

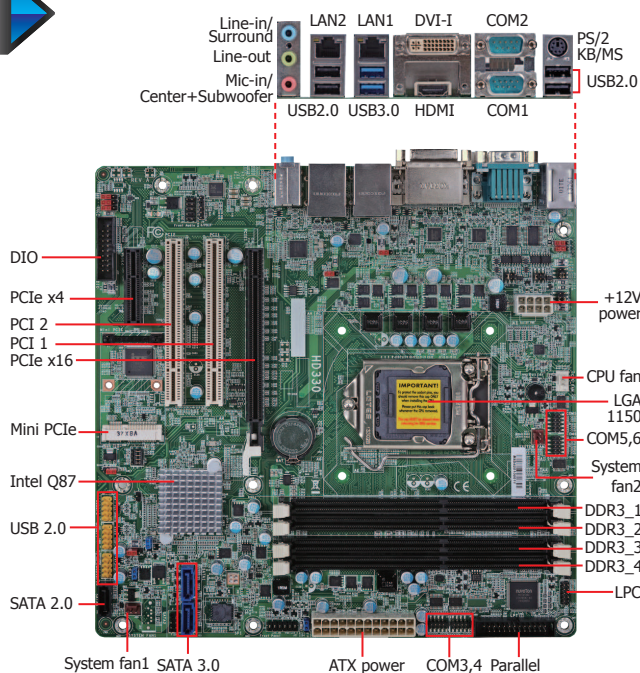


4th Gen Intel® Core™
microATX

HD330-Q87

Desktop

Q87

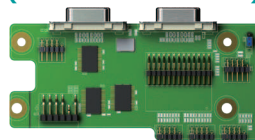


Features

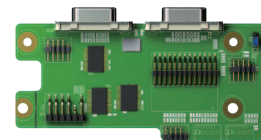
MEMORY	4 DDR3/DDR3L DIMM up to 32GB
EXPANSION	1 PCIe x16 1 PCIe x4 2 PCI 1 Mini PCIe
DISPLAY OUTPUTS	1 HDMI, 1 DVI-I
LAN	2 LAN
COM	6 COM
USB	12 USB: 2 USB 3.0, 10 USB 2.0
PARALLEL	1 Parallel
STORAGE	3 SATA: 2 SATA 3.0, 1 SATA 2.0
DIO	8-bit DIO



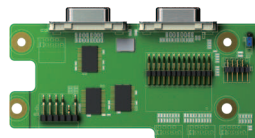
3 Modules for Additional COM/Parallel Ports (via the LPC connector)



