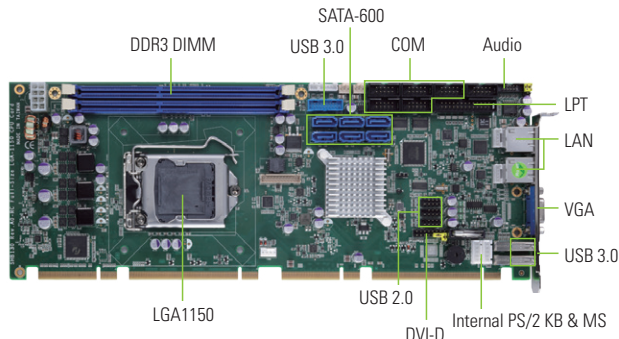


# SHB130

PICMG 1.3 Full-size CPU Card with LGA1150 4th Gen Intel® Core™ i7/i5/i3 Processor, Intel® Q87, SATA3, USB 3.0, DVI-D, VGA, DisplayPort and Dual LAN

## Features

- LGA1150 socket 4th gen Intel® Core™ i7/i5/i3 processor (Haswell/Haswell Refresh)
- Intel® Q87 chipset
- 2 DDR3-1333/1600 DIMM for up to 16GB of memory
- Intel® AMT 9.0 & TPM supported (optional)
- PCIe Gen3 at 8GT/s supported
- DVI-D, VGA, DisplayPort (optional) with dual-view supported
- 6 SATA-600 with RAID 0/1/5/10
- USB 3.0 supported



### Core System

CPU	LGA1150 socket 4th gen Intel® Core™ i7/i5/i3 processor (Haswell/Haswell Refresh), TDP up to 65W
System Memory	2 x 240-pin DDR3-1333/1600 DIMM, up to 16GB
Chipset	Intel® Q87
BIOS	AMI UEFI BIOS with OA 3.0 built
SSD	N/A
Watchdog Timer	225 levels, 1 to 255 sec.
Expansion Interface	1 x PCIe x16 Gen3 1 x PCIe x4 or 4 x PCIe x1 Gen2 4 x 32-bit PCI bus masters
Battery	Lithium 3V/220 mAH
Power Requirements	Intel® Core™ i7-4770S +5V @ 2.26A, +12V @ 4.68A, +5VSB @ 0.2A, +3.3V @ 2.3A
Dimensions	338 x 126 mm
Board Thickness	1.6 mm
Operating Temperature	0°C to +60°C (32°F to 140°F)
Humidity	10% to 95% relative humidity, non-condensing

### I/O

SATA	6 x SATA-600; support RAID 0/1/5/10
Hardware Monitoring	Detect CPU/system temperature, voltage and fan speed
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i217-LM; supports Wake-on-LAN, RPL/PXE Boot ROM, AMT 9.0 1 x 10/100/1000 Mbps Ethernet with Intel® i210-AT; supports Wake-on-LAN, RPL/PXE Boot ROM
Audio	HD Codec audio as Mic-in/Line-in/Line-out/Speaker-out with ALC662
USB	10 x USB 2.0 4 x USB 3.0
Serial	4 x RS-232 1 x RS-232/422/485, mode selection by SW
PS/2 Combo Port	1 x PS/2 keyboard & mouse
TPM	Infineon SLB9635 for trusted platform (optional)
SMBus	N/A
Others	1 x LPT with SPP/EPP/ECP supported 2 x Smart fan for system Fan1/Fan2 1 x DIO (4-in & 4-out)

### Display

Chipset	Intel® HD Graphics
Memory Size	Intel® DVM T 5.0
Display Interface	1 x VGA (default) 1 x DVI-D (header) 1 x DisplayPort (optional)

### Packing List

#### Standard

Quick installation guide, user's manual/utility CD, cable

#### Cable

Part Number	Description	Qty
59380502000E	COM+print cable w/bracket	1
593826A0000E	SATA signal cable, 500 mm	1

### Ordering Information

#### Standard

Part Number	Description
SHB130VGGGA (P/N: E38C130101)	PICMG1.3 full-size CPU card with LGA1150 socket, Intel® Q87, VGA, DVI-D, 2 GbE LAN, audio and PCIe x4
SHB130PGGGA (P/N: E38C130105)	PICMG1.3 full-size CPU card with LGA1150 socket, Intel® Q87, DisplayPort, DVI-D, 2 GbE LAN, audio and PCIe x1
SHB130VGGGA (P/N: E38C130102)	PICMG1.3 full-size CPU card with LGA1150 socket, Intel® Q87, VGA, DVI-D, 2 GbE LAN, audio and PCIe x1

#### Optional

5938A808010E	2 x USB 2.0 cable with bracket, P=2.54 mm, L=190 mm
5948C122800E	2 x USB 3.1 (Gen1) cable with bracket, L=400 mm
59380000290E	PS/2 keyboard & mouse cable with bracket
593826A0000E	SATA signal cable/red, L=500 mm
59384500100E	Audio cable with bracket, P=2.0 mm, L=450 mm
59380402010E	1 x COM port cable with bracket, P=2.54 mm, L=300 mm
59380703000E	2 x COM port cable with bracket, P=2.54 mm, L=300 mm
594C1093500E	DVI cable 24-pin header to DVI-D, L=30 mm
71193221200E	DVI bracket