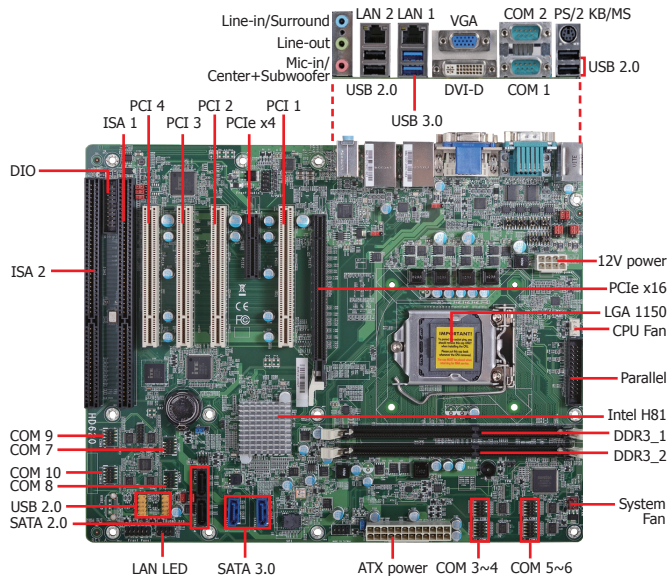


**4th Gen Intel® Core™**  
**ATX**

**HD620-H81**



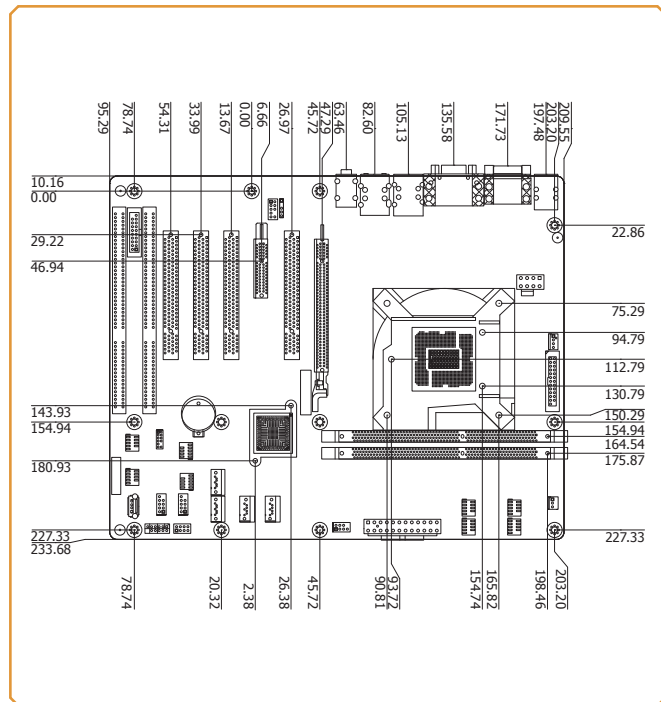
**Features**

MEMORY	2 DDR3 DIMM up to 16GB
EXPANSION	1 PCIe x16 1 PCIe x4 (x1 signal) 4 PCI 2 ISA
DISPLAY OUTPUTS	1 VGA, 1 DVI-D
LAN	2 LAN
COM	10 COM
USB	10 USB: 2 USB 3.0, 8 USB 2.0
STORAGE	4 SATA: 2 SATA 3.0, 2 SATA 2.0
PARALLEL	1 Parallel
DIO	8-bit DIO

