

# IPC-220 / 240

## Compact Industrial Computer System with 6<sup>th</sup>/7<sup>th</sup> Gen Intel® Core™ i CPU Socket (LGA 1151)

**NEW**



### Features

- Intel® 6<sup>th</sup>/7<sup>th</sup> Gen Core™ i CPU socket-type (LGA1151) with Intel® Q170/H110 chipset
- 3 x independent displays (third display output (DP) via optional cable)
- 2 x GigaLan and 6 x USB3.0 (Q170)/ 4 x USB3.0 (H110)
- 2 x RS-232/422/485 and 2 x RS232 serial ports
- 2 x 2.5" HDD/SSD, and 1 x mSATA
- 19 ~ 24 V<sub>DC</sub> input power range
- Support Power Out 12V/5V - 2A
- Supports Advantech i-Door
- Versatile LED for system status and alarm



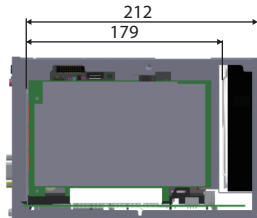
### Specifications

6 <sup>th</sup> /7 <sup>th</sup> Generation Processor (TDP 35W)	CPU	i7-7700T	i7-6700TE	i5-6500TE	i3-6100TE	G4400TE	
	Core Number	4	4	4	2	2	
	Base Frequency	2.9 GHz	2.4 GHz	2.3 GHz	2.7 GHz	2.9 GHz	
	Max Turbo Frequency	3.8 GHz	3.4 GHz	3.3 GHz			
	L3 Cache	8MB	8 MB	6 MB	4 MB	3 MB	
	Temperature	0 ~ 45 °C					
6 <sup>th</sup> /7 <sup>th</sup> Generation Processor (TDP 65W)	Chipset	Q170/H110					
	BIOS	AMI 128Mb SPI Flash					
	CPU	i7-7700	i5-7500	i3-7101E	i7-6700	i5-6500	i3-6100
	Core Number	4	4	2	4	4	2
	Base Frequency	3.6GHz	3.4 GHz	3.9 GHz	3.4GHz	3.2 GHz	3.7 GHz
	Max Turbo Frequency	4.2GHz	4.0GHz		4.0GHz	3.6GHz	
Memory	L3 Cache	8MB	6 MB	3 MB	8MB	6 MB	4 MB
	Temperature	0 ~ 45 °C					
	Chipset	Q170/H110					
	BIOS	AMI 128Mb SPI Flash					
	Technology	Dual-channel DDR4 2133/2400 MHz (without ECC)					
	Socket	2 x 260-pin DDR4 SODIMM (up to 16 GB per socket)					
Display	Maximum Capacity	32GB					
	VGA	1 x DB15, up to 2048 x 1152 maximum resolution					
	HDMI	1 x HDMI, up to 4096 x 2160 maximum resolution @ 30Mhz					
Ethernet	Multiple Display	3 x independent displays (third display output (DP) via optional cable , resolution up to 4096 x 2160) (Q170 only)					
	Controller	Q170 LAN1: Intel® i219LM, LAN2: Intel® i210AT H110 LAN1: Intel® i219V, LAN2: Intel® i210AT					
	Interface	2 x RJ45					
Storage	HDD	2 x 2.5" HDD/SSD (Max 9.5mm Height)					
	mSATA/MiniPCle	Q170: 1x MiniPCle (PCle and mSATA) H110: 1x mSATA					
	RAID	0/1/5/10 (Q170 only)					
I/O	USB	Q170: 6 x USB 3.0, 2 x USB 2.0, 2 x Internal USB 2.0, 2 x Internal USB2.0 Type A H110: 4 x USB 3.0, 4 x USB 2.0, 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)					
	I/O Module	Support Advantech i-Door					
Expansion	Add-On-Card Module		PCIex16	PCIex4	PCIex1	PCI	
		IPC-220-00A1	1	1	0	0	
		IPC-240-00A1	1	2	1	0	
		IPC-240-01A1	1	1	0	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					
	Type	ATX/AT					
Power	Input Voltage	19 ~ 24 V <sub>DC</sub> , 8A ~ 6.5A					
	Remote Power Switch	Support Remote Power Switch					
	Power consumption	150W (Without Add on card)-220W (With Add on card)					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec/min					
Environment	Operating	0 ~ 45 °C				Non-operating	
	Humidity	95% @ 40 °C (non-condensing)				-40 ~ 85 °C	
	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-240: 180 x 230 x 150 mm (7.08" x 9.05" x 5.9") IPC-220: 140 x 230 x 150 mm (5.51" x 9.05" x 5.9")					
	Weight	IPC-220: 3.0kg IPC-240: 3.2Kg					
	Installation	Desktop/wall mount					
Certifications	EMC	CE/FCC Class A, CCC					
	Safety	UL, CCC					