EXT-6C1PR
- 6 COM
- 1 Parallel



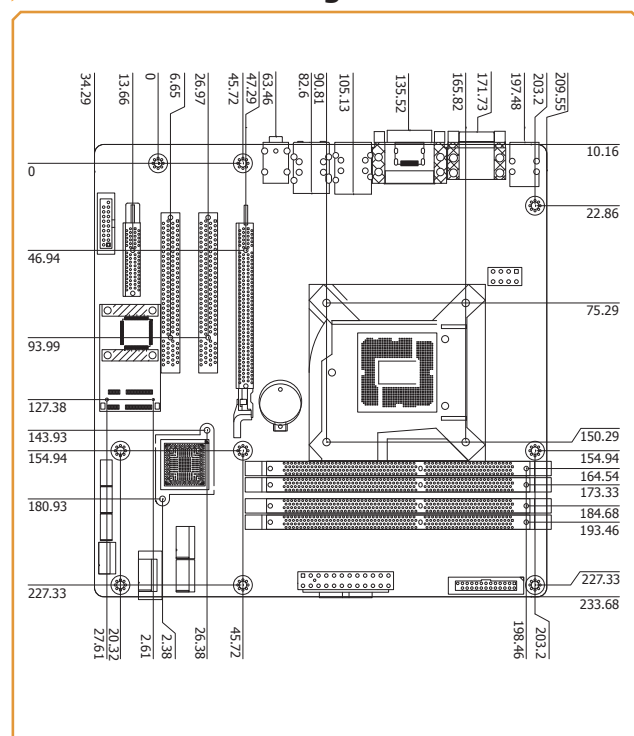
EXT-4C1PR
- 4 COM
- 1 Parallel



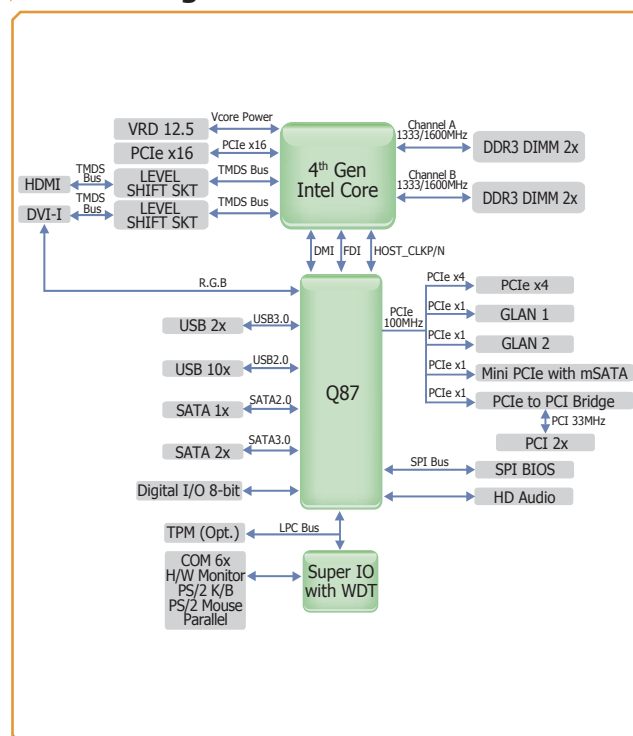
EXT-2C1PR
- 2 COM
- 1 Parallel

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

Mechanical Drawing



Block Diagram



HD330-Q87

► 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® Q87 Express Chipset

SYSTEM MEMORY

- Four 240-pin DDR3/DDR3L DIMM sockets
- Supports DDR3/DDR3L 1333/1600MHz when operating at 1.5V
- Supports dual channel memory interface
- Supports up to 32GB 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)
- 2 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
- HDMI supports up to 4096x2304 @ 24Hz resolution or 2560x1600 @ 60Hz resolution
- DVI-I supports up to 1920x1200 @ 60Hz resolution
- VGA display resolution up to 1920x1200 pixels with 24-bit color @ 60Hz
- Supports 20 Graphics Execution Units (EUs)
- Intel® Clear Video Technology
- DirectX Video Acceleration (DXVA) support for accelerating video processing
- Supports DirectX 11.1 and OpenGL 4.0

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
- 1 SATA 2.0 port with data transfer rate up to 3Gb/s
- Integrated Advanced Host Controller Interface (AHCI) controller
- Supports RAID 0/1/5
- Supports Intel® Smart Response Technology

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 USB 3.0/2.0/1.1 ports
- 4 USB 2.0/1.1 ports
- 2 DB-9 RS232/422/485 serial ports (RS232 and/or Power)
- 1 HDMI port
- 1 DVI-I port
- 2 RJ45 LAN ports
- Line-in/surround, Line-out, and Mic-in/Center+Subwoofer jacks

I/O CONNECTORS

- 3 connectors for 6 external USB 2.0/1.1 ports
- 4 connectors for 4 external RS232 serial ports
- 1 parallel connector
- 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
- 3 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/3VSB/VBAT 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

- microATX form factor
- 244mm (9.6") x 244mm (9.6")

CERTIFICATION

- CE, FCC Class B, RoHS, UL

► Packing List

• 1 HD330 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
• I/O shield
• 1 LPC module kit