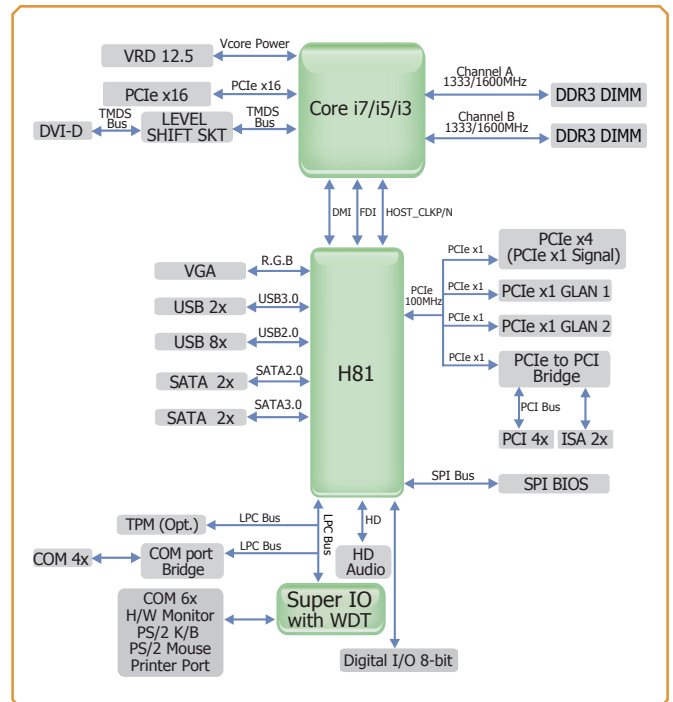
\* The specifications on this datasheet refer to HD620-H81X.



**Mechanical Drawing**



**Block Diagram**



# HD620-H81

## ► Specifications \* Optional and is not supported in standard model. Please contact your sales representative for more information.

### PROCESSOR

- LGA 1150 socket for:
  - 4th Generation Intel® Core™ processors (22nm process technology)
    - : Intel® Core™ i7-4790S (8M Cache, up to 4.0 GHz); 65W
    - : Intel® Core™ i7-4770S (8M Cache, up to 3.9 GHz); 65W
    - : Intel® Core™ i7-4770TE (8M Cache, up to 3.3 GHz); 45W
    - : Intel® Core™ i5-4590S (6M Cache, up to 3.7 GHz); 65W
    - : Intel® Core™ i5-4590T (6M Cache, up to 3.0 GHz); 35W
    - : Intel® Core™ i5-4570S (6M Cache, up to 3.6 GHz); 65W
    - : Intel® Core™ i5-4570TE (4M Cache, up to 3.3 GHz); 35W
    - : Intel® Core™ i3-4360 (4M Cache, 3.7 GHz); 54W
    - : Intel® Core™ i3-4350T (4M Cache, 3.1 GHz); 35W
    - : Intel® Core™ i3-4340TE (4M Cache, 2.6 GHz); 35W
    - : Intel® Core™ i3-4330 (4M Cache, 3.5 GHz); 54W
    - : Intel® Core™ i3-4330TE (4M Cache, 2.4 GHz); 35W
    - : Intel® Pentium® G3420 (3M Cache, 3.2 GHz); 53W
    - : Intel® Pentium® G3320TE (3M Cache, 2.3 GHz); 35W
    - : Intel® Celeron® G1820 (2M Cache, 2.7 GHz); 53W
    - : Intel® Celeron® G1820TE (2M Cache, 2.2 GHz); 35W

### CHIPSET

- Intel® H81 Express Chipset

### SYSTEM MEMORY

- Two 240-pin DDR3 DIMM sockets
- Supports DDR3 1333/1600MHz
- Supports dual channel memory interface
- Supports up to 16GB system memory
- DRAM device technologies: 1Gb, 2Gb and 4Gb DDR3 DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

### EXPANSION SLOTS

- 1 PCIe x16 Gen 3 slot (PCIe 3.0)
- 1 PCIe x4 Gen 2 slot (PCIe 2.0)
  - x1 signal
- 4 PCI slots (PCI 2.3)
  - 1 shared with ISA slot
- 2 ISA slots

