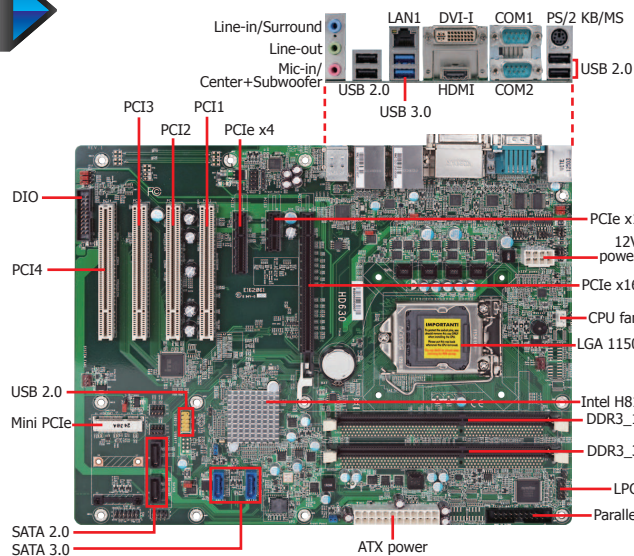




# HD630-H81

Desktop

H81



**HD630-H81B: 1 LAN, 2 COM, 1 Parallel**  
**HD630-H81D: 2 LAN, 2 COM, 1 Parallel**  
**HD630-H81C: 2 LAN, 6 COM, 1 Parallel**

Note: Parallel on "HD630-H81D" is optional

## Features

MEMORY	2 DDR3/DDR3L DIMM up to 16GB
EXPANSION	1 PCIe x16 1 PCIe x4 (x1 signal) 1 PCIe x1 4 PCI 1 Mini PCIe
DISPLAY OUTPUTS	1 HDMI, 1 DVI-I
LAN	1 LAN
COM	2 COM
USB	8 USB: 2 USB 3.0, 6 USB 2.0
STORAGE	4 SATA: 2 SATA 3.0, 2 SATA 2.0
PARALLEL	1 Parallel
DIO	8-bit DIO



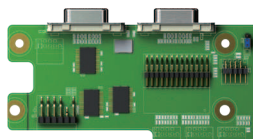
Vertical USB port for securing USB flash drive (optional)

