

M/B offering for PPC-600

PPC-MB-620



Features

- Supports Intel® 12/13/14th Gen Core™ i processor (LGA1700) & Intel® Core™ Processor Series 2 with Intel Q670E/H610E chipset
- Two 262-pin SO-DIMM up to 64GB DDR5 4800/5600 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)

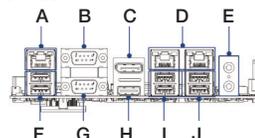
Specifications

	CPU	251E/251TE	221E/221TE	211E/211TE	201E/201TE	300/300T	
Intel® Core™ Processors Series 2 (Bartlett Lake-S)	Core Number	24/24	14/14	10/10	4/4	2/2	
	Max Speed	2.1GHz(Up to 5.6GHz) /1.4GHz(Up to 5.4GHz)	2.7GHz(Up to 5.2GHz) /1.8GHz(Up to 5.0GHz)	2.7GHz(Up to 4.9GHz) /1.7GHz(Up to 4.8GHz)	3.6GHz(Up to 4.8GHz) /2.9GHz(Up to 4.6GHz)	3.9GHz /3.4GHz	
	SmartCache	36/36MB	24/24MB	20/20MB	12/12MB	6/6MB	
	TDP	65W/45W	65W/45W	65W/45W	60W/45W	46W/35W	
	Memory	Up to DDR5 5600 MT/s /Up to DDR5 5600 MT/s	Up to DDR5 5600 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	
14th Generation Processors	CPU	i9-14900/i9-14900T	i7-14700/i7-14700T	i5-14500/i5-14500T	i5-14400/i5-14400T	i3-14100/i3-14100T	
	Core Number	24/24	20/20	14/14	10/10	4/4	
	Max Speed	2GHz(up to 5.8GHz) /1.1GHz(up to 5.5GHz)	2.1GHz(up to 5.4GHz) /1.3GHz(up to 5.2GHz)	2.6GHz(up to 5.0GHz) /1.7GHz(up to 4.8GHz)	2.5GHz(up to 4.7GHz) /1.5GHz(up to 4.5GHz)	3.5GHz(up to 4.7GHz) /2.7GHz(up to 4.4GHz)	
	SmartCache	36/36MB	33/33MB	24/24MB	20/20MB	12MB	
	TDP	65W/35W	65W/35W	65W/35W	65W/35W	60W/35W	
13th Generation Processors	CPU	i9-13900E/i9-13900TE	i7-13700E/i7-13700TE	i5-13500E/i5-13500TE	i3-13100E/i3-13100TE		
	Core Number	24/24	16/16	14/14	4/4		
	Max Speed	1.8GHz(Up to 5.2GHz) /1.0GHz(Up to 5.0GHz)	1.9GHz(Up to 5.1GHz) /1.1GHz(Up to 4.8GHz)	2.4GHz(Up to 4.6GHz) /1.3GHz(Up to 4.5GHz)	3.3GHz(Up to 4.4GHz) /2.4GHz(Up to 4.1GHz)		
	SmartCache	36/36MB	30/30MB	24/24MB	12/12MB		
	TDP	65W/35W	65W/35W	65W/35W	60W/35W		
12th Generation Processors	CPU	i9-12900E/i9-12900TE	i7-12700E/i7-12700TE	i5-12500E/i5-12500TE	i3-12100E/i3-12100TE	G7400E/G7400TE	G6900E/G6900TE
	Core Number	16/16	12/12	6/6	4/4	2/2	
	Max Speed	2.3GHz(Up to 5.0GHz) /1.1GHz(Up to 4.8GHz)	2.1GHz(Up to 4.8GHz) /1.4GHz(Up to 4.6GHz)	2.9GHz(Up to 4.5GHz) /1.9GHz(Up to 4.3GHz)	3.2GHz(Up to 4.2GHz) /2.1GHz(Up to 4.0GHz)	3.6GHz/ 3.0GHz	3.0GHz/ 2.4GHz
	SmartCache	30/30MB	25/25MB	18/18MB	12/12MB	6/6MB	4/4MB
	TDP	65W/35W	65W/35W	65W/35W	60W/35W	46W/35W	46W/35W
Memory	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s	Up to DDR5 4800 MT/s /Up to DDR5 4800 MT/s
Memory	2 x 262-pin SODIMM DDR5, 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 x4 & SATA) 1 x M.2 E key 2230 (PCIe & USB2.0)				1 x M.2 B key 3042/3052 (PCIe & 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