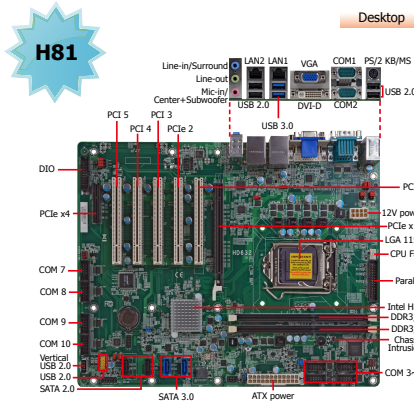


# DFI® HD632-H81 ATX

# HD632-H81 ATX DFI®



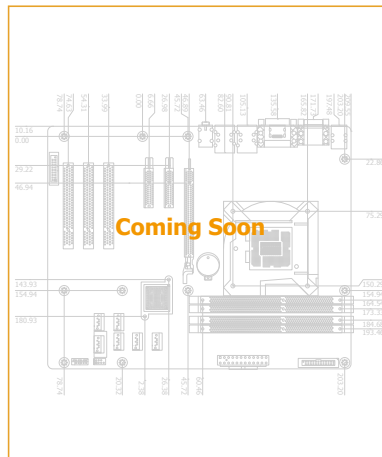
## Features

|                 |                                        |
|-----------------|----------------------------------------|
| CHIPSET         | Intel® H81                             |
| CPU             | 4th Generation Intel® Core™ processors |
| MEMORY          | 2 DDR3/DDR3L DIMM up to 16GB           |
| EXPANSION       | 1 PCIe x16<br>1 PCIe x4<br>5 PCI       |
| DISPLAY OUTPUTS | 1 VGA, 1 DVI-D                         |
| LAN             | 2 Gigabit LAN ports                    |
| COM             | 10 COM                                 |
| USB             | 9 USB: 2 USB 3.0, 7 USB 2.0            |
| STORAGE         | 4 SATA: 2 SATA 3.0, 2 SATA 2.0         |
| PARALLEL        | 1 Parallel                             |
| DIO             | 8-bit DIO                              |

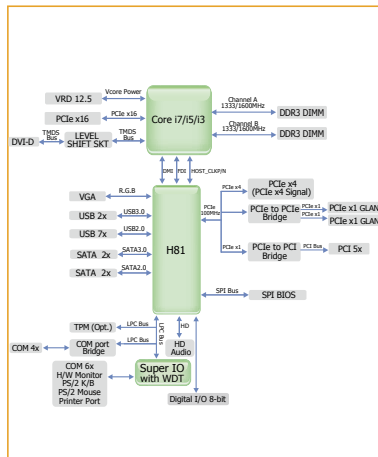


Vertical USB port for securing USB flash drive

## Mechanical Drawing



## Block Diagram



## Specifications

## 4th Generation Intel® Core™ Processors

### PROCESSOR

- LGA 1150 socket for:
  - 4th Generation Intel® Core™ processors (22nm process technology)
    - Intel® Core™ i3-4330 (3M Cache, 3.5 GHz); 54W
    - Intel® Core™ i3-4330TE (3M Cache, up to 2.4 GHz); 35W
    - Intel® Pentium® G3420 (3M Cache, 3.2 GHz); 54W
    - Intel® Pentium® G3320TE (3M Cache, 2.3 GHz); 35W

### CHIPSET

- Intel® H81 Express Chipset

### SYSTEM MEMORY

- Two 240-pin DDR3/DDR3L DIMM sockets
- Supports DDR3/DDR3L 1066/1333/1600MHz
- 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 2 slot (PCIe 2.0)
- 1 PCIe x4 Gen 2 slot (PCIe 2.0)
- 5 PCI slots (PCI 2.3)

### 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® I210 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
- 2 SATA 2.0 ports with data transfer rate up to 3Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller

### TRUSTED PLATFORM MODULE (TPM) - optional

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

## Packing List

- 1 HD632 motherboard
- 1 Serial ATA data cable
- 1 I/O shield
- 1 DVD
- 1 QR (Quick Reference)

### REAR PANEL I/O PORTS

- 1 mini-DIN-6 port for PS/2 mouse/keyboard
- 2 DB-9 RS232 serial ports (RS232 and/or power)
- 1 VGA port
- 1 DVI-D port
- 2 RJ45 LAN ports
- 2 USB 3.0/2.0/1.1 ports
- 4 USB 2.0/1.1 ports
- Line-in/Surround, Line out, Mic-in/Center+Subwoofer jacks

### I/O CONNECTORS

- 1 connector for 2 external USB 2.0/1.1 ports
- 1 vertical USB 2.0/1.1 port
- 1 8-bit Digital I/O connector
- 1 Digital I/O power connector
- 8 connectors for 8 external serial ports
  - 7 RS232 (4 are optional)
  - 1 RS422/485
- 1 front audio connector for line-out and mic-in jacks
- 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
- 3 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 (optional)
- 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\_DIMM/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)
- Windows XP Professional x64 & SP2 (64-bit)
- 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")

## Optional Items

- USB port cable
- COM port cable
- Serial ATA data cable
- Serial ATA power cable
- I/O shield

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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