## 3 Modules for Additional COM/Parallel Ports (via the LPC connector)



**EXT-6C1PR**  
- 6 COM  
- 1 Parallel

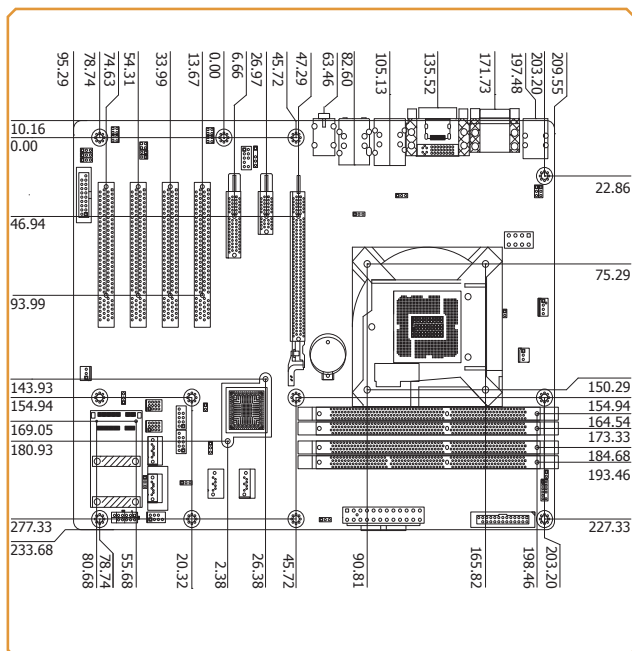
**EXT-4C1PR**  
- 4 COM  
- 1 Parallel



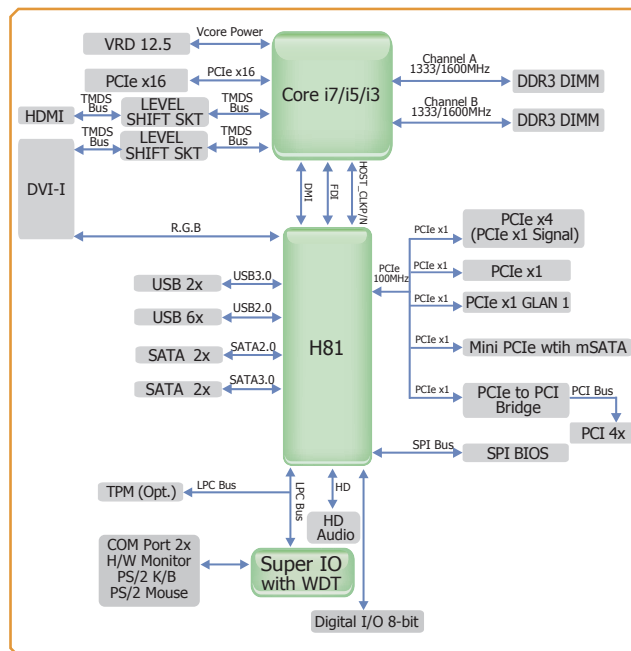
**EXT-2C1PR**  
- 2 COM  
- 1 Parallel

Note: To support the additional COM/Parallel ports, please contact your sales representative for the LPC module and its BIOS.

## Mechanical Drawing



## Block Diagram



## HD630-H81

## ► Specifications

## PROCESSOR

- LGA 1150 socket for:
  - 4th Generation Intel® Core™ processors (22nm process technology)
    - : 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™ i5-4570S (6M Cache, up to 3.6 GHz); 65W
    - : Intel® Core™ i5-4570TE (4M Cache, up to 3.3 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

## CHIPSET

- Intel® H81 Express Chipset

## SYSTEM MEMORY

- Two 240-pin DDR3/DDR3L DIMM sockets
- Supports DDR3/DDR3L 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)
  - x1 signal
- 1 PCIe x1 Gen 2 slot (PCIe 2.0)
- 4 PCI slots (PCI 2.3)
- 1 Mini PCIe slot
  - Supports USB and PCIe signals
  - Supports mSATA
  - Supports half size and/or full size Mini PCIe card

## ONBOARD GRAPHICS FEATURES

- Intel® HD Graphics
- Display ports: HDMI and DVI-I
- DVI-I supports up to 1920x1200 @ 60Hz resolution
- HDMI supports up to 4096x2304 @ 24Hz resolution or 2560x1600 @ 60Hz resolution
- VGA display resolution up to 1920x1200 pixels with 24-bit color @ 60Hz
- 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
- 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
  - SATA port 5 provides adequate space for SATA DOM
- 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

## USB INTERFACE

- XHCI Host Controller supports up to 2 super speed USB 3.0 ports

## REAR PANEL I/O PORTS

- 1 mini-DIN-6 port for PS/2 mouse/keyboard
- 2 DB-9 RS232/422/485 serial ports (RS232 and/or Power)
- 1 HDMI port
- 1 DVI-I port
- 1 RJ45 LAN port
- 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 or 1 vertical USB 2.0/1.1 port (optional)
- 1 8-bit Digital I/O connector
- 1 front audio connector for line-out and mic-in jacks
- 1 S/PDIF connector
- 1 LPC 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 8 Enterprise x86 (32-bit)
- Windows 8 Enterprise x64 (64-bit)
- Windows 7 Ultimate x86 & SP1 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows XP Professional x86 & SP3 (32-bit)
- Windows XP Professional x64 & SP2 (64-bit)  
*(based on Intel's Windows XP support list)*

## 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")

## ► Packing List

• 1 HD630 motherboard
• 1 Serial ATA data cable
• 1 I/O shield
• 1 DVD
• 1 QR (Quick Reference)

## ► Optional Items

• USB port cable
• Serial ATA data cable
• Serial ATA power cable
• COM port cable
• I/O shield
• 1 LPC module kit