IPC-220 / 240

Compact Industrial Computer System with 10th Gen Intel® Core™ i CPU Socket (LGA 1200)

Features

- Intel® 10th Gen Core™ i CPU socket-type (LGA1200) with Intel® Q470E/ H420E chipset
- 3 x independent displays (third display output (DP) via optional cable)
- 2 x GigaLan and 6 x USB3.2
- 2 x RS-232/422/485 and 2 x RS232 serial ports
- 1 x NVMe M.2 (Q470E Only), 2 x 2.5" HDD/SSD, and 1 x mSATA
- 19 ~ 24 V_{DC} input power range
- Support Power Out 12V/5V - 2A
- Supports Advantech i-Door
- Versatile LED for system status and alarm

Specifications

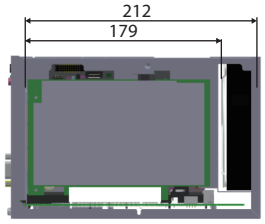
10th Generation Processor (TDP 35W)	CPU	I9-10900TE	I7-10700TE	I5-10500TE	I3-10100TE
	Core Number	10	8	6	4
	Base Frequency	1.80 GHz	2.00 GHz	2.30 GHz	2.30 GHz
	Max Turbo Frequency	4.50 GHz	4.40 GHz	3.70 GHz	3.60 GHz
	L3 Cache	20 MB	16 MB	12 MB	6 MB
	Temperature	0 ~ 45 °C			
	Chipset	Q470E/H420E			
	BIOS	AMI 256/128Mb SPI Flash			
10th Generation Processor (TDP 65W)	CPU	I9-10900E	I7-10700E	I5-10500E	I3-10100E
	Core Number	10	8	6	4
	Base Frequency	2.80 GHz	2.90 GHz	3.10 GHz	3.20 GHz
	Max Turbo Frequency	4.70 GHz	4.50 GHz	4.20 GHz	3.80 GHz
	L3 Cache	20 MB	16 MB	12 MB	6 MB
	Temperature	0 ~ 45 °C			
	Chipset	Q470E/H420E			
	BIOS	AMI 256/128Mb SPI Flash			
Memory	Technology	Dual-channel DDR4 2666/2933 MHz			
	Socket	2 x 260 pin DDR4 SODIMM			
	Maximum Capacity	64GB/ 32GB per DIMM			
Display	VGA	1 x DB15, up to 2048 x 1152 maximum resolution			
	HDMI	1 x HDMI, up to 4096 x 2160 maximum resolution @ 24 MHz			
	DP	1 x DP, up to 4096x2304 maximum resolution @ 60 MHz (Pin Header)			
	Multiple Display	3 x independent displays (third display output (DP) via optional cable, resolution up to 4096 x 2160) (Q470E only)			
Ethernet	Controller	Q470E LAN1: Intel® i219LM, LAN2: Intel® i210AT H420E LAN1: Intel® i219V, LAN2: Intel® i210AT			
	Interface	2 x RJ45			
Storage	NVMe M.2	1 x PCIex4 M Key			
	HDD	2 x 2.5" HDD/SSD (Max 15mm Height each)			
	mSATA/MiniPCIe	Q470E: 1 x MiniPCIe H420E: 1 x mSATA			
	RAID	0/1/5/10 (Q470E Only)			
I/O	USB	Q470E: 6 x USB3.2, 2 x USB2.0, 2 x Internal USB2.0, 2 x Internal USB2.0 Type A H420E: 6 x USB3.2, 2 x USB2.0, 2 x Internal USB2.0 Type A			
	Serial Port	2 x RS-232/422/485 support auto flow control			
	Audio	2 (1 x line out and 1 x mic in)			
Expansion	I/O Module	Support Advantech i-Door			
	Add-On-Card Module		PCIex16	PCIex4	PCI
		IPC-220-20A1	1	1	0
		IPC-240-20A1	1	3	0
		IPC-240-21A1	1	1	2
LED and Switch	Button	Power			
	LED	1 x CPU FAN Alarm, 1 x System Temp. Alarm, 1 x Watch Dog, 1 x CPU Temp. Alarm, 1 x Power, 1 x HDD Disk			
Power	Type	ATX/AT			
	Input Voltage	19 ~ 24 V_{DC}, 8A ~ 6.5A			
	Remote Power Switch	Support Remote Power Switch			
	Power consumption	150W (Without Add on card)~230W (With Add on card)			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment		Operating			Non-operating
	Temperature	0 ~ 45 °C			-40 ~ 85 °C
	Humidity	95% @ 40 °C (non-condensing)			
	Vibration	With SSD: 3 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			
Mechanical	Dimensions (W x D x H)	IPC-220 V2: 155 x 230 x 150 mm (6.1" x 9.05" x 5.9") IPC-240 V2: 195 x 230 x 150 mm (7.68" x 9.05" x 5.9")			
	Weight	IPC-220 V2: 3.1kg IPC-240 V2: 3.3kg			
	Installation	Desktop/wall mount			
Certifications	EMC	CE/FCC Class A, CCC, BSMI			
	Safety	UL, CCC			

All product specifications are subject to change without notice.

