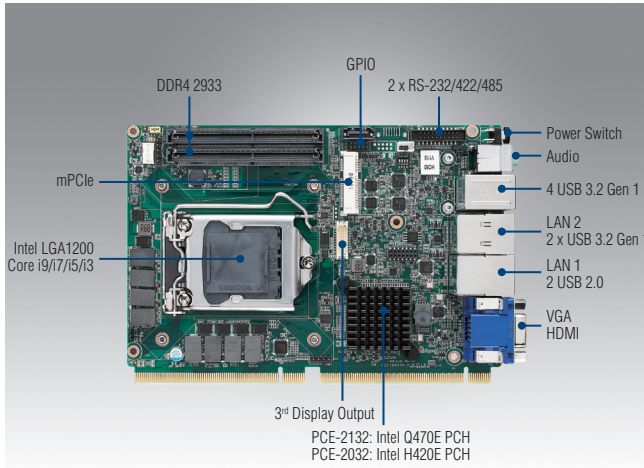


# PCE-2032/2132

## LGA1200 10th Generation Intel® Core™ i9/i7/i5/i3 & Pentium®/Celeron® CPU Board for IPC-2 Series Chassis



### Features

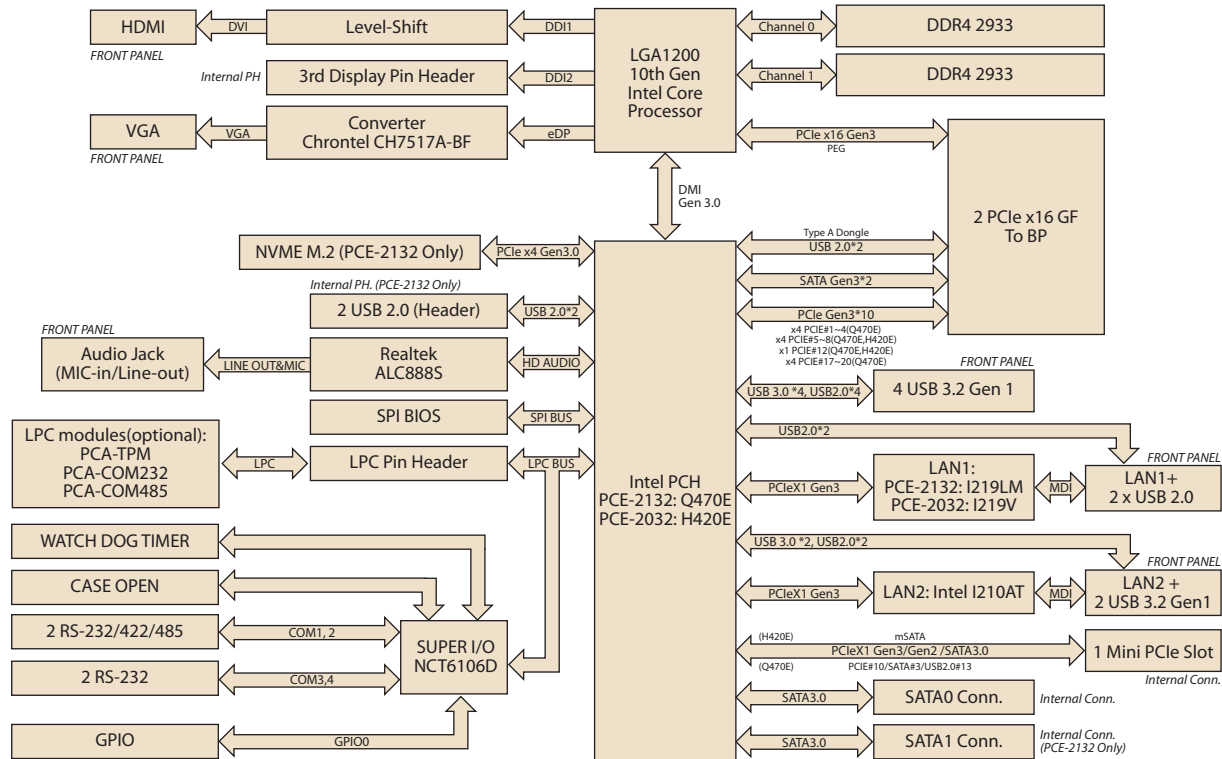
- Intel® 10th Gen Core™ i CPU socket-type (LGA1200) with Intel® Q470E/H420E chipset
- 3 x independent displays (third display output via optional cable)
- 2 x GigaLan and 6 x USB3.2
- 2 x RS-232/422/485 and 2 x RS232 serial ports
- 1 x NVMe M.2 (PCE-2132 Only), 2 x 2.5" HDD/SSD, and 1 x mSATA

