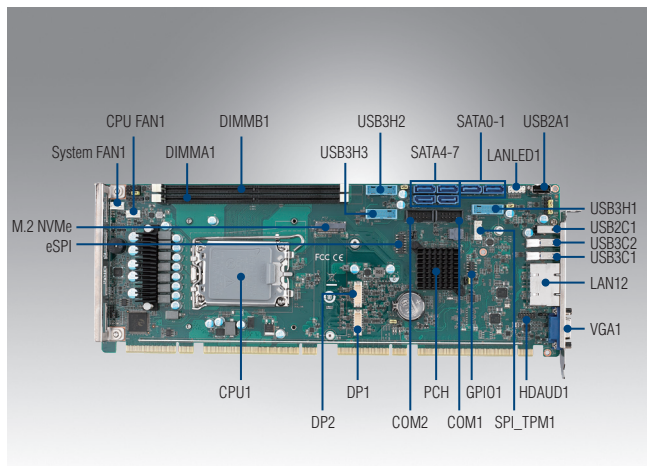


# PCE-5133

## LGA1700 12th/13th Generation Intel® Core™ i9/i7/i5/i3/Pentium® System Host Board with DDR5, SATA 3.0, USB 3.2, M.2, Dual 2.5GbE, and Triple Displays



### Features

- Intel® Core™ i9/i7/i5/i3/Pentium LGA1700 processor with R680E chipset
- Up to 64 GB of dual-channel (ECC/ non-ECC) DDR5 5600 MHz
- PCIe 3.0, M.2, USB 3.2, SATA 3.0, Dual 2.5GbE LAN and SW Raid 0, 1, 5, 10
- Supports VGA and 2 x DVI-D/DP/HDMI display (with optional cable)
- Supports out-of-band remote management with AMT
- Supports Advantech's TPM and COM modules, SUSI 4.0, and embedded software APIs

Note: Legacy platform is not supported.



