

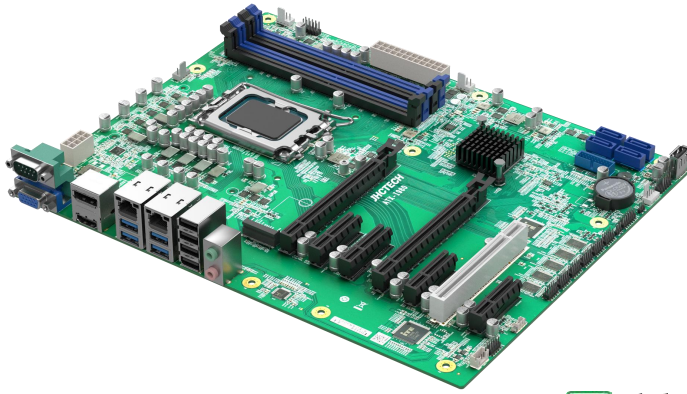
ATX-I980

Intel® Q670 PCH+Alder lake-S/Raptor Lake-S CPU, 2*LAN, 1*DP,
1*HDMI, 1*VGA, 6*COM, 6*USB3.2, 7*USB2.0, 4*SATA3.0,
6*PCIe+1*PCI

JHCTECH

IoT Computer
Connecting the Dots

Single Board Computer-SBC



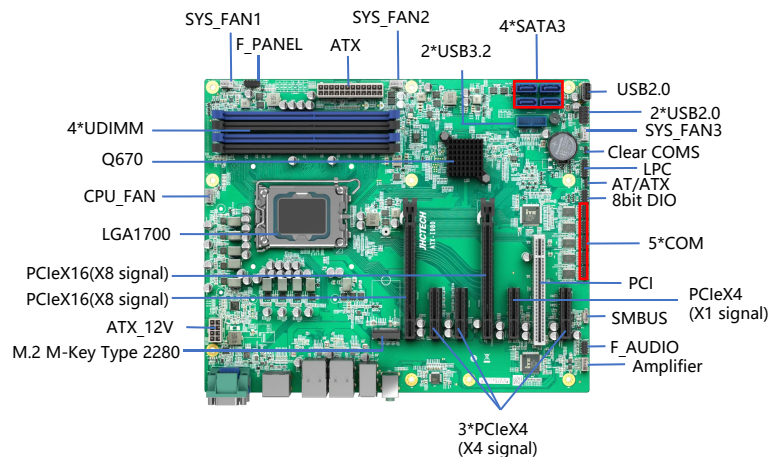
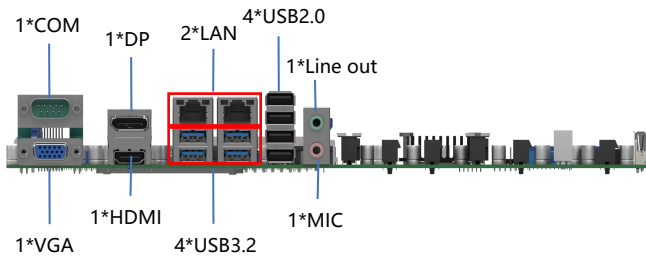
Key Features

- Intel 12th/13th Gen. Alder lake-S/Raptor Lake-S Core i9/i7/i5/i3/Pentium/Celeron CPU, LGA1700 Socket
- Intel Q670, high-performance chipsets
- Dual - channel 4*DDR4 3200MHz UDIMM, up to 128GB
- Intel UHD Graphic, 1*DP+1*HDMI+1*VGA, three independent displays
- 1*I219LM and 1*I226V, dual Gigabit network ports
- 6*USB3.2, 7*USB2.0, 6*COM, 8bit DIO
- 2*PCIeX16(X8 signal), 1*PCI, 4*PCIeX4 (3 for X4 signal, 1 for X1 signal), a total of seven slots, 1*M.2 2280 M-key
- 4*SATA3.0 6.0Gbps, support Raid0/1/10/5
- 24pin ATX +8pin 12V ATX power

Description

ATX-I980 is an industrial motherboard powered by Intel Q670 chipset, supporting Intel®12th/13th Gen Core i9/i7/i5/i3/Pentium/Celeron CPU, designed according to the standard ATX motherboard specification and has seven PCIe and PCI extensions. It fits all 4U chassis and wall-mounted chassis on the market, and is suitable for machine vision, CNC machinery, digital medical and casino games and other fields.

