passive cooling architecture. With its refined industrial design, quiet and reliable operation, and flexible network scalability, this product is an ideal solution for building space-constrained network access devices, industrial control terminals, and lightweight edge computing applications.

Application Scenarios



Cybersecurity



IoT Edge Gateway



Industrial Control Automation



Embedded Terminal

Processor	Product Collection	Products formerly Gemini Lake/Gemini Lake-R	
	Sockets Supported	FCBGA1090	
	Memory Type	2*DDR4 SO-DIMM	
Memory specifications	Maximum Capacity	8GB	
	Maximum Frequency	2400 MHz	
	SATA	1*SATA 2.0 (3Gb/s)	
Storage specifications	M.2	1*M.2 Key-M SSD	
	mSATA	1*mSATA	
	Front Panel	Ethernet	4*RJ45
Power		1*Jack DC_IN	
Console		1*RJ45 RS232	
Interface	Button	1*Start or Restart	
	USB	2*USB-A 3.0, 2*USB-A 2.0	
	Back Panel	Display	1*DP/1*HD
Antenna hole		2*Reserved	
Extension interface	mPCIe	1*mPCIe	
Cooling Method	Passive Cooling, Fanless (Need air flow)		
System Specifications	Chassis Size	134*125*40 (mm)	
	Weight	Equipment Weight 0.65 KG; Package Weight 1.25 KG (including accessories)	
Power Mode	DC	12V 4A or Higher	
Work Environment	Temperature	0~50℃	
	Humidity	5%~90% (Relative humidity, no condensation)	



G31S-1090NP -4L

Product Features

The G31S-1090NP-4L is an ultra-compact, fanless industrial PC based on the Intel Gemini Lake low-power platform. We've upgraded the chassis size and heat dissipation, providing more cooling space and better temperature control than smaller models in the same series, resulting in greater stability during extended high-load operation. With 4×2.5GbE network interfaces, dual-channel DDR4, M.2 NVMe SSD, and LTE/Wi-Fi&BT scalability, it's an ideal solution for building industrial automation, network communication, and edge computing applications.

Application Scenarios



Cybersecurity



IoT Edge Gateway



Industrial Control Automation



Embedded Terminal

Processor	Product Collection	Products formerly Gemini Lake/Gemini Lake-R		
	Sockets Supported	FCBGA1090		
	Memory Type	2*DDR4 SO-DIMM		
Memory specifications	Maximum Capacity	8GB		
	Maximum Frequency	2400 MHz		
	SATA	1*SATA 2.0 (3Gb/s)		
Storage specifications	M.2	1*M.2 Key-M SSD		
	mSATA	1*mSATA		
	Front Panel	Ethernet	4*RJ45	
Interface	Power	1*Jack DC_IN		
	Console	1*RJ45 RS232		
	Button	1*Start or Restart		
	Back Panel	USB	2*USB-A 3.0, 2*USB-A 2.0	
		Display	1*DP/1*HD	
	Antenna hole	2*Reserved		
Extension interface	mPCIe	1*mPCIe		
Cooling Method	Passive Cooling, Fanless (Need air flow)			
System Specifications	Chassis Size	178*126*56 (mm)		
	Weight	Equipment Weight 1.15 KG; Package Weight 1.85 KG (including accessories)		
Power Mode	DC	12V 4A or Higher		
Work Environment	Temperature	0~50℃		
	Humidity	5%~90% (Relative humidity, no condensation)		



G31F-1090NP -4L

Product Features

The G31F-1090NP-4L is a compact, intelligent temperature-controlled industrial PC designed based on the Intel low-power processor. This device integrates 4x 2.5 Gigabit Ethernet ports and is equipped with an intelligent chassis fan cooling system, achieving a good balance of performance, heat dissipation, and reliability within a compact space. With its stable network connectivity, efficient active cooling, and flexible configuration options, this product is ideal for building lightweight network gateways, industrial control terminals, and commercial embedded applications.

Application Scenarios



Cybersecurity



IoT Edge Gateway



Industrial Control Automation



Embedded Terminal

Processor	Product Collection	Products formerly Gemini Lake/Gemini Lake-R		
	Sockets Supported	FCBGA1090		
	Memory Type	2*DDR4 SO-DIMM		
Memory specifications	Maximum Capacity	8GB		
	Maximum Frequency	2400 MHz		
Storage specifications	SATA	1*SATA 2.0 (3Gb/s)		
	M.2	1*M.2 Key-M SSD		
	mSATA	1*mSATA		
Interface	Front Panel	Ethernet	4*RJ45	
		Power	1*Jack DC_IN	
	Back Panel	Console	1*RJ45 RS232	
		Button	1*Start or Restart	
		USB	2*USB-A 3.0, 2*USB-A 2.0	
		Display	1*DP/1*HD	
Antenna hole	2*Reserved			
Extension interface	mPCIe	1*mPCIe		
Cooling Method	Active, Cooling Fan, 1*Smart Chassis fan			
System Specifications	Chassis Size	178*126*56 (mm)		
	Equipment Weight	Equipment Weight 1.25 KG; Package Weight 1.95 KG (including accessories)		
Power Mode	DC	12V 4A or Higher		
Work Environment	Temperature	0~50℃		
	Humidity	5%~90% (Relative humidity, no condensation)		