

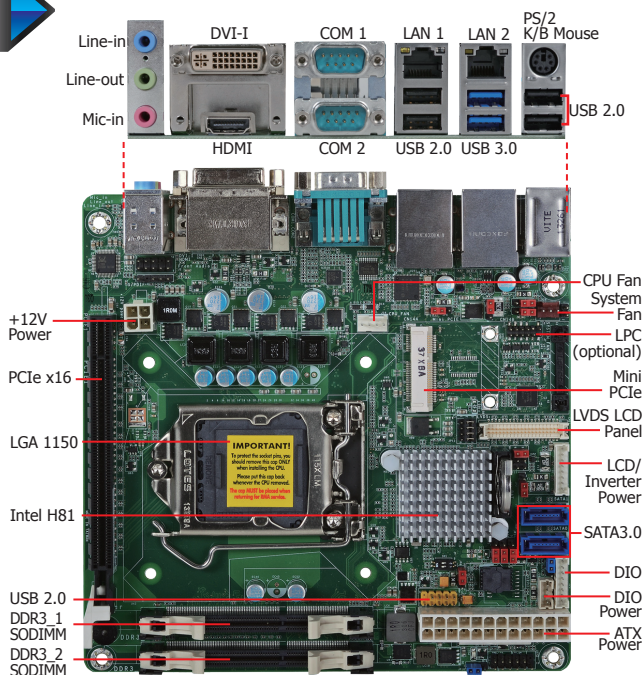


4th Gen Intel® Core™ Mini-ITX

HD100-H81

Desktop

H81

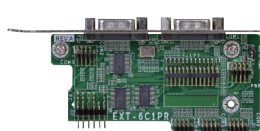


Features

MEMORY	2 DDR3/DDR3L SODIMM up to 16GB
EXPANSION	1 PCIe x16 1 Mini PCIe
DISPLAY OUTPUTS	1 HDMI, 1 DVI-I, 1 LVDS
LAN	2 LAN
COM	2 COM
USB	8 USB: 2 USB 3.0, 6 USB 2.0
STORAGE	2 SATA 3.0
DIO	8-bit DIO



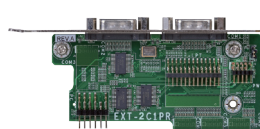
3 Modules for Additional COM/Parallel Ports (via the LPC connector)