### ONBOARD GRAPHICS FEATURES

- Intel® HD Graphics
- Display ports: VGA and DVI-D
- VGA and DVI-D supports up to 1920x1200 @ 60Hz resolution
- Supports 6 Graphics Execution Units (EUs)
- Intel® Clear Video Technology
- DirectX Video Acceleration (DXVA) support for accelerating video processing

### ONBOARD AUDIO FEATURES

- Realtek ALC886 5.1-channel High Definition Audio
- Audio outputs: Mic-in/Center+Subwoofer, line-in/surround and line out
- S/PDIF audio interface

### ONBOARD LAN FEATURES

- Intel® 82574 PCI Express Gigabit Ethernet controller
- Intel® I217LM Gigabit Ethernet Phy
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

### SERIAL ATA (SATA) INTERFACE

- 2 SATA 3.0 ports with data transfer rate up to 6Gb/s
  - SATA port 1 provides adequate space for SATA DOM
- 2 SATA 2.0 ports with data transfer rate up to 3Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller

### TRUSTED PLATFORM MODULE (TPM)\*

- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

### REAR PANEL I/O PORTS

- 1 mini-DIN-6 port for PS/2 mouse/keyboard
- 2 DB-9 serial ports
  - Supports RS232/422/485 (RS232 and/or Power)
- 1 VGA port
- 1 DVI-D port
- 2 RJ45 LAN ports
- 2 USB 3.0 ports
- 4 USB 2.0 ports
- Line-in/Surround, Line-out, Mic-in/Center+Subwoofer jacks

## ► Packing List

- |  |
|--|
| • 1 HD620 motherboard                      |
| • 1 Serial ATA data cable: 332-553001-005G |
| • 1 I/O shield: A49-SB6000-000G            |
| • 1 DVD                                    |
| • 1 QR (Quick Reference)                   |

### I/O CONNECTORS

- 2 connectors for 4 external USB 2.0/1.1 ports
- 8 connectors for 8 external RS232 serial ports (2.0mm pitch)
- 1 vertical USB 2.0/1.1 port\*
- 1 8-bit Digital I/O connector
- 1 front audio connector for line-out and mic-in jacks
- 1 LAN LED connector
- 1 S/PDIF connector
- 1 parallel port
- 4 Serial ATA ports
- 1 24-pin ATX power connector
- 1 8-pin 12V power connector
- 1 chassis intrusion connector
- 1 front panel connector
- 2 fan connectors

### BIOS

- AMI BIOS
- 64Mbit SPI BIOS

### WATCHDOG TIMER

- Software programmable from 1 to 255 seconds

### ENERGY EFFICIENT DESIGN

- Supports ErP Lot6 power saving\*
- Supports ACPI
- System Power Management
- Wake-On-Events include:
  - Wake-On-PS/2 KB/Mouse
  - Wake-On-USB KB/Mouse
  - Wake-On-LAN
  - RTC timer to power-on the system
- CPU stopped clock control
- AC power failure recovery

### DAMAGE FREE INTELLIGENCE

- Monitors CPU/system temperature and overheat alarm
- Monitors VCore/5V/3.3V/V<sub>DDIMM</sub>/12V/5VSB voltages and failure alarm
- Monitors CPU/system fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed

### POWER CONSUMPTION

- TBD

### OS SUPPORT

- Windows XP Professional x86 & SP3 (32-bit) (limited function)
- Windows 7 Ultimate x86 & SP1 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows 8 Enterprise x86 (32-bit)
- Windows 8 Enterprise x64 (64-bit)

### TEMPERATURE

- Operating: 0°C to 60°C
- Storage: -20°C to 85°C

### HUMIDITY

- 5% to 90%

### DIMENSIONS

- ATX form factor
- 305mm (12") x 244mm (9.6")

### CERTIFICATION

- CE, FCC Class B, RoHS

## ► Optional Items

- |  |
|--|
| • USB port cable: 332-253010-026G        |
| • COM port cable: A81-015004-005G        |
| • Serial ATA data cable: 332-553001-005G |
| • I/O shield: A49-SB6000-000G            |