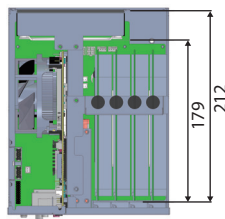
## Dimensions

Unit: mm

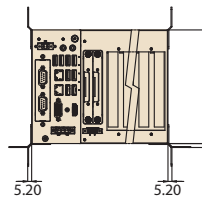
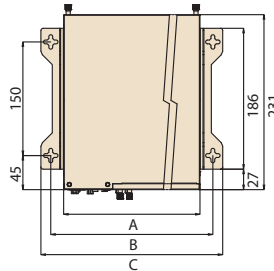
Add on card Max. length



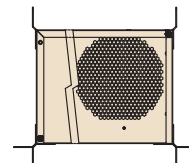
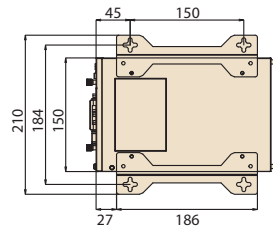
Side View



Top View



Dimension (mm)	IPC-220-00A1	IPC-240-00A1	IPC-240-01A1
A	140	180	180
B	174	214	214
C	200	240	240



## Front View



IPC-220-00A1



IPC-240-00A1  
IPC-240-01A1

Expansion slot order	IPC-220-00A1	IPC-240-00A1	IPC-240-01A1
1	PCIe x 16	PCIe x 16	PCIe x 16
2	PCIe x 4	PCIe x 1	PCI
3	-	PCIe x 4	PCIe x 4
4	-	PCIe x 4	PCI

## Ordering Information

Part Number	Compatible Mother Board	Chipset	PCIex16	PCIex4	PCIex1	PCI	HDD/SSD	Power	Internal USB2.0 Type A
IPC-220-00A1	Q170 - PCE-2129-00A1 H110 - PCE-2029-00A1	Q170/H110	1	1	0	0	2 x 2.5"	19-24V <sub>DC</sub>	2
IPC-240-00A1	Q170 - PCE-2129-00A1	Q170	1	2	1	0	2 x 2.5"	19-24V <sub>DC</sub>	2
IPC-240-01A1	Q170 - PCE-2129-00A1 H110 - PCE-2029-00A1	Q170/H110	1	1	0	2	2 x 2.5"	19-24V <sub>DC</sub>	2

Part Number	Chipset	USB3.0	USB2.0 (External/Internal)	GbE	mSATA	COM
PCE-2029-00A1	H110	4	4/0	2	1	2
PCE-2129-00A1	Q170	6	2/2	2	1	2

## IPC-220/240 Packing List

Item	Description
IPC-220/240	Compact Industrial Computer Chassis
1960070543T005	Mounting Bracket
2001022001	User Manual for IPC-220/240
1652003234	4-pin Phoenix power connector
1652002205	Remote SW 2 pin Phoenix connector
1652007291-01	4-Pin Plug in 3.5mm 90D(F) DC output connector

## PCE-2029/2129 Packing List

Item	Description
PCE-2029/2129	6th/7th Gen Intel® Core™ i CPU (LGA 1151) CPU board
1950023035N001	Front IO Panel
2041202901	Startup Manual for PCE-2029/2129

