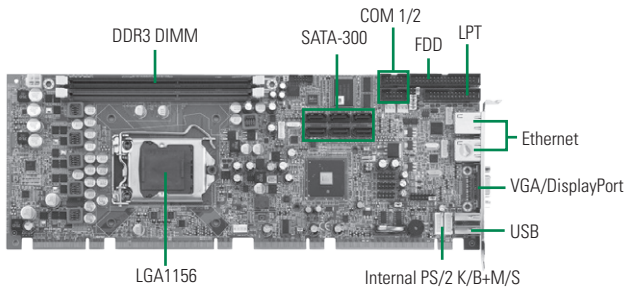


SHB105

LGA1156 Intel® Xeon® PICMG 1.3 Full-size CPU Card with Intel® 3450 Chipset, VGA/DisplayPort and ECC Memory



System

CPU	LGA1156 socket for Intel® Xeon® / Core™ i5/ i3/ Pentium® processors
System Memory	2 x 240-pin DDR3 1066/1333 DIMM max. up to 8 GB
Chipset	Intel® 3450
BIOS	AMI UEFI BIOS
SSD	N/A
Watchdog Timer	255 levels, 1 ~ 255 sec.
Expansion Interface	PCIe x16 (or 2 x PCIe x8) via SHB connector-A & B PCIe x4 (or 4 x PCIe x1) via SHB connector-A PCI with 4 bus masters via SHB connector-D
Battery	Lithium 3V/196mAH
Power Requirements	Intel® Core™ i5-660 @3.33 GHz, 1 GB DDR3 +5V_SBY @ 23mA, +3.3V @ 1.372A, +5V @ 1.548A, +12V (System) @ 158mA, -12V @ 28mA, +12V (CPU) @ 1.809A
Size	338 x 126 mm
Board Thickness	1.6 mm
Temperature	0° ~ +60°C (32°F ~ 140°F), operation
Relative Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x FDD 1 x PS/2 keyboard 1 x PS/2 mouse 1 x LPT; with SPP/EPP/ECP supported 1 x RS-232/422/485 (COM 1) 1 x RS-232 (COM 2)
SATA	6 x SATA-300; with RAID 0/1/10/5
Hardware Monitoring	Supports CPU/System temperature, CPU/system voltage and CPU/system Smart Fan features
Ethernet	1st port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM, iAMT with Intel® 82578DM 2nd port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® 82583V
Audio	HD Codec audio as MIC-in/Line-in/Line-out/speaker-out with Realtek ALC662
USB	12 x USB 2.0 (2 on the rear I/O; 6 ports with pin-headers; 4 ports via SHB connector-C)
SMBus	System Management Bus for advanced monitoring/control interface
TPM	Supports TPM 1.2

Features

- LGA1156 socket for Intel® Xeon® / Core™ i5/ i3/ Pentium® processors
- 2 DDR3 1066/1333 DIMM support up to 8 GB memory capacity
- Intel® AMT & TPM supported
- DisplayPort (optional)
- Supports unbuffered-ECC memory

Display

Chipset	According to CPU
Display Interface	VGA with D-sub 15-pin connector DisplayPort co-layout with VGA connector

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	
SHB105VGGA (P/N: E38C105101)	LGA1156 socket Intel® Xeon® / Core™ i5/ i3/ Pentium® PICMG 1.3 full-size CPU card with VGA, 2 10/100/1000Mbps Ethernet and audio
SHB105PGGA (P/N: E38C105100)	LGA1156 socket Intel® Xeon® / Core™ i5/ i3/ Pentium® PICMG 1.3 full-size CPU card with DisplayPort and 2 10/100/1000Mbps Ethernet

Optional	
59384500100E	Audio cable w/ bracket, P=2.0 L=450 mm
5938A808010E	2 x USB cable with bracket, P=2.54 mm, L=190 mm
593836A0030E	4-pin power cable to SATA x 2, L=150 mm
5938000290E	PS/2 keyboard and mouse cable with bracket
E9B900C000	LGA1156 cooler 4-pin H: 61.4 mm
50761222000E	LGA1156 2U cooler 3-pin H=68.8 mm

* Discrete graphic card is necessary for display if the chosen CPU doesn't have integrated graphics support.