

IPC-220 / 240

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



Features

- Intel® 6th/7th 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_{DC} input power range
- Support Power Out 12V/5V - 2A
- Supports Advantech i-Door
- Versatile LED for system status and alarm



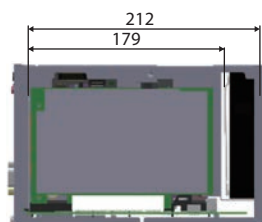
Specifications

6 th /7 th 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				
	Chipset	Q170/H110				
6 th /7 th Generation Processor (TDP 65W)	BIOS	AMI 128Mb SPI Flash				
	CPU	i7-7700	i5-7500	i3-7101E	i7-6700	i5-6500
	Core Number	4	4	2	4	4
	Base Frequency	3.6GHz	3.4 GHz	3.9 GHz	3.4GHz	3.2 GHz
	Max Turbo Frequency	4.2GHz	4.0GHz		4.0GHz	3.6GHz
	L3 Cache	8MB	6 MB	3 MB	8MB	6 MB
	Temperature	0 ~ 45 °C				
Memory	Chipset	Q170/H110				
	BIOS	AMI 128Mb SPI Flash				
	Technology	Dual-channel DDR4 2133/2400 MHz (without ECC)				
Display	Socket	2 x 260-pin DDR4 SODIMM (up to 16 GB per socket)				
	Maximum Capacity	32GB				
	VGA	1 x DB15, up to 2048 x 1152 maximum resolution				
Ethernet	HDMI	1 x HDMI, up to 4096 x 2160 maximum resolution @ 30Mhz				
	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				
Storage	Interface	H110 LAN1: Intel® I219V, LAN2: Intel® I210AT				
	HDD	2 x 2.5" HDD/SSD (Max 9.5mm Height each)				
	mSATA/MiniPCle	Q170: 1x MiniPCle (PCle and mSATA)				
I/O	RAID	H110: 1x mSATA				
	USB	0/1/5/10 (Q170 only)				
	Serial Port	Q170: 6 x USB 3.0, 2 x USB 2.0, 2 x Internal USB 2.0, 2 x Internal USB2.0 Type A				
Expansion	Audio	H110: 4 x USB 3.0, 4 x USB 2.0, 2 x Internal USB2.0 Type A				
	I/O Module	2 x RS-232/422/485 support auto flow control				
	Support Advantech i-Door	2 (1 x line out and 1 x mic in)				
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				
	Input Voltage	19 ~ 24 V _{DC} , 8A ~ 6.5A				
Power	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				
	Shock	With 2.5" HDD: 0.5Grms @ 5 ~ 500 Hz, random, 1 hr/axis				2G
Mechanical	Dimensions (W x D x H)	With SSD: 10G, IEC-68-2-27, half-sine wave, 11 ms duration				
	Weight	IPC-240: 180 x 230 x 150 mm (7.08" x 9.05" x 5.9")				
	Installation	IPC-220: 140 x 230 x 150 mm (5.51" x 9.05" x 5.9")				
Certifications	EMC	IPC-220: 3.0Kg				
	Safety	IPC-240: 3.2Kg				
	CE/FCC Class A, CCC	Desktop/wall mount				
	UL, CCC					

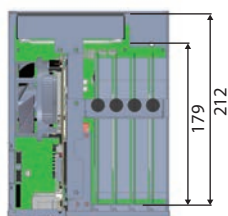
Dimensions

Unit: mm

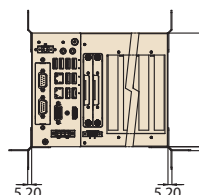
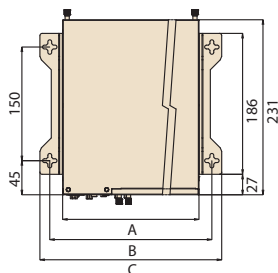
Add on card Max. length



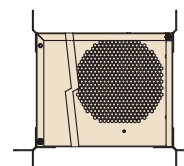
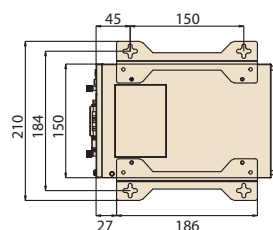
Side View



Top View



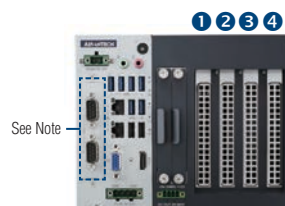
Dimension (mm)	IPC-220-00A1	IPC-240-00A1	IPC-240-01A1
A	140	180	180
B	174	214	214
C	200	240	240



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 x16
2	PCIe x 4	PCIe x 1	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	PClex16	PClex4	PClex1	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 _{DC}	2
IPC-240-00A1	Q170 - PCE-2129-00A1	Q170	1	2	1	0	2 x 2.5"	19-24V _{DC}	2
IPC-240-01A1	Q170 - PCE-2129-00A1 H110 - PCE-2029-00A1	Q170/H110	1	1	0	2	2 x 2.5"	19-24V _{DC}	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
1700019968	2-port D-sub 9-pin COM cable
1960068789N105	ID00R COM x2 COVER

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

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-A150W19P4-4	ADP A/D 100-240V 150W 19V C14 TERMINAL BLOCK 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-0081E	TPM 2.0 module

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)