IPC-221

Compact Industrial Computer System Supporting Intel® Core™ i 12th/13th/14th Gen Processor & Intel® Core™ Processor Series 2 (LGA 1700)



Features

- Supporting Intel® Core™ i 12th/13th/14th Gen Processor & Intel® Core™ Processor Series 2 (LGA 1700) with Intel® Q670E/H610E chipset
- 2 x independent displays
- 2 x GigaLan and up to 8 USB 3.2 Gen2
- 2 x RS-232/422/485
- 1 x NVMe M.2 (PCE-2133 Only), 2 x 2.5" HDD/SSD, and 1 x mSATA
- Built-in TPM module (TPM 2.0)
- Built in 100~240VAC, 250W Adaptor

Specifications

Intel® Core™ Processors Series 2 (Bartlett Lake-S) (P-Core Only)	CPU	Core 9 273PE	Core 9 273PTE	Core 7 253PE	Core 7 253PTE	Core 5 223PE	Core 5 223PTE	Core 5 213PE	Core 5 213PEF	Core 5 213PTE												
	P-core Base Frequency	2.3 GHz	1.4 GHz	2.5 GHz	1.8 GHz	2.9 GHz	2.3 GHz	2.7 GHz	2.7 GHz	2.1 GHz												
	L3 Cache	36 MB	36 MB	33 MB	33 MB	24 MB	24 MB	24 MB	24 MB	24 MB												
	Cores	12	12	10	10	8	8	8	8	8												
	Processor Base Power	65W	45W	65W	45W	65W	45W	65W	65W	45W												
Intel® Core™ Processors Series 2 (Bartlett Lake-S)	CPU	251E	251TE	221E	221TE	211E	211TE	211EF	201E	201TE	300	300T										
	P-core Base Frequency	2.1 GHz	1.4 GHz	2.7 GHz	1.8 GHz	2.7 GHz	1.7 GHz	2.7 GHz	3.6 GHz	2.9 GHz	3.9 GHz	3.4 GHz										
	L3 Cache	36 MB	36 MB	24 MB	24 MB	20 MB	20 MB	20 MB	12 MB	12 MB	6 MB	6 MB										
	Cores	24	24	14	14	10	10	10	4	4	2	2										
	Processor Base Power	65W	45W	65W	45W	65W	45W	65W	60W	45W	46W	35W										
14th Generation Processors	CPU	I9-14900	I9-14900T	I7-14700	I7-14700T	I5-14500	I5-14500T	I5-14400	I5-14400T	I5-14400F	I3-14100	I3-14100T	I9-14901E	I9-14901TE	I7-14701E	I7-14701TE	I5-14501E	I5-14501TE	I5-14401E	I5-14401TE		
	P-core Base Frequency	2.0 GHz	1.1 GHz	2.1 GHz	1.3GHz	2.6 GHz	1.7 GHz	2.5 GHz	1.5 GHz	2.5 GHz	3.5 GHz	2.7 GHz	2.8 GHz	2.3 GHz	2.6 GHz	2.1 GHz	3.3 GHz	2.2 GHz	2.5 GHz	2 GHz		
	L3 Cache	36 MB	36 MB	33 MB	33 MB	24 MB	24 MB	20 MB	20 MB	20 MB	12 MB	12 MB	36 MB	36 MB	33 MB	33 MB	24 MB	24 MB	24 MB	24 MB		
	Cores	24	24	20	20	14	14	10	10	10	4	4	8	8	8	8	6	6	6	6		
	Processor Base Power	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	65 W	60 W	35 W	65 W	45 W	65 W	45 W	65 W	45 W	65 W	45 W		
13th Generation Processors	CPU	i9-13900(E)		i9-13900TE		i7-13700(E)		i7-13700T(E)		i5-13500(E)		i5-13500T(E)		i5-13400(E)		i3-13100(E)		i3-13100T(E)				
	P-core Base Frequency	2.0 GHz		1.1 GHz		2.1 GHz		1.4 GHz		2.5 GHz		1.6 GHz		2.5 GHz		3.4 GHz		2.5 GHz				
	L3 Cache	36 MB		36 MB		30 MB		30 MB		24 MB		24 MB		20MB		12 MB		12 MB				