EXT-6C1PR
- 6 COM, 1 Parallel



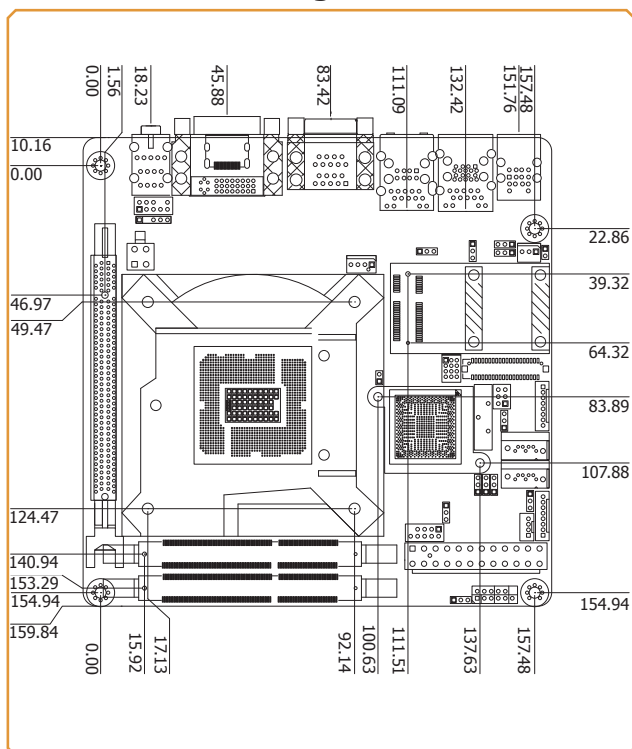
EXT-4C1PR
- 4 COM, 1 Parallel



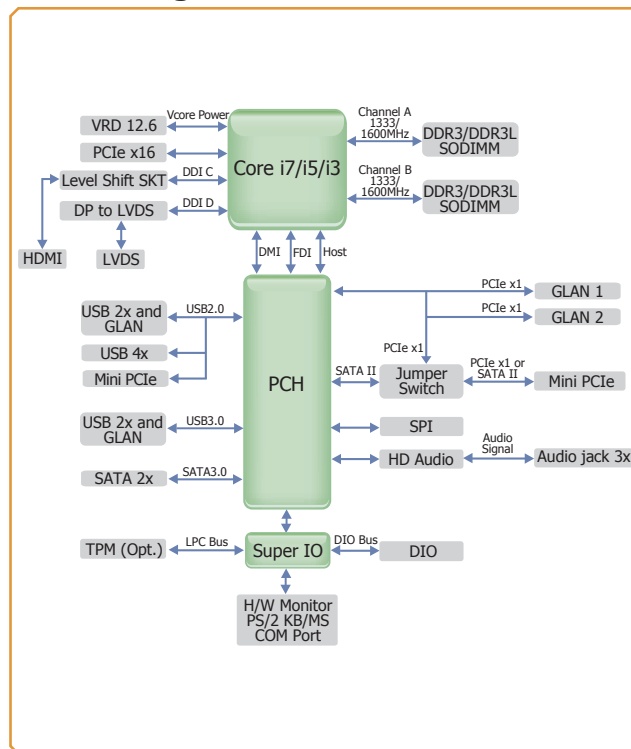
EXT-2C1PR
- 2 COM, 1 Parallel

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

Mechanical Drawing



Block Diagram



HD100-H81

Specifications

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 204-pin DDR3/DDR3L SODIMM sockets
- Supports DDR3/DDR3L 1333/1600MHz when operating at 1.5V
- Supports up to 16GB system memory
- Supports dual channel memory interface
- 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 Mini PCIe slot
 - Supports USB and PCIe signals
 - Supports mSATA
 - Supports full size Mini PCIe card

ONBOARD GRAPHICS FEATURES

- Intel® HD Graphics
- Display ports: HDMI, DVI-I, LVDS
- HDMI, DVI-I: resolution up to 1920x1200 @ 60Hz
- LVDS: 24-bit, dual channel, resolution up to 1920x1200 @ 60Hz
- Supports 20 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
- S/PDIF audio interface

ONBOARD LAN FEATURES

- Intel® I210 PCI Express Gigabit Ethernet controller
- Intel® I217 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

TRUSTED PLATFORM MODULE (TPM) - optional

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

REAR PANEL I/O PORTS

- 1 mini-DIN-6 PS/2 keyboard/mouse port
- 4 USB 2.0 ports
- 2 USB 3.0 ports
- 2 DB-9 RS232 serial ports
- 1 HDMI port
- 1 DVI-I port
- 2 RJ45 LAN ports
- Mic-in, line-in and line-out jacks

Packing List

- | |
|---------------------------|
| • 1 HD100 motherboard |
| • 1 Serial ATA data cable |
| • 1 I/O shield |
| • 1 DVD |
| • 1 QR (Quick Reference) |

I/O CONNECTORS

- 1 connector for 2 external USB 2.0/1.1 ports
- 1 LVDS LCD panel connector
- 1 LCD/inverter power connector
- 1 8-bit Digital I/O connector
- 1 Digital I/O power connector
- 1 front audio connector for line-out and mic-in jacks
- 1 S/PDIF connector
- 1 LPC connector (optional)
- 2 SATA 3.0 ports
- 1 24-pin ATX power connector
- 1 4-pin 12V power connector
- 1 chassis intrusion connector
- 1 front panel connector
- 2 fan connectors

BIOS

- AMI BIOS
 - 64Mbit SPI BIOS

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
- Watchdog timer function

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

- 10% to 90%

DIMENSIONS

- Mini-ITX form factor
- 170mm (6.7") x 170mm (6.7")

CERTIFICATION

- CE, FCC Class B, RoHS, UL

Optional Items

- | |
|--|
| • USB port cable |
| • Serial ATA data cable |
| • Serial ATA power cable |
| • 1 LPC module kit (COM/Parallel extension module) |
| • I/O shield |