## 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
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

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

## Embedded OS

Part Number	Description
20706WE7PS0017	img WES7P PCE-2029 64b 1709 10 MUI
20706WE7PS0014	img WES7P PCE-2129 64b 1709 10 MUI
20706WX9ES0017	img W10 19EL PCE-2029 64b 1809 ENU(Entry)
20706WX9VS0015	img W10 19VL PCE-2029 64b 1809 ENU(Value)
20706WX9HS0012	img W10 19HL PCE-2029 64b 1809 ENU(High end)
20706WX9ES0022	img W10 19EL PCE-2129 64b 1809 ENU(Entry)
20706WX9VS0018	img W10 19VL PCE-2129 64b 1809 ENU(Value)
20706WX9HS0015	img W10 19HL PCE-2129 64b 1809 ENU(High end)

# IPC-242

Compact size IPC with 10th Gen Intel® Core™ i CPU Socket (LGA 1200) and 250W ATX PSU

NEW



## Features

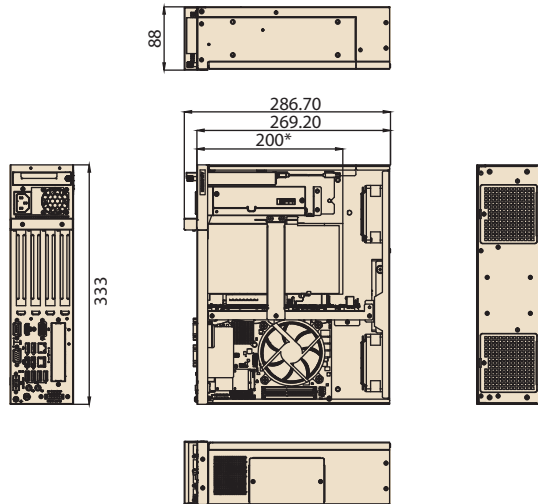
- Intel 10th Gen Core i Desktop LGA 1200 CPU supported with Q470E/H420E chipset
- Compact design fit in small cabinet or limited space
- 2-3 Independent Display (HDMI/ VGA/ DP or DVI)
- 4 Expansion slots (PCIe/ PCI)
- Rich I/O: 2 x GbE, 6 x USB3.2, 1x NVMe M.2, 2 x SATAIII, 2 x RS-232/422/485 Serial Ports, 1 x Internal USB 2.0
- 1 x Swappable HDD/SSD Tray
- 250W Flex ATX Power Support
- Support Power Output 5V/12V (max. 2A)
- Dimension: 333(W) x 269.2(D) x 88(H) mm

## Specifications

10 <sup>th</sup> 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			
10 <sup>th</sup> Generation Processor (TDP 65W)	BIOS	AMI 256/128Mb SPI Flash			
	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			
Memory	Chipset	Q470E/H420E			
	BIOS	AMI 256/128Mb SPI Flash			
	Technology	Dual-channel DDR4 2666/2933 MHz			
Display	Socket	2 x 260 pin DDR4 SODIMM			
	Maximum Capacity	Max up to 64GB (32GB Per DIMM)			
	VGA	1 x DB15, up to 2048 x 1152 maximum resolution			
Ethernet	HDMI	1 x HDMI, up to 4096 x 2160 maximum resolution @ 24 MHz			
	DP	1 x DP, up to 4096x2304 maximum resolution @ 60 MHz (Internal Pin Header via Cable)			
	Multiple Display	3 x independent displays (third display output (DP or HDMI or DVI-D) via optional cable (PCE-2132 only))			
Storage	Controller	PCE-2132: LAN1: Intel® i219LM, LAN2: Intel® i210AT PCE-2032: LAN1: Intel® i219V, LAN2: Intel® i210AT			
	Interface	2 x RJ45			
	NVMe M.2	1 x PCIe4 M Key (PCE-2132 only)			
I/O	HDD	2 x 2.5" HDD/SSD (Max 15mm Height)			
	mSATA/MiniPCIe	PCE-2132: 1 x MiniPCIe (PCIe/ SATA/USB) PCE-2032: 1 x mSATA (SATA only)			
	RAID	SW RAID 0/1/5/10 (PCE-2132 Only)			
Expansion	USB	PCE-2132: 6 x USB3.2, 2 x USB2.0, 1 x Internal USB2.0 Type A, 2 x Internal USB2.0 PCE-2032: 6 x USB3.2, 2 x USB2.0, 1 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)			
LED and Switch	I/O Module	Support Advantech i-Door			
	Add-On-Card Module		PClex16	PClex4	PCI
		IPC-242-00A1	1	3	0
Power	IPC-242-01A1	1	1	2	
	Button	Power			
	LED	1 x HDD Disk			
Watchdog Timer	Output Rating	AC 250W, ATX			
	Input Voltage	100-240V~/3.5A, 47-63Hz			
	DC Output Voltage	5V/12V (Max 2A Each)			
Environment	Remote Power Switch	2-Pin Remote Power Switch Control			
	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Mechanical	Temperature	Operating			Non-operating
	Humidity	0 ~ 45 °C			-40 ~ 85 °C
	Vibration	95% @ 40 °C (non-condensing)			
Certifications	Shock	With SSD: 1 Gms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 0.5Grms @ 5 ~ 500 Hz, random, 1 hr/axis			2G
	Dimensions (W x D x H)	333 x 269.2 x 88 mm (13.11" x 10.55" x 3.46")			
	Weight	4.2kg			
Safety	Installation	Table/wall mount			
	EMC	CE/FCC Class A, CCC			
	Safety	UL, CCC			