	Cores	24		24		16		16		14		14		10		4		4				
	Processor Base Power	65 W		35 W		65 W		35 W		65 W		35 W		65W		60 W		35 W				
12th Generation Processors	CPU	i9-12900(E)		i9-12900TE		i7-12700(E)		i7-12700TE		i5-12500(E)		i5-12400		i5-12500TE		i3-12100(E)		i3-12100TE	Pentium G7400E	Pentium G7400TE	Celeron G6900E	Celeron G6900TE
	P-core Base Frequency	2.4 GHz		1.1 GHz		2.1 GHz		1.4 GHz		3.0 GHz		2.5 GHz		1.9 GHz		3.3 GHz		2.1 GHz	3.6 GHz	3.0 GHz	3.0 GHz	2.4 GHz
	L3 Cache	30 MB		30 MB		25 MB		25 MB		18 MB		18 MB		18 MB		12 MB		12 MB	6 MB	6 MB	4 MB	4 MB
	Cores	16		16		12		12		6		6		6		4		4	2	2	2	2
	Processor Base Power	65 W		35 W		65 W		35 W		65 W		65 W		35 W		60 W		35 W	46 W	35 W	46 W	35 W
Processor System	Socket	LGA 1700																				
	Chipset	Q670E / H610E																				
	BIOS	AMI 256Mbit SPI Flash																				
Memory	Technology	Dual-channel DDR5 4800 MHz																				
	Socket	2 x 262 pin DDR5 SODIMM (Up to 32GB per socket)																				
	Maximum Capacity	64GB																				
	Chipset	PCE-2133: Q670E PCE-2033: H610E																				
Display	VGA	Up to 1920 x 1080 @ 60Hz																				
	HDMI	Up to 3840 x 2160 @ 60Hz																				
Ethernet	Controller	PCE-2133 LAN1: Intel® I219LM, LAN2: Intel® I226V PCE-2033 LAN1: Intel® I219V, LAN2: Intel® I226V																				
	Interface	LAN1: 10/100/1000 Mbps; LAN2: 10/100/1000/2500 Mbps																				
	Connector	2 x RJ45																				
Storage	NVMe M.2	1 (PCIe x4 M-key 2280 type, PCE-2133 Only)																				
	HDD/SSD	2 x 2.5" HDD/SSD (Max 15mm Height each)																				
	mSATA	1																				
	RAID	0/1 (PCE-2133 Only)																				
I/O	USB	PCE-2133: 8 x USB 3.2 Gen2 PCE-2033: 4 x USB 3.2 Gen1 + 4 USB 2.0																				
	Serial Port	2 x RS-232/422/485 support auto flow control																				
	Audio	2 (Line-out, Mic-in)																				
Expansion	Expansion slots	One PCIe x16 One PCIe x4																				
	Support card size	111.15mm(Full height) x 168mm (Half length)																				
Watchdog Timer	Output	System reset																				
	Interval	Programmable 1 ~ 255 sec/min																				
Environment		Operating												Non-operating								
	Temperature	0 ~ 40 °C												-40 ~ 70 °C								
	Humidity	95% @ 40 °C (non-condensing)																				
	Vibration	With SSD: 2 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 0.5Grms @ 5 ~ 500 Hz, random, 1 hr/axis												2G								
	Shock	With SSD: 10G, IEC-68-2-27, half-sine wave, 11 ms duration																				

