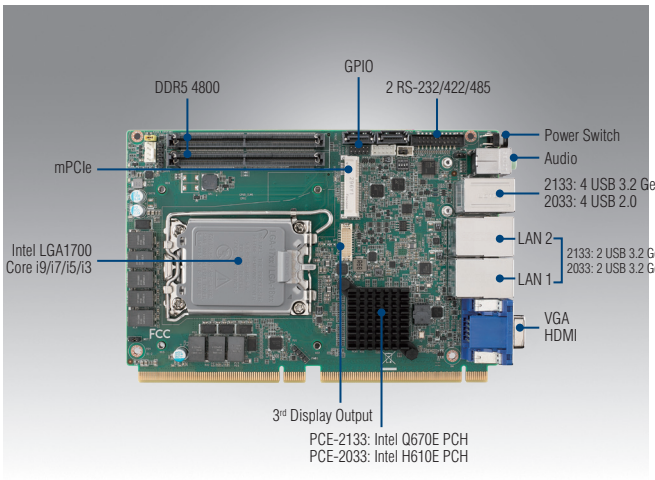
PCE-2033/2133

LGA1700 12th/13th Generation Intel® Core™ i9/i7/i5/i3 & Pentium®/Celeron® CPU Board for IPC-2 Series Chassis



Features

- Intel® 12th/13th Gen Core™ i CPU socket-type (LGA1700) with Intel® Q670E/ H610E chipset
- 3 x independent displays (third display output via optional cable)
- 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