## Dimensions

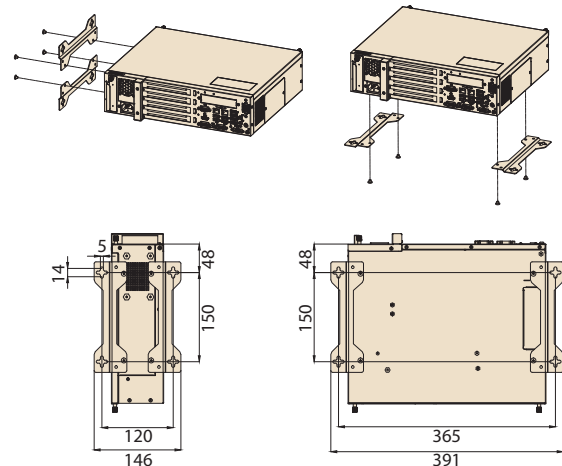
Unit: mm



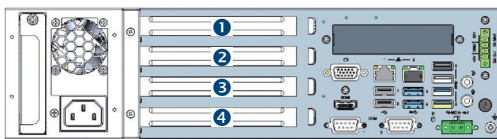
\*Max. length for expansion modules

## Installation

Unit: mm



## Front View



IPC-242-00A1  
IPC-242-01A1

Expansion Slot Order	IPC-242-00A1	IPC-242-01A1
1	PCIex4	PCI
2	PCIex16	PCI
3	PCIex4	PCIex16
4	PCIex4	PCIex4

## Ordering Information

Part Number	Compatible MB	Chipset	PCIex16	PCIex4	PCI	HDD/SSD	AC Power
IPC-242-00A1	PCE-2132-00A1	Q470E	1	3	0	2 x 2.5" (1 x internal, 1 x swappable)	250W ATX
IPC-242-01A1	PCE-2132-00A1	Q470E	1	1	2		
	PCE-2032-00A1	H420E	1	1	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-242 Packing List

Item	Description
IPC-242	Compact Industrial Computer Chassis
1960070543T007	Mounting Bracket
2001024200	User Manual for IPC-242
1652002205	Remote SW 2 pin Phoenix connector
1652005685	4-Pin Plug in 3.81mm DC output connector
1700018804	M CABLE SATA 7P/SATA 7P 90/90 25CM
1700007352	SATA POWER CABLE 15P/15CM
1960070543T007	MOUNTING BKT x2

## PCE-2032/2132 Packing List

Item	Description
PCE-2032/2132	10th Gen Intel® Core™ i CPU (LGA 1200) CPU board
2041203200	Startup Manual for PCE-2032/2132

## Optional Accessories

Part Number	Description
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
1960097668N001	Vertical Rear Mounting BKT_UP
1960097669N001	Vertical Rear Mounting BKT_DOWN
98R12420000	HDMI port kit iDoor
98R12420010	DVI port kit iDoor
98R12420020	Display port kit iDoor
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