### Quiet Specifications

CE FCC

10th Generation Processor	CPU	i9-10900E	i9-10900TE	i7-10700E	i7-10700TE	i5-10500E	i5-10500TE	i3-10100E	i3-10100TE	G6400E	G6400TE	G5900E	G5900TE	
	Base Frequency	2.8 GHz	1.8 GHz	2.9 GHz	2.0 GHz	3.1 GHz	2.3 GHz	3.2 GHz	2.3 GHz	3.8 GHz	3.2 GHz	3.2 GHz	3.0 GHz	
	L3 Cache	20 MB	20 MB	16 MB	16 MB	12 MB	12 MB	6 MB	6 MB	4 MB	4 MB	2 MB	2 MB	
	Cores	10	10	8	8	6	6	4	4	2	2	2	2	
	TDP	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	65 W	35 W	
	Socket	LGA1200												
	Chipset	PCE-2132: Q470E PCE-2032: H420E												
	BIOS	PCE-2132: AMI 256Mbit SPI PCE-2032: AMI 128Mbit SPI												
	Memory	Technology	Dual Channel (Non-ECC) DDR4 2933											
		Max. Capacity	64GB/ 32GB per DIMM											
	Socket	2 x 260 pin DDR4 SODIMM												
Graphics	VGA	Up to 1920 x 1080 @ 60Hz												
	HDMI	Up to 3840 x 2160 @ 30 Hz or 1920 x 1080 @60Hz												
	DP	Up to 4096 x 2160 @ 60 Hz via optional cable												
	Multiple Display	3 x independent displays (third display output via optional cable)												
Ethernet	Controller	PCE-2132 LAN1: Intel® I219LM, LAN2: Intel® I210AT PCE-2032 LAN1: Intel® I219V, LAN2: Intel® I210AT												
	Connector	2 x RJ-45												
SATA	Max. Data Transfer Rate	600MB/s												
	Channel	2												
	RAID	0/1/5/10 (PCE-2132 Only)												
Front I/O	VGA	1												
	HDMI	1												
	Ethernet	2												
	USB	6 x USB3.2, 2 x USB2.0												
	Audio	2 (Line-out, Mic-in)												
Internal Connectors	USB	2 USB 2.0 (PCE-2132 Only)												
	Serial	2 x RS-232/422/485 support auto flow control and 2 x RS232 serial ports												
	M.2	1 (PCIe x4 M-key 2280 type, PCE-2132 Only)												
	mPCIe	1, PCE-2132 supports PCIe, mSATA, and USB signal 1, PCE-2032 supports only mSATA signal												
	GPIO	8-bit												
	Watchdog Timer	Output	System reset											
Interval		Programmable 1 ~ 255 sec												
Environment	Operating	Non-Operating												
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and system thermal solution												
	Humidity	40 °C @ 95% RH Non-condensing												
Physical Characteristics	Dimensions (L x H)	186 x 127mm												

## Block Diagram



## Ordering Information

CPU Board Part number	Intel CPU Support	Chipset	USB 3.2	USB 2.0	GbE	NVMe M.2	miniPCIe	COM
PCE-2133-00A1	12th/13th Gen	Q670E	8	0	2	1 (PCIe x4 M Key)	1 (Full-Size)	2
PCE-2033-00A1	12th/13th Gen	H610E	4	4	2	0	1 (mSATA Only)	2
PCE-2132-00A1	10th Gen	Q470E	6	2	2	1 (PCIe x4 M Key)	1 (Full-Size)	2
PCE-2032-00A1	10th Gen	H420E	6	2	2	0	1 (mSATA Only)	2

Chassis Part Number	Compatible CPU Board Model	PCIe x16	PCIe x4	PCI	HDD/SSD	Power	Internal USB (2.0 Type A)	ErP Compliance
IPC-220-20A1	PCE-2132 / PCE-2133	1	1	0	2 x 2.5"	19-24 V <sub>DC</sub>	2	No
IPC-240-20A1	PCE-2032 / PCE-2133	1	3	0	2 x 2.5"	19-24 V <sub>DC</sub>	2	No
IPC-240-21A1	PCE-2132 / PCE-2133	1	1	2	2 x 2.5"	19-24 V <sub>DC</sub>	2	No
IPC-220-20B1	PCE-2132 / PCE-2133	1	1	0	2 x 2.5"	19-24 V <sub>DC</sub>	2	Yes
IPC-240-20B1	PCE-2032 / PCE-2133	1	1	0	2 x 2.5"	19-24 V <sub>DC</sub>	2	Yes
IPC-240-20B1	PCE-2132 / PCE-2133	1	3	0	2 x 2.5"	19-24 V <sub>DC</sub>	2	Yes
IPC-240-21B1	PCE-2132 / PCE-2133	1	1	2	2 x 2.5"	19-24 V <sub>DC</sub>	2	Yes
IPC-240-21B1	PCE-2032 / PCE-2033	1	1	2	2 x 2.5"	19-24 V <sub>DC</sub>	2	Yes

## Packing List

Item	Description
PCE-2032/2132	10th Gen Intel® Core™ i CPU (LGA 1151) CPU board
1950023035N021	Front IO Panel
-	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
98R12200010	Display port kit iDoor
98R12200030	HDMI port kit iDoor
98R12200040	DVI port kit iDoor
PCA-TPM-00B1E	TPM 2.0 module

## Embedded OS

Item	Description
20706WX9HS0119	img Win 10 IoT 19HL PCE-2132 64b 1809 ENU
20706WX9VS0123	img Win 10 IoT 19VL PCE-2132 64b 1809 ENU
20706WX9ES0133	img Win10 IoT 19EL PCE-2132 64b 1809 ENU
20706WX9HS0126	img Win 10 IoT 19HL PCE-2032 64b 1809 ENU
20706WX9VS0130	img Win 10 IoT 19VL PCE-2032 64b 1809 ENU
20706WX9ES0140	img Win10 IoT 19EL PCE-2032 64b 1809 ENU