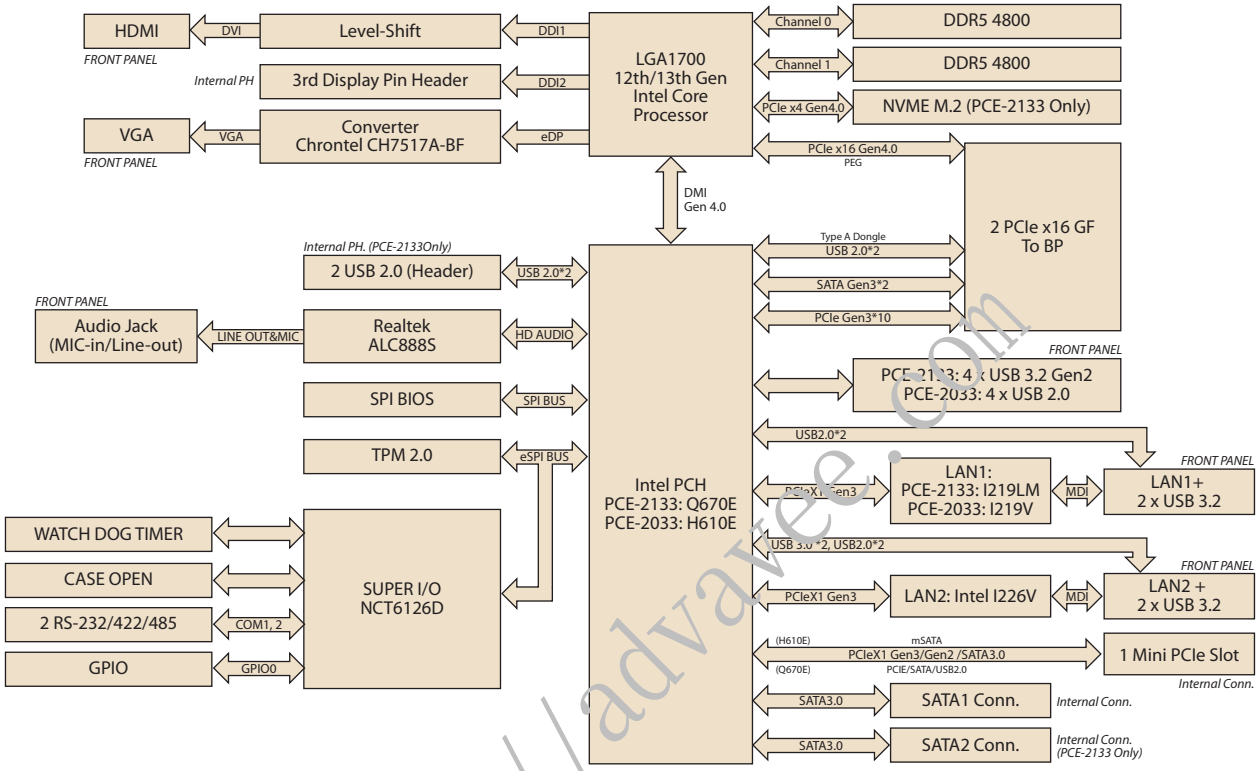
Quiet

Specifications

13th Generation Processors	CPU	i9-13900(E)	i9-13900TE	i7-13700(E)	i7-13700T(E)	i5-13500(E)	i5-13500T(E)	i5-13400(F)	i3-13100(E)	i3-13100T(E)				
	P-core Base Frequency (Up to)	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 (Up to)	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
	Socket	LGA 1700												
	Chipset	PCE-2133: Q670E PCE-2033: H610E												
	BIOS	AMI 256Mbit SPI Flash												
Memory	Technology	Dual Channel (Non-ECC) DDR5 4800												
	Max. Capacity	64GB/ 32GB per DIMM												
	Socket	2 x 262 pin DDR5 SO-DIMM												
Graphics	VGA	Up to 1920 x 1080 @ 60Hz												
	HDMI	Up to 3840 x 2160 @ 60Hz												
	DP	Up to 4096 x 2160 @ 60Hz via optional cable												
	DVI	Up to 1920 x 1080 @ 60Hz via optional cable												
	Multiple Display	3 x independent displays (third display output via optional cable)												
Ethernet	Interface	LAN1: 10/100/1000 Mbps; LAN2: 10/100/1000/2500 Mbps												
	Controller	PCE-2133 LAN1: Intel® I219LM, LAN2: Intel® I226V PCE-2033 LAN1: Intel® I219V, LAN2: Intel® I226V												
	Connector	2 x RJ-45												
SATA	Max. Data Transfer Rate	600MB/s												
	Channel	2												
	RAID	0/1/5/10 (PCE-2133 Only)												
Front I/O	VGA	1												
	HDMI	1												
	Ethernet	2												
	USB	PCE-2133: 8 x USB 3.2 Gen2 PCE-2033: 4 x USB 3.2 Gen1 + 4 USB 2.0												
	Audio	2 (Line-out, Mic-in)												
Internal Connectors	USB	2 x USB 2.0 (Pin header, PCE-2133 Only)												
	Serial	2 x RS-232/422/485 support auto flow control												
	M.2	1 (PCIe x4 M-key 2280 type, PCE-2133 Only)												
	mPCIe	1, PCE-2133 supports PCIe, mSATA, and USB signal 1, PCE-2033 supports only mSATA signal												
	GPIO	8-bit												
Watchdog Timer	Output	System reset												
	Interval	Programmable 1 ~ 255 sec												
		Operating						Non-Operating						
Environment	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and system thermal solution						-40 ~ 85 °C (-40 ~ 185 °F)						
	Humidity	40 °C @ 95% RH Non-condensing						60 °C @ 95% RH Non-condensing						
Physical Characteristics	Dimensions (L x H)	188.6 x 127mm												

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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 VDC	2	No
	PCE-2032 / PCE-2033	1	1	0	2 x 2.5"	19-24 VDC	2	No
IPC-240-20A1	PCE-2132 / PCE-2133	1	3	0	2 x 2.5"	19-24 VDC	2	No
IPC-240-21A1	PCE-2132 / PCE-2133	1	1	2	2 x 2.5"	19-24 VDC	2	No
	PCE-2032 / PCE-2033	1	1	2	2 x 2.5"	19-24 VDC	2	No
IPC-220-20B1	PCE-2132 / PCE-2133	1	1	0	2 x 2.5"	19-24 VDC	2	Yes
	PCE-2032 / PCE-2033	1	1	0	2 x 2.5"	19-24 VDC	2	Yes
IPC-240-20B1	PCE-2132 / PCE-2133	1	3	0	2 x 2.5"	19-24 VDC	2	Yes
IPC-240-21B1	PCE-2132 / PCE-2133	1	1	2	2 x 2.5"	19-24 VDC	2	Yes
	PCE-2032 / PCE-2033	1	1	2	2 x 2.5"	19-24 VDC	2	Yes

Packing List

Item	Description
PCE-2033/2133	12th/13th Gen Intel® Core™ i CPU (LGA1700) CPU board
1950023035N022	Front IO Panel
-	Startup Manual for PCE-2033/2133

Optional Accessories

Part Number	Description
1970005354T001	CPU Cooler LGA1700 S-65W 110x110x45.4
98R12200010	Display port kit iDoor
98R12200030	HDMI port kit iDoor
98R12200040	DVI port kit iDoor

Embedded OS

Item	Description
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
20706U22DS0005	img UbuntuD PCE-2033 64b 22.04 ENU
20706U22DS0007	img UbuntuD PCE-2133 64b 22.04 ENU

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