



1338NP-12-4L

Product Features

The BKHD-1338NP-12-4L is a high-performance, low-power embedded industrial motherboard based on Intel's 11th Generation Celeron N-series processor platform. It supports dual-channel DDR4 memory and features a compact Nano-ITX form factor. It combines powerful networking performance with flexible expansion capabilities, making it suitable for a variety of industrial and edge computing applications.

Application Scenarios



Cybersecurity Equipment



Industrial Control Gateway



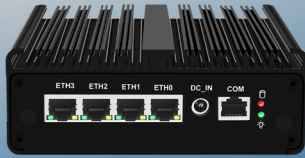
Branch Network Server



Embedded Solutions

Processor	Product Collection	Intel Celeron Processor N Series
	Sockets Supported	FCBGA1338
	Memory Type	DDR4 SO-DIMM
Memory specifications	Maximum Capacity	16GB
	Maximum Frequency	2933 MHz
Storage specifications	SATA	1*SATA 3.0 (6Gb/s)
	M.2	1*M.2 Key-M 2280 (PCIe Gen3 x2 rate)
Network features	Ethernet	4*2.5GbE
	Controller	4*Intel I226V
Extension interface	mPCIe	1*mPCIe
Display functions	Port	1*DP/1*HD
	Chip	Intel UHD Graphics
Backplane I/O	USB	2*USB-A 3.0/2*USB-A 2.0
	Display	1*DP/1*HD
	Console	1*RJ45 COM RS232
	LAN	4*RJ45
	Button	1*Start or Restart Button, 1*Clear CMOS Button
Onboard I/O	Power supply	1*Jack DC 5.5/2.5mm
	SATA	1*SATA Data connector/1*SATA Power socket
	SIM	1*SIM Card slots
	Fan	1*CPU Fan power socket
	SATA	1*SATA Data connector/1*SATA Power socket

Power supply mode	DC	12V
Motherboard size	Specification	120*120 (mm)
Work Environment	Temperature	-20~55°C
	Humidity	5%~90% (Relative humidity, no condensation)



H30S-1338NP

-4L

Product Features

The H30S-1338NP-4L is a compact, fanless mini network appliance powered by Intel's Jasper Lake series processors. Featuring a durable metal chassis with passive cooling, it is ideal for space-constrained networking and edge computing environments where quiet operation and energy efficiency are essential. It comes with 4x 2.5Gb RJ45 ports, a reserved SIM card slot with antenna interface, and an mPCIe slot for wireless or cellular module connectivity. This makes it an excellent choice for building IoT gateways, edge computing nodes, and lightweight network devices.

Application Scenarios



Cybersecurity Equipment



Industrial Control Gateway



Branch Network Server



Embedded Solutions

Processor	Product Collection	Intel Celeron Processor N Series	
	Sockets Supported	FCBGA1338	
Memory specifications	Memory Type	DDR4 SO-DIMM	
	Maximum Capacity	16GB	
	Maximum Frequency	2933 MHz	
Storage specifications	SATA	1*SATA 3.0 (6Gb/s)	
	M.2	1*M.2 Key-M 2280 (PCIe Gen3 x2 rate)	
Interface	Network	4*RJ45 LAN	
	Front Panel Console	1*RJ45 COM	
	Power	1*Jack DC_IN	
	USB	2*USB-A 3.0/2*USB-A 2.0	
Back Panel	Display	1*DP/1*HD	
	SIM	1*SIM Card slot	
	Antenna hole	2*Reserved	
Extension interface	mPCIe	1*mPCIe	
Cooling Method	Passive Cooling, Fanless (Need air flow)		
System Specifications	Chassis Size	138*126*40 (mm)	
	Weight	Equipment Weight 0.75 KG; Package Weight 1.25 KG (including accessories)	
	Power Mode	DC	12V 4A or Higher
Work Environment	Temperature	0~50°C	
	Humidity	5%~90% (Relative humidity, no condensation)	



G48S-1338NP -4L

Product Features

The G48S-1338NP-4L is a compact, fanless mini network appliance powered by Intel's Jasper Lake series processors. Featuring a durable metal chassis with passive cooling, it is ideal for space-constrained networking and edge computing environments where quiet operation and energy efficiency are essential. It comes with 4x 2.5Gb RJ45 ports, a reserved SIM card slot with antenna interface, and an mPCIe slot for wireless or cellular module connectivity. This makes it an excellent choice for building IoT gateways, edge computing nodes, and lightweight network devices.