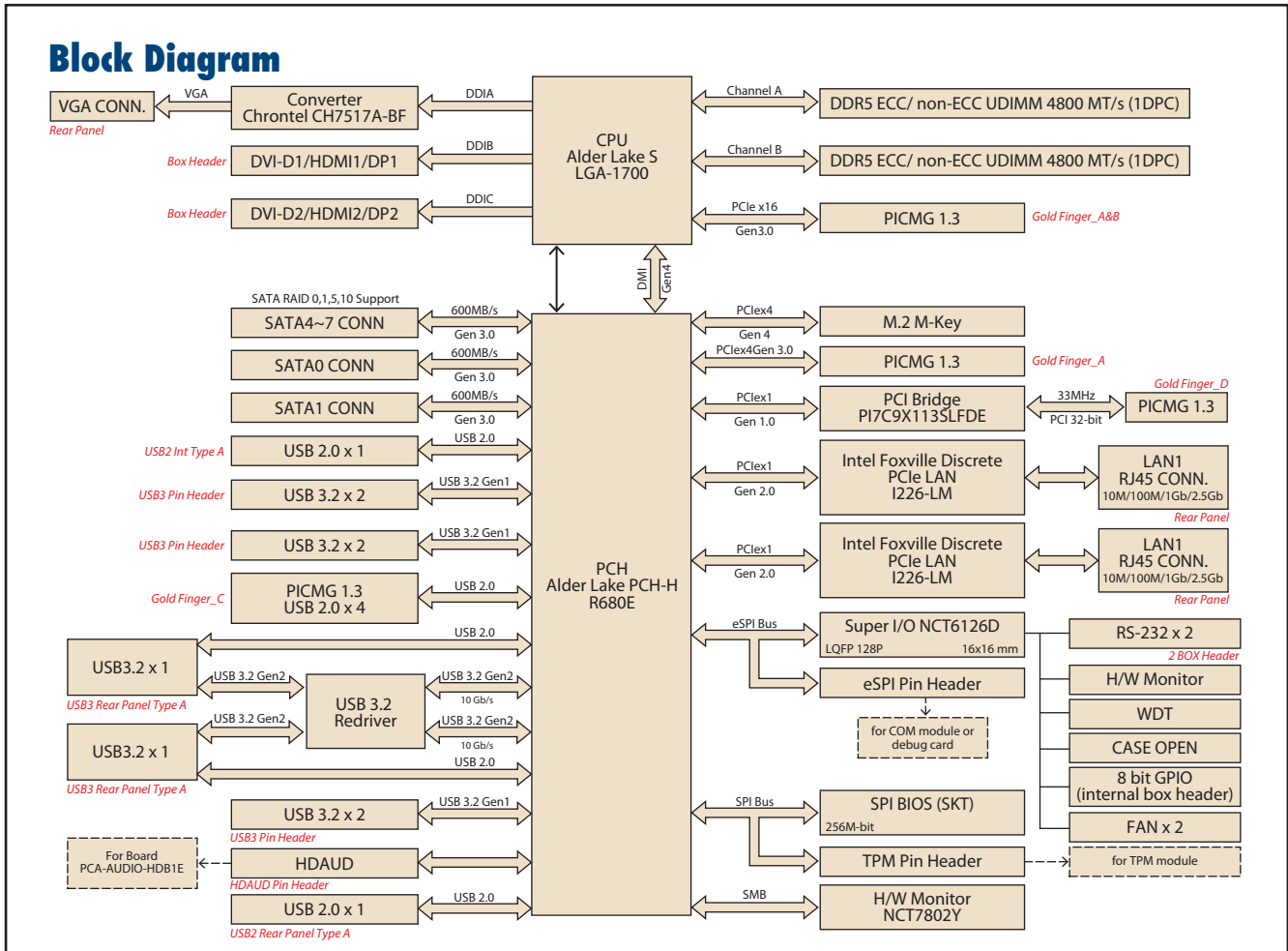
### Specifications



13th Generation Processors	CPU	i9-13900(E)	i9-13900TE	i7-13700(E)	i7-13700T(E)	i5-13500(E)	i5-13500T(E)	i5-13400(E)	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	R680E												
BIOS	AMI 256MB SPI Flash													
Bus	PCI-Express	1 x PCIe x16/2 x PCIe x8 and 1 x PCIe x4 to backplane												
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz												
Memory	Technology	Dual-channel (ECC/non-ECC) U-DIMM DDR5 5600 MHz												
	Max. Capacity	Up to 64GB												
	Socket	2 x DDR5 288-pin DIMM												
Graphics	Controller	Chipset integrated with Intel® UHD Graphics												
	VRAM	Shared system memory is subject to OS												
	VGA	Supports resolutions of up to 2048 x 1152 pixel @ 60 MHz												
	DVI-D	Supports resolutions of up to 1920x 1200 @ 60 MHz												
	Display Port	Supports resolutions of up to 4096 x 2160 @ 60 MHz												
	HDMI	Supports resolutions of up to 1920 x 1080 @ 60MHz												
Triple Display	1st: VGA, 2nd DP/DVI-D/HDMI, 3rd DP/DVI-D/HDMI (2nd and 3rd display via optional cable)													
	Interface	10/100/1000/2500 Mbps												
Ethernet	Controller	LAN 1: Intel® i226-LM LAN 2: Intel® i226-LM												
	Connector with LED	2 x RJ45												
	USB 3.2 Gen2	2												
Rear I/O	USB2.0	1												
	Ethernet	2												
	VGA	1												
	USB	5 x USB 2.0 ( 1 USB Type A + 4 to backplane), 6 x USB 3.2												
Internal Connector	SATA (SW Raid 0,1,5,10)	6												
	M.2 (2280 Type M)	1 (PCIe x4)												
	DP/DVI-D/HDMI	2 (Pin header)												
	COM	2 x RS232												
	GPIO	8bit												
	Watchdog Timer	Output Interval	System reset Programmable 1-255 sec											
Miscellaneous	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)												
	Test Environment	Intel i9-12900E, Memory *2 DDR5 16GB												
Power Requirement	Voltage	+3.3V, +5V, +12V												
	Current	2.52A, 4.13A, 6.86A												
	Operating	Non-Operating												
Environment	Temperature	0 - 60 °C (dependent on CPU and cooler solution)										-40 - 85 °C		
	Humidity	40 °C @ 85% relative humidity (non-condensing)										60 °C @ 95% relative humidity (non-condensing)		
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")												

Note: Power must be turned off before installing any expansion modules

### Block Diagram



### Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/DVI-D/HDMI	COM	SATA III	M.2	USB 2.0	USB 3.2 (Gen1)	USB 3.2 (Gen2)	S/W Raid	AMT
PCE-5133G2-00A2	R680E	ECC/ non-ECC	PCE-5BXX PCE-7BXX	2	Yes	2*	2	6	1	4	6	2	Yes	Yes

Note: DP/DVI/HDMI cable is optional

### Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1701090401	COM cable w/ BKT 40cm	x1
2190000902	Warranty card	x1
2041513300	Startup manual	x1

### Optional Accessories

Part Number	Description
1970005349T000	CPU cooler for 2U, 4U, and wall-mount chassis (for CPU Base Power=35-125W)
PCA-AUDIO-HDB1E	Audio module
PCA-COM232-ESPA1	4-port RS-232 eSPI module
PCA-COM485-ESPA1	4-port RS-422/485 eSPI module
1700002204	2-port USB2.0 cable w/BKT (27 cm)
1700028292-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700031719-01	4-port USB 3.0 cable w/ BRK (30 cm)
1700021831-01	DP to DVI-D cable w/ BKT
1701090401	1-port COM cable kit
1701092300	2-port COM cable kit
PCE-DP10-00A1E	DP to DP cable w/ BKT
1700034454-01	DP to HDMI cable w/ BKT
PCA-TPMSPI-00A1	dTPM 2.0 SPI module
20706WX1HS0054	PCE-5133 win 10 embedded OS (high-end)
20706WX1VS0054	PCE-5133 win 10 embedded OS (value)
20706WX1ES0054	PCE-5133 win 10 embedded OS (entry)
20706U22DS0025	img UbuntuD PCE-5133 64b 22.04 ENU

### I/O View



PCE-5133G2-00A2