I/O View

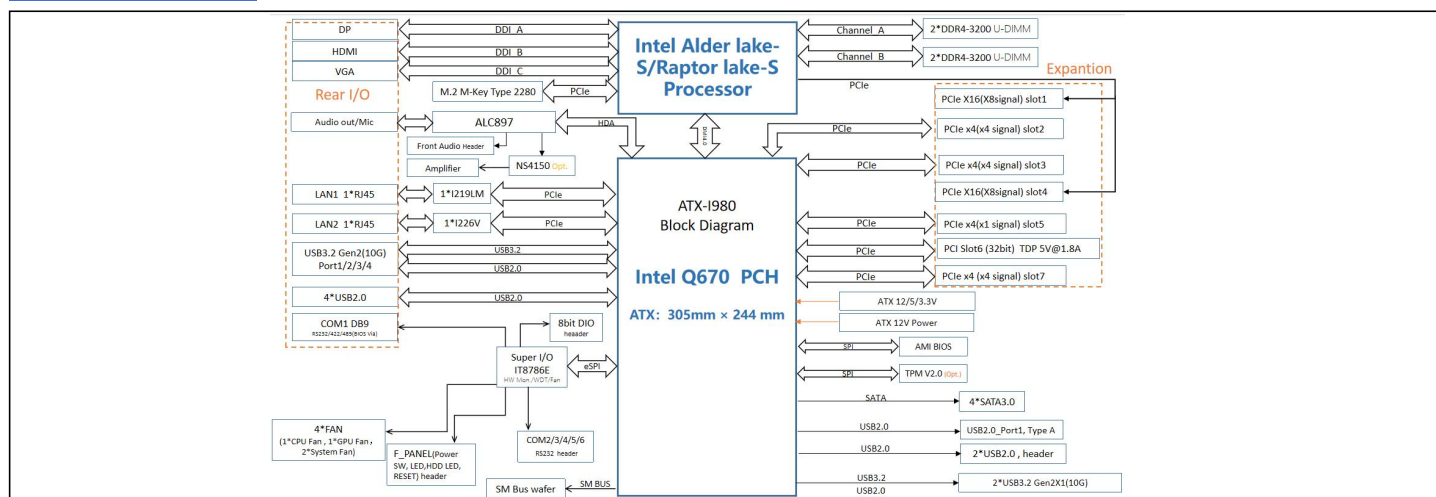


SPEC.