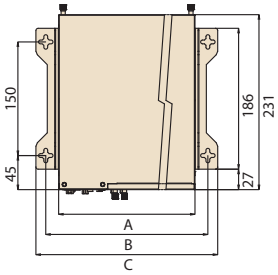
Dimensions

Unit: mm

Add on card Max. length

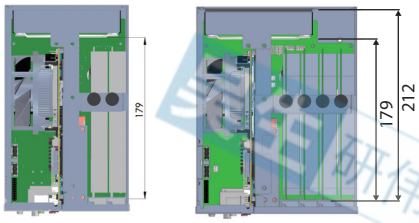


Side View

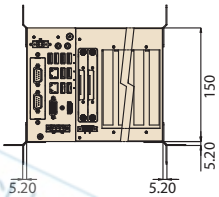


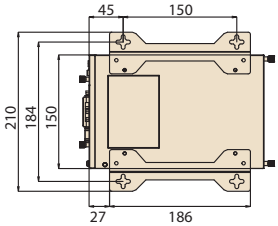
Dimension (mm)	IPC-220-20A1	IPC-240-20A1	IPC-240-21A1
A	155	195	195
B	189	229	229
C	215	255	255

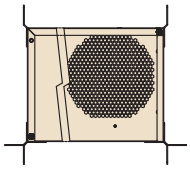
IPC-220 **IPC-240**



Top View







Front View

IPC-220-20A1

IPC-240-20A1
IPC-240-21A1

Expansion Slot Order	IPC-220-20A1	IPC-240-20A1	IPC-240-21A1
1	PCIe x 16	PCIe x 16	PCIe x 16
2	PCIe x 4	PCIe x 4	PCI
3	-	PCIe x 4	PCIe x 4
4	-	PCIe x 4	PCI

Note: 2-port D-sub 9-pin COM cable to be assembled upon request

Ordering Information

Part Number	Compatible Mother Board	Chipset	PCIex16	PCIex4	PCI	HDD/SSD	Power	Internal USB2.0 Type A
IPC-220-20A1	PCE-2132-00A1	Q470E	1	1	0	2 x 2.5"	19-24 V_DC	2
	PCE-2032-00A1	H420E	1	1	0	2 x 2.5"	19-24 V_DC	2
IPC-240-20A1	PCE-2132-00A1	Q470E	1	3	0	2 x 2.5"	19-24 V_DC	2
IPC-240-21A1	PCE-2132-00A1	Q470E	1	1	2	2 x 2.5"	19-24 V_DC	2
	PCE-2032-00A1	H420E	1	1	2	2 x 2.5"	19-24 V_DC	2

Part Number	Chipset	USB3.2	USB2.0 (External/Internal)	GbE	NVMe M.2	miniPCIe	COM
PCE-2132-00A1	Q470E	6	2/2	2	1 (PCIex4 M Key)	1 (Full-Size)	2
PCE-2032-00A1	H420E	6	2/0	2	0	1 (mSATA Only)	2

IPC-220/240 Packing List

Item	Description
IPC-220/240	Compact Industrial Computer Chassis
1960070543T005	Mounting Bracket
2001022010	User Manual for IPC-220/240
1652003234	4-pin Phoenix power connector
1652002205	Remote SW 2 pin Phoenix connector
1652007894-01	4-Pin Plug in 3.5mm 90D(F) DC output connector
1700019968	F Cable 2*10P-2.0/D-SUB 9P(M)*2 15CM ARK-2120
1960068789N105	IDOOR COMX2 COVER FOR IPC-240 877C
1700024926-01	A CABLE 1*2P-2.0/PLUG-IN 2P-5.08 16cm
1700019968	2-port D-sub 9-pin COM cable
1960068789N105	IDOOR COM x2 COVER

Note: 2-port D-sub 9-pin COM cable to be assembled upon request

PCE-2032/2132 Packing List

Item	Description
PCE-2032/2132	10th Gen Intel® Core™ i CPU (LGA 1151) CPU board
1950023035N021	Front IO Panel
2041203200	Startup Manual for PCE-2032/2132

Optional Accessories

Part Number	Description
96PSA-A230W24P4-3	ADP A/D 100-240V 230W 24V TB 4P
96PSA-A150W19P4-3	Adaptor A/D 100-240V 150W 19V TB 4P
96PSD-A240W24-MN	DIN RAIL Adapter A/D 100-240V 240W 24V
1960053207N001	CPU Cooler LGA1155 S-95W 92.9x92.9x46 4400RPM
1700008762	COM3/4 (RS-232) Cable+PCIe Bracket
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
1700024858-01	POE Power Cable 2*2P-4.2/2*2P-4.2 15cm
98R12200010	Display Port accessory kit
98R12200030	HDMI port kit iDoor
98R12200040	DVI port kit iDoor
1700031170-01	4-PIN DC to DC Power cable, DIN Rail Adapter, 150cm
1700029720-01	Power Cord (USA), 3 Pin, DIN Rail Adapter, 183cm
1700030520-01	Power Cord (CN), 3 Pin, DIN Rail Adapter, 150cm
PCA-TPM-00B1E	TPM 2.0 module

Note: The PCM series module requires a bracket (P/N : 1960065854N001) that must be ordered separately.

Embedded OS

Item	Description
20706WX9ES0140	img W10 19EL PCE-2032 64b 1809 ENU
20706WX9HS0126	img W10 19HL PCE-2032 64b 1809 ENU
20706WX9VS0130	img W10 19VL PCE-2032 64b 1809 ENU

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