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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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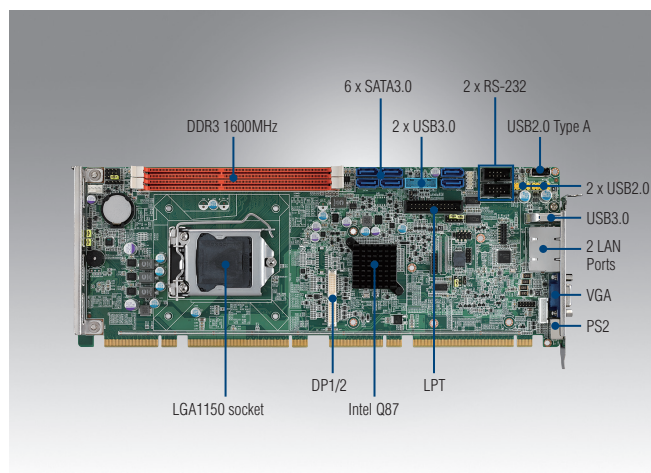
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# PCE-5128

LGA1150 Intel® Core™ i7/i5/i3/Pentium®  
SHB DDR3/SATA 3.0/USB3.0/Dual GbE/  
3 Displays



## Features

- Supports Intel® Core™ i7/i5/i3 LGA1150 processors with Q87
- Dual Channel (Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports PCIE 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DP/DVI-D (optional) display
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

