

M/B offering for PPC-600

PPC-MB-620



Features

- Supports Intel® 12/13/14th Gen Core™ i processor (LGA1700) with Intel Q670E/H610E chipset
- Two 262-pin SO-DIMM up to 64GB DDR5 4800 MHz SDRAM
- Supports triple display of DP/HDMI/LVDS
- Supports PCIe x16 (Gen 5), 1 x M.2 M key & 1 x M.2 E key, 6 x USB 3.2
- Supports 2 x SATA 3.0 (Raid 0, 1) (only for PCH Q670E)
- Supports TPM2.0 hardware security (on board as default)
- Supports 4 x RS-232, 1 x RS-232/422/485
- Supports 1 x GPIO(8 channels)

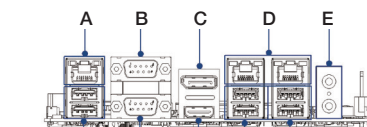
Specifications

14th Generation Processors	CPU	i7-14700	i7-14700T	i5-14500	i5-14500T	i3-14100	i3-14100T		
	Core Number	20	20	14	14	8	8		
	Base frequency (GHz)	2.1	1.3	2.6	1.7	3.5	2.7		
	Max Speed (GHz)	5.4	5.2	5.0	4.8	4.7	4.4		
	SmartCache (MB)	33MB	33MB	24MB	24MB	12MB	12MB		
13th Generation Processors	TDP (W)	65W	35W	65W	35W	65W	35W		
	CPU	i9-13900E/i9-13900	i9-13900TE	i7-13700E/i7-13700	i7-13700TE	i5-13500E/i5-13500	i5-13500TE	i3-13100E/i3-13100	i3-13100TE
	Core Number	24	24	16	16	14	14	4	4
	Base frequency (GHz)	1.8/2.0	1.0	1.9/2.1	1.1	2.4/2.5	1.3	3.3/3.4	2.4
	Max Speed (GHz)	5.2/5.6	5	5.1/5.2	4.8	4.6/4.8	4.5	4.4/4.5	4.1
12th Generation Processors	SmartCache (MB)	36	36	30	30	24	24	12	12
	TDP (W)	65	35	65	35	65	35	60	35
	CPU	i9-12900E/i9-12900	i9-12900TE	i7-12700E/i7-12700	i7-12700TE	i5-12500E/i5-12500	i5-12500TE	i3-12100E / i3-12100	
	Core Number	16	16	12	12	6	6	4	4
	Base frequency (GHz)	2.3/2.4	1.1	2.1/2.1	1.4	2.9/3.0	1.9	3.2/3.3	2.1
Memory	Max Speed (GHz)	5.0/5.1	4.8	4.8/4.9	4.6	4.5/4.6	4.3	4.2/4.3	4
	SmartCache (MB)	30	30	25	25	18	18	12	12
	TDP (W)	65	35	65	35	65	35	60	35
	Memory		2 x 262-pin SODIMM DDR5 , 4800 MHz , up to 64 GB (non-ECC)						
	Chipset		Q670E					H610E	
Ethernet	Controller	LAN1: 1Gb Intel i219LM (support AMT 16.0 only for i7 & i5) LAN2: 2.5Gb Intel i226-LM					LAN1: 1Gb Intel i219LM LAN2: 2.5Gb Intel i226-LM LAN3: 2.5Gb Intel i226-LM		
	Connector	RJ45 x2					RJ45 x3		
Rear I/O	USB	6 (USB 3.2 Gen 2)					6 (2 x USB 3.2 Gen 2, 2 x USB 3.2 Gen 1, 2 x USB 2.0)		
	Ethernet	2					3		
	Display Port	1							
	HDMI	1							
	Audio	2 (Mic-in, Line-out)							
Internal Connector	Serial	2 (1 x RS-232/422/485, 1 x RS-232)							
	USB	3 x USB 2.0					1 x USB 2.0		
	SATA	2 x SATA 3.0 (support RAID 0,1)					2 x SATA 3.0		
	Serial	3 x RS-232							
	GPIO	8-bit							
Expansion Slot	M.2	1 x M.2 M key 2280 (PCIe x 4 & SATA) 1 x M.2 E key 2230 (PCIe & USB2.0) 1 x M.2 B key 3042/3052 (PCIe & USB2.0 & SIM slot)					1 x M.2 B key 3042/3052 (PCIe & USB3.1 & USB2.0 & SIM slot)		
	PCIe x16 (Gen5)	1 x slot							
	Security	1 x TPM2.0 (on board as default)							
Watchdog Timer		255 timer intervals , configurable using software							
Dimensions		170 mm x 170 mm (6.69 x 6.69)							
OS Support		Microsoft® Win 10 IOT LTSC/64-bit/Win 11, Linux							

Ordering Information

Part Number	Description
PPC-MB-620A	12/13/14th Core i M/B, H610E, 3 x LAN
PPC-MB-620B	12/13/14th Core i M/B, Q670E, 2 x LAN

I/O view



Note: * Gigabit Ethernet only for PPC-MB-620A (H610E)

** 2 x USB2.0 for PPC-MB-620A (H610E)
2 x USB3.2 for PPC-MB-620B (Q670E)

- A. Gigabit Ethernet*
- B. RS232
- C. Display Port
- D. 2 x Gigabit Ethernet
- E. Line-out/Mic-in
- F. 2 x USB**
- G. RS232/422/485
- H. HDMI
- I. 2 x USB 3.2
- J. 2 x USB 3.2