



2049NP-6L -15

Product Features

The 2049NP-6L-15-MB is an industrial-grade motherboard that redefines edge intelligence. Powered by an Intel Ultra 5/7/9 processor, it integrates a CPU, GPU, and NPU triple-computing architecture for the first time. With 6x 2.5GbE smart network ports, PCIe 5.0 expansion, and dual-mode 5G redundancy, it provides a next-generation industrial foundation that combines computing power, networking, and energy efficiency for machine vision, autonomous driving, and smart city hubs.

Application Scenarios



Edge AI Computing



Cybersecurity



Portable Server



Industrial IoT Gateway

Processor	Product Collection	Intel Core Ultra processors (Series 1)
	Sockets Supported	FCBGA2049
Memory specifications	Memory Type	DDR5 SO-DIMM
	Maximum Capacity	96GB
	Maximum Frequency	5600 MT/s
Storage specifications	SATA	1*SATA 6Gb/s
	M.2	2*M.2 Key-M 2280 (PCIe Gen4 x4)
Network features	Ethernet	6*2.5GbE
	Controller	1*Intel I226 LM/5*Intel I226V
Extension interface	mPCIe	1*mPCIe (USB2.0 Signal)
	PCIe	1*PCIe x8 (Gen5)
	M.2	1*M.2 Key-B 3052 (USB2.0/3.0 Signal)
		1*M.2 Key-E 2230 (CNVi Signal)
Display functions	Port	1*DP/1*HD
	Chip	Integrated Intel Arc graphics
NPU functions	Intel AI Boost	OpenVINO, WindowsML, DirectML, ONNX RT
I/O Chip	IT8613	Handling CPU/SYS Fan data/GPIO/COM ports
Backplane I/O	USB	4*USB-A 2.0/2*USB-A 3.2
	Type-C	1*Thunderbolt (40Gbit/s)
	Display	1*DP/1*HD
	COM	1*RJ45 COM-RS232
	LAN	6*RJ45
	Power Supply	1*Jack DC 5.5/2.5mm
	SIM	2*Micro SIM card slots

	Fan	1*SYS_FAN
	SATA	1*SATA Data connector 1*SATA Power socket
Onboard I/O	Fan	1*CPU_FAN/1*SYS_FAN
		1*F_PANEL
	Pins	1*GPIO 1*TPM
Power supply mode		Jack DC or Phoenix Terminal (19V)
Motherboard size	Specification	150*145 (mm)
Work Environment	Temperature	0°C~60°C;
	Humidity	0%~95% (Relative humidity, no condensation)



H15-2049NP-6L

Product Features

The H15-2049NP-6L is a high-performance edge computing platform powered by Intel Core Ultra processors (Series 1). Within a compact metal chassis, it integrates six 2.5GbE ports, a PCIe x8 expansion slot, Thunderbolt 4, dual SIM slots, and advanced AI acceleration capabilities. Designed for demanding applications requiring high network throughput, edge AI inference, and real-time data processing, it is ideal for edge computing, network security, autonomous driving assistance, smart surveillance, and industrial control.

Application Scenarios



Edge AI Computing



Cybersecurity



Portable Server



Industrial IoT Gateway

Processor	Product Collection	Intel Core Ultra processors (Series 1)	
	Sockets Supported	FCBGA2049	
Memory specifications	Memory Type	DDR5 SO-DIMM	
	Maximum Capacity	2*48GB	
	Maximum Frequency	5600 MT/s	
Storage specifications	SATA	1*SATA 6Gb/s	
	M.2	2*M.2 Key-M 2280	
Network features	Ethernet	6*2.5GbE	
	Controller	1*Intel I226 LM/5*Intel I226V	
Extension interface	mPCIe	1*mPCIe	
	PCIe	1*PCIe x8	
	M.2		1*M.2 Key-B 3052
			1*M.2 Key-E 2230
Interface	Network	6*RJ45	
	Console	1*RJ45 COM	
	Power	1*Jack DC_IN	
	Expansion port	Optional 2x/4x10G SFP+ or 4x 2.5G RJ45	
	Antenna hole	Reserved	
	USB		4*USB-A 2.0, 2*USB-A 3.2
		Display	1*HD/1*DP
	Back Panel	USB Type-C	1*Thunderbolt 40Gbit/s
		Fan	1* Chassis Fan power socket

	SIM	2*SIM card slot
Cooling Method	Passive Cooling, Fanless (Need air flow)	
System Specifications	Chassis Size	165*155*78 (mm)
	Weight	Equipment Weight 1.55 KG; Package Weight 2.65 KG (including accessories)
Power Mode	DC	19V
Work Environment	Temperature	0~50°C
	Humidity	0%~90% (Relative humidity, no condensation)