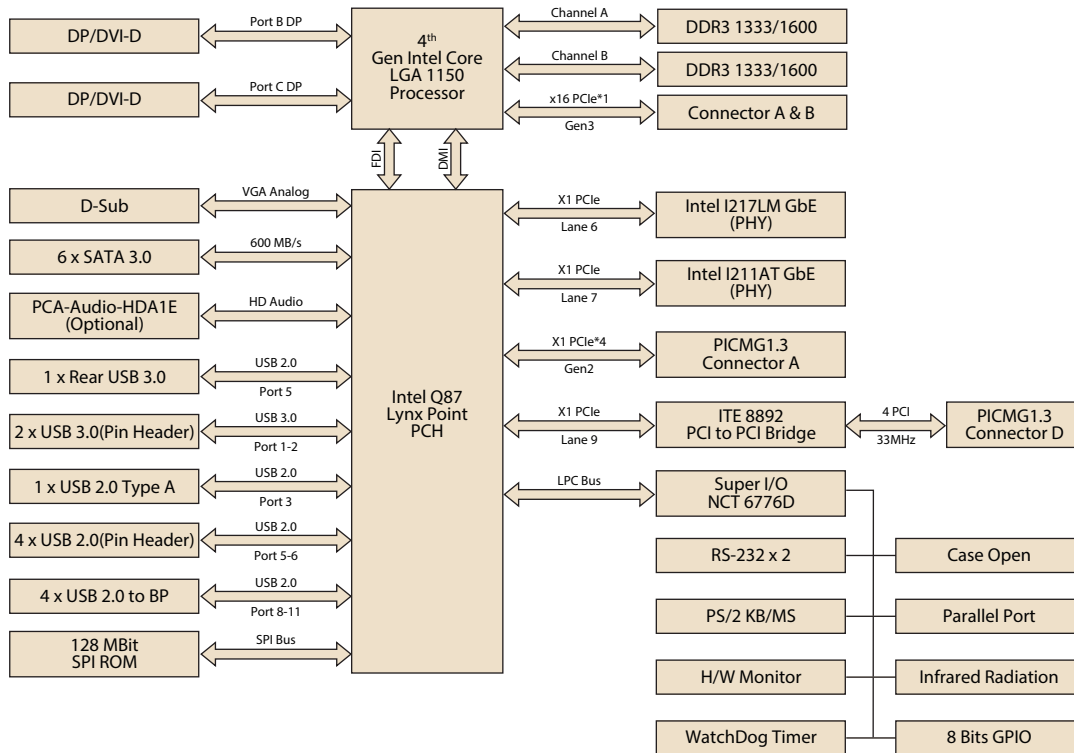
Quiet

CE FCC

## Specifications

Processor System		Haswell refresh CPUs are supported from BIOS V2.xx						
	CPU	i7-4790S	i5-4590S	i5-4590T	i3-4360	i3-4350T	i3-4340TE	
	Base Frequency	3.2GHz	3.0GHz	2.0GHz	3.7GHz	3.1GHz	2.6GHz	
	L3 Cache	8MB	6MB	6MB	4MB	4MB	4MB	
Processor System		Haswell CPUs are supported by both BIOS V1.xx and V2.xx						
	CPU	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	G3420 G3320TE
	Base Frequency	3.1GHz	2.3GHz	2.9GHz	2.7GHz	3.5GHz	2.4GHz	3.2GHz 2.3GHz
	L3 Cache	8MB	8M	6MB	4MB	3MB	3MB	3MB
	SKU/Chipset	Intel Q87						
	BIOS	AMI 128Mbit SPI Flash						
Bus		PCI-Express One x16 plus four x1 to backplane						
	PCI	Four 32-bit 33 MHz PCI Masters to backplane						
Memory		Technology Dual channel (Non-ECC) DDR3 1333/1600 UDIMM						
	Max. Cap.	16 GB (8 GB per DIMM)						
	Socket	DDR3 240-pin DIMM x 2						
Graphics		Controller Chipset integrated Intel HD Graphics						
	VRAM	Shared system memory is subject to OS						
	CRT	Supports resolution up to 1920 x 2000 pixel at 60Hz						
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz						
	Triple Display	CRT+DP/DVI-D+DP/DVI-D						
Ethernet		Interface 10/100/1000 Mbps						
	Controller	LAN 1: Intel I217LM LAN 2: Intel I211AT						
	Connector with LED	RJ-45 x 2						
SATA		S/W Raid 0, 1, 5, 10 SATA 3.0 x 6 (600 MB/sec)						
Rear I/O		USB 3.0 1						
	Ethernet	2						
	VGA	1						
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)						
Internal Connector		USB Night USB2.0 (Pin-header*4+USB Type A*1+ 4 on backplane); Two USB3.0 (Pin header)						
	SATA	6						
	DP/DVI-D	2 (Pin header)						
	COM	2						
	Parallel	1						
	IrDA	1						
	GPIO	8-bit						
Watchdog Timer		Output System reset						
	Interval	Programmable 1-255 sec						
Miscellaneous		Audio Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)						
	Test Environment	Core i7-4770S DDR3 1600 8GB x 2						
Power Requirement		Voltage +12V +5V +3.3V +5Vsb -12V -5V						
	Current	4.02A 1.36A 0.81A 0.09A 0A 0A						
Environment		Operating 0 ~ 60° C (32~140° F); Depends on CPU frequency and cooler solution						
	Temperature/Humidity	Operating humidity: 40° C @ 85% RH Non-Condensing						
		Non-operating -40 ~ 85° C and 60° C @ 95% RH Non-Condensing						
Physical		Dimensions 338 mm (L) x 122 mm (W) (13.3" x 4.8")						

## Block Diagram



## Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/ DVI-D	COM	SATA III	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-5128G2-00A1E	Q87	Non-ECC	PCE-5BXX	2	Yes	2*	2	6	10	3	Yes	Yes

Note: Both DP and DVI-D cable are optional.

## Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
2006512800	Startup manual	x1
2066512802	Utility CD	x1

## Optional Accessories

Part Number	Description
1960047831N001	PCE-5128 optimized CPU Cooler (2U)
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module(Trust Platform management)
PCA-COM232-00A1E	4 Ports RS-232 Module by LPC
PCA-COM485-00A1E	4 Ports RS-485/422 Module by LPC
1700020277-01	2 ports USB 3.0 cable w/ BKT(30cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT

## I/O View



PCE-5128G2-00A1E