

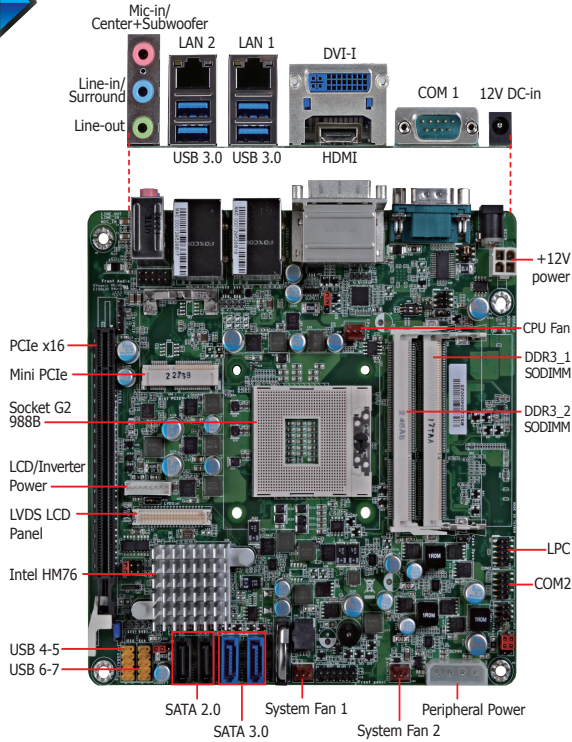


**3rd/2nd Gen Intel® Core™  
Mini-ITX**

**CR101-D**

Mobile

**HM76**

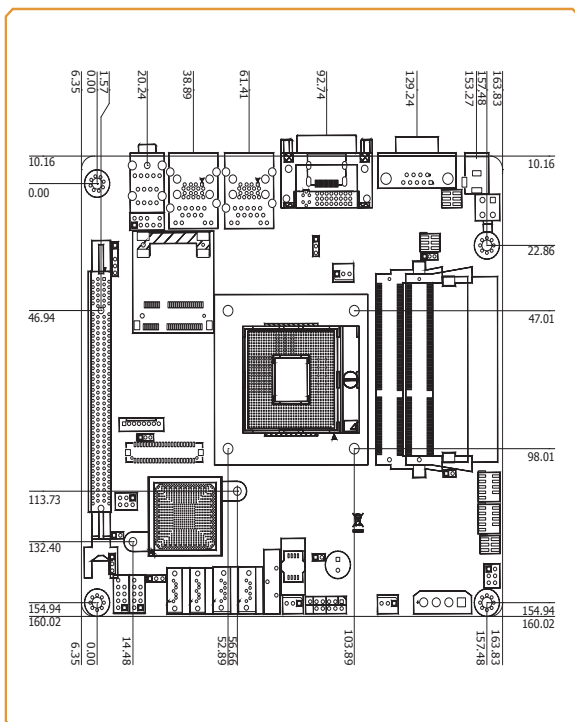


**Features**

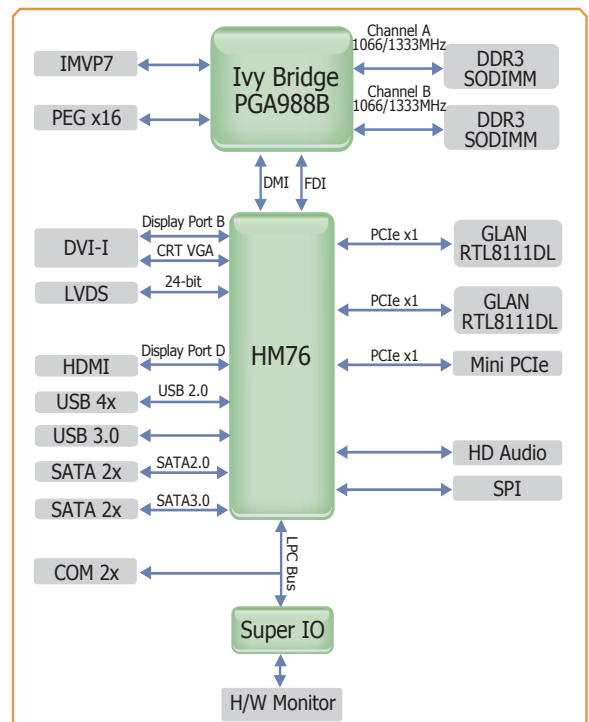
MEMORY	2 DDR3/DDR3L SODIMM up to 16GB
EXPANSION	1 PCIe x16 1 Mini PCIe
DISPLAY OUTPUTS	2 Independent Displays 1 HDMI, 1 DVI-I, 1 LVDS
LAN	2 LAN
COM	2 COM
USB	8 USB: 4 USB 3.0, 4 USB 2.0
STORAGE	4 SATA: 2 SATA 3.0, 2 SATA 2.0



**Mechanical Drawing**



**Block Diagram**





# CR101-D

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

**PROCESSOR**

- Socket G2 988B for:
  - 3rd Generation Intel® Core™ processors (22nm process technology)
    - : Intel® Core™ i7-3610QE (6M Cache, up to 3.3 GHz); 45W
    - : Intel® Core™ i5-3610ME (3M Cache, up to 3.3 GHz); 35W
    - : Intel® Core™ i3-3120ME (3M Cache, 2.4 GHz); 35W
  - 2nd Generation Intel® Core™ processors (32nm process technology)
    - : Intel® Core™ i7-2710QE (6M Cache, up to 3.0 GHz); 45W
    - : Intel® Core™ i5-2510E (3M Cache, up to 3.1 GHz); 35W
    - : Intel® Core™ i3-2330E (3M Cache, 2.2 GHz); 35W
    - : Intel® Celeron® B810 (2M Cache, 1.6 GHz); 35W

**CHIPSET**

- Intel® HM76 Express chipset

**SYSTEM MEMORY**

- Two 204-pin DDR3 SODIMM sockets
- Supports DDR3 SODIMM

3rd Generation Processors	2nd Generation Processors
DDR3 1066/1333/1600MHz	DDR3 1066/1333MHz (i5/i3/Celeron)
	DDR3 1600MHz (i7)

- Supports DDR3L SODIMM
  - 1066/1333MHz when operating at 1.35V
  - 1066/1333/1600MHz when operating at 1.5V
- 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 slot
  - Supports Gen 3.0 (3rd generation processors)
  - Supports Gen 2.0 (2nd generation processors)
  - Configurations (supported only via a riser card):
    - : One x8 (GFX) and two x4 (I/O)
    - : Two x8 (GFX, I/O)
    - : One x16 (GFX, I/O)
- 1 Mini PCIe slot
  - Supports USB and PCIe signals
  - Supports half size card

**ONBOARD GRAPHICS FEATURES**

- Intel® HD Graphics 4000
- Display ports: HDMI, DVI-I, and LVDS
- Dual independent display
- HDMI and DVI: resolution up to 1920x1200 @ 60Hz
- VGA: resolution up to 2048x1536 @ 75Hz, 32-bit
- LVDS: Single Channel - 18/24-bit; Dual Channel: 36/48-bit; resolution up to 2048x1536 @ 60Hz
- Intel® Clear Video Technology
- DirectX Video Acceleration (DXVA) for accelerating video processing
  - Full AVC/VC1/MPEG2 HW Decode
- Supports DirectX 11/10.1/10/9 and OpenGL 3.0

**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**

- 2 Realtek RTL8111DL PCI Express Gigabit Ethernet