Application Scenarios



Cybersecurity Equipment



Industrial Control Gateway



Branch Network Server



Embedded Solutions

Processor	Product Collection	Intel Celeron Processor N Series	
	Sockets Supported	FCBGA1338	
Memory specifications	Memory Type	DDR4 SO-DIMM	
	Maximum Capacity	16GB	
	Maximum Frequency	2933 MHz	
Storage specifications	SATA	1*SATA 3.0 (6Gb/s)	
	M.2	1*M.2 Key-M 2280 (PCIe Gen3 x2 rate)	
Interface	Network	4*RJ45 LAN	
	Front Panel Console	1*RJ45 COM	
	Power	1*Jack DC_IN	
	USB	2*USB-A 3.0/2*USB-A 2.0	
Back Panel	Display	1*DP/1*HD	
	SIM	1*SIM Card slot	
	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)	
	Equipment Weight		
	Weight	0.65 KG; Package Weight 1.25 KG (including accessories)	
Power Mode	DC	12V 4A or Higher	
Work Environment	Temperature	0~50°C	
	Humidity	5%~90% (Relative humidity, no condensation)	



G31S-1338NP

-4L

Product Features

The G31S-1338NP-4L is a compact, fanless mini network appliance powered by Intel Jasper Lake processors. Its durable metal chassis and passive cooling ensure quiet, energy-efficient operation in space-constrained networking and edge environments. With 4x 2.5Gb RJ45 ports, a reserved SIM slot with antenna interface, and an mPCIe slot for wireless or cellular expansion, it is ideal for IoT gateways, edge nodes, and lightweight network deployments.

Application Scenarios



Cybersecurity Equipment



Industrial Control Gateway



Branch Network Server



Embedded Solutions

Processor	Product Collection	Intel Celeron Processor N Series	
	Sockets Supported	FCBGA1338	
Memory specifications	Memory Type	DDR4 SO-DIMM	
	Maximum Capacity	16GB	
	Maximum Frequency	2933 MHz	
Storage specifications	SATA	1*SATA 3.0 (6Gb/s)	
	M.2	1*M.2 Key-M 2280 (PCIe Gen3 x2 rate)	
Front Panel	Network	4*RJ45 LAN	
	Console	1*RJ45 COM	
	Power	1*Jack DC_IN	
Interface	USB	2*USB-A 3.0/2*USB-A 2.0	
	Display	1*DP/1*HD	
Back Panel	SIM	1*SIM Card slot	
	Antenna hole	2*Reserved	
Extension interface	mPCIe	1*mPCIe	
Cooling Method	Passive Cooling, Fanless (Need air flow)		
System Specifications	Chassis Size	178*126*55 (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°C	
	Humidity	5%~90% (Relative humidity, no condensation)	



G31F-1338NP -4L

Product Features

The G31F-1338NP-4L is a compact, high-performance network application platform powered by Intel Jasper Lake processors. It combines the reliability of a fanless design with an upgraded intelligent active cooling system. Its temperature-controlled fan improves stability and performance under sustained heavy workloads, making it ideal for space-constrained deployments such as lightweight commercial security gateways, edge servers, and smart communication nodes.

Application Scenarios



Cybersecurity Equipment



Industrial Control Gateway



Branch Network Server



Embedded Solutions

Processor	Product Collection	Intel Celeron Processor N Series	
	Sockets Supported	FCBGA1338	
Memory specifications	Memory Type	DDR4 SO-DIMM	
	Maximum Capacity	16GB	
Storage specifications	Maximum Frequency	2933 MHz	
	SATA	1*SATA 3.0 (6Gb/s)	
Interface	M.2	1*M.2 Key-M 2280 (PCIe Gen3 x2 rate)	
	Front Panel	Network	4*RJ45 LAN
Console		1*RJ45 COM	
Power		1*Jack DC_IN	
Back Panel	USB	2*USB-A 3.0/2*USB-A 2.0	
	Display	1*DP/1*HD	
Extension interface	SIM	1*SIM Card slot	
	Antenna hole	2*Reserved	
Cooling Method	Active Cooling, 1*Intelligent TPM Fan		
System Specifications	Chassis Size	178*126*56 (mm)	
	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°C	
	Humidity	5%~90% (Relative humidity, no condensation)	