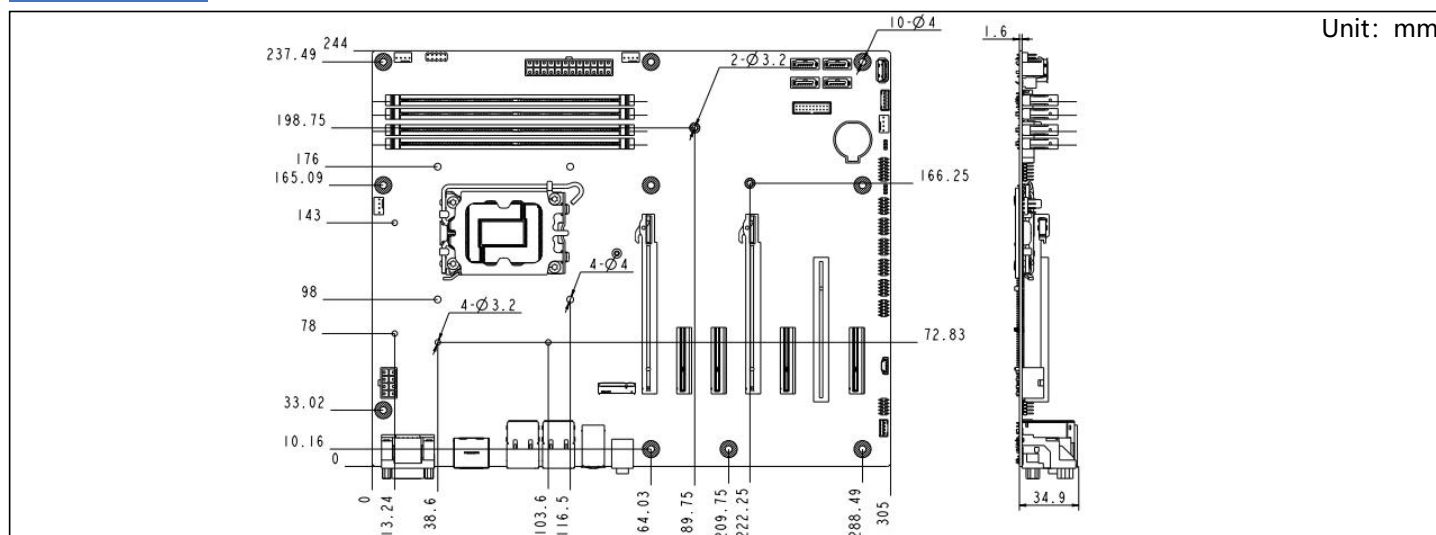
CPU	Intel 12th Gen. Alder lake-S/13th Gen. Raptor Lake-S Core i9/i7/i5/i3/Pentium/Celeron CPU, LGA 1700 Socket, up to 125W
Chipset	Intel Q670, high-performance chipsets
Memory	4*288-pin Non-ECC UDIMM, dual channel DDR4 3200MHz, up to 128GB
Expansion	2*PCIe X16 Gen5.0 slot(X8 signal), 2*PCIe X4 Gen4.0 slot(X4 signal), 2*PCIe X4 Gen3.0 slot(one is X4 signal, the other is X1 signal), 1*32-bit PCI slot, 1*M.2 2280 M-key(PCIe X4 Gen4.0)
Graphics	Intel Xe 700 series UHD Graphics, supports DirectX 12, OpenGL 4.5 and OpenCL 2.1; HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9; HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9; the highest resolution: HDMI is 4096*2160@60Hz, DP is 7680*4320@60Hz, VGA is 1920*1200@60Hz
Audio	Realtek ALC897 HD audio chip, support 5.1 channels, optional support 2*3W amplifier
LAN	1*Intel I226V, 10M/100M/1000Mbps adaptive, supports WOL 1*Intel I219LM, 10/100/1000Mbps adaptive, supports iAMT13.0 active management, i5/i7/i9 CPU can support vPro remote management
Storage	4*SATA3, 6.0Gbps, support RAID0/1/10/5
Rear I/O	2*LAN(RJ45); 1*COM(RS232/422/485, DB9); 1*HDMI+1*DP+1*VGA; 4*USB3.2 Gen2 (10Gb/s, Type A), 4*USB2.0(Type A), both support USB Power jumper switching power supply mode 5V System or 5VSB; 1*Line out+1*Mic, 3.5mm phone jack
Internal I/O	8bit DIO(2*5pin dupont pin), 2*USB3.2 Gen2(10Gb/s, 2*10pin header), 3*USB2.0(one of them is Type A, the other is 2*5pin dupont pin), 1*SM Bus(1*4pin wafer), 5*COM(1*RS232/422/485, 4*RS232, 2*5pin dupont pin), 4*SATA3, 1*F_AUDIO(2*5pin dupont pin), 1*AMP (1*4pin 2.0mm wafer, opt.), 4*FAN, 1*TPM2.0 (opt.)
Switch & LED	F_PANEL (Power SW, Reset, Power LED, HDD LED), Clear CMOS jumper, AT/ATX jumper, USB Power jumper
Power Supply	24-pin ATX + 8-pin 12V, TDP:110W (I7-12700K CPU/16G DDR4/128G SSD, without accelerator card or function card)
Watchdog Timer	Programmable timeout interrupt or system reset, 1 to 255 seconds
Security	TPM 2.0 secure encryption (opt.)
OS Support	Windows 10/11 IoT Enterprise (64-bit), Windows Server 2019, Ubuntu, SUSE, Redhat Enterprise, Wind River Linux, Yocto Project (64-bit), Wind River VxWorks 7

Dimension	(W*H): 305*244mm
Height	Top Side: 34.9mm; PCB: 1.6mm
Operating Temperature	0 ~ 60°C
Storage Temperature	-40°C~85°C
Storage Humidity	10~95%@40°C, Non-condensing
EMC/Certification	CE/FCC Class A

Block Diagram



Dimension



Ordering Info

Model No.	Introduction
ATX-1980/S001	Embedded single board computer, Intel® Q670+Alder lake-S/Raptor lake-S LGA1700 CPU, 2*LAN, 6*USB3.2, 7*USB2.0, 6*COM, 2*PCIe X16(X8 signal), 4*PCIe x4(3 for X4 signal,1 for X1 signal), 1*PCI, 1*M.2 M-key, 1*HDMI, 1*DP, 1*VGA, 1*Line out and 1*Mic, optional Amplifier, 8bit DIO, 4*SATA3, 24-pin ATX+8-pin ATX provides 12V power supply

Accessory Pack

Standard configuration			Selectinve configuration	
Accessory	Description	Amount	Accessory	Description
Serial ports cable	DB9 male, 300mm	3	DIO cable	DB9 male, 600mm
SATA cable	SATA 7pin data cable, 420mm	2	Audio cable	Three in a row(Line-out/Line-in/Mic) 3.5mm phone jack, 300mm
980 I/O block slice	Full IO opening, 0.5mm stainless steel	1	Serial ports cable	DB9 male, 300mm
Screw&jumper package	Two M2 screws, two M2.5 screws+two 2.0 and two 2.5 jumper caps (spare)	1	USB2.0 cable	Two in a row Type A, 300mm
			USB3.0 cable	Two in a row Type A, 300mm
			SATA cable	SATA 7pin data cable, 420mm
			CPU radiator1	LGA1700, TDP 65W wind-cooling radiator
			CPU radiator2	LGA1700, TDP 125W wind-cooling radiator