All product specifications are subject to change without notice.

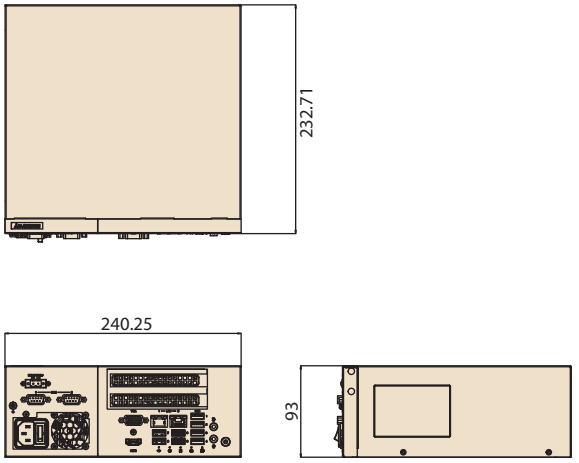
Last updated: 20-Apr-2026

Specifications (Cont.)

Mechanical	Dimensions (W x D x H)	240 x 233 x 93 mm
	Weight	2.5 kg
	Installation	Desktop/wall mount
Certifications	EMC	CE/FCC Class A, CCC
	Safety	CCC

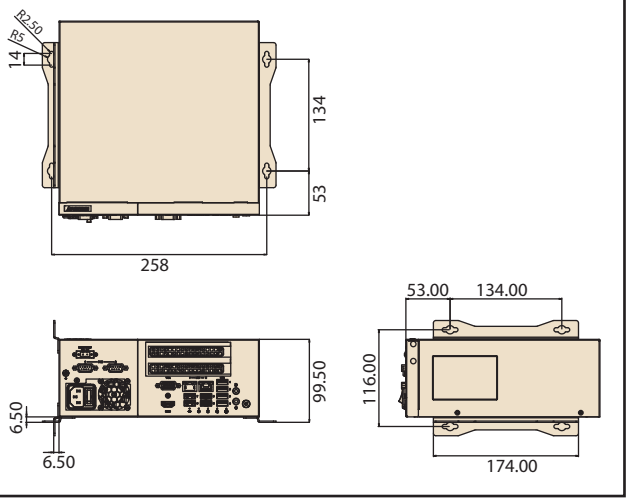
Dimensions

Unit: mm



Installation

Unit: mm



Front View



Rear View



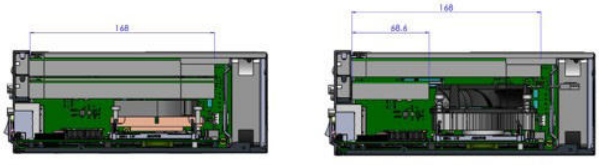
Ordering Information

Part Number	Compatible Mother Board	PCIe x16	PCIe x4	PCI	Gbe	HDD/SSD	COM	Internal USB (2.0 Type A)
IPC-221-00A1	PCE-2133	1 (Gen4)	1 (Gen3)	0	2	2 x 2.5"	2	1
	PCE-2033	1 (Gen4)	1 (Gen3)	0	2	2 x 2.5"	2	1

Part Number	Chipset	TPM 2.0	USB 3.2	USB 2.0	Internal USB 2.0 (Box header)	NVMe M.2	miniPCIe
PCE-2133-00A1	Q670E	TPM 2.0	8	0	2	1	1 (mSATA, PCIe, USB)
PCE-2033-00A1	H610E	TPM 2.0	4	4	0	0	1 (mSATA Only)

Optional Accessories

Part Number	Description
1970006211S001	1U CPU Cooler LGA1700 65W 92x89x26.2
1970005354T001	1.5U CPU Cooler LGA1700 65W 110x110x45.4
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700022940-01	Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01
1702002605	Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D



Note: Please select 1U Cooler if need to install 2 expansion cards

Embedded OS

PN	Description
20706WLH1S0050	img W11 2024HL LTSC PCE-2133 64b
20706WLV1S0050	img W11 2024VL LTSC PCE-2133 64b
20706WLE1S0050	img W11 2024EL LTSC PCE-2133 64b
20706WLH1S0049	img W11 2024HL LTSC PCE-2033 64b
20706WLV1S0049	img W11 2024VL LTSC PCE-2033 64b
20706WLE1S0049	img W11 2024EL LTSC PCE-2033 64b
20706WX1HS0053	img W10 21HL PCE-2133 64b 21H2 ENU
20706WX1VS0053	img W10 21VL PCE-2133 64b 21H2 ENU
20706WX1ES0053	img W10 21EL PCE-2133 64b 21H2 ENU
20706WX1HS0056	img W10 21HL PCE-2033 64b 21H2 ENU
20706WX1VS0056	img W10 21VL PCE-2033 64b 21H2 ENU
20706WX1ES0056	img W10 21EL PCE-2033 64b 21H2 ENU
20706U22DS0007	img UbuntuD PCE-2133 64b 22.04 ENU
20706U22DS0005	img UbuntuD PCE-2033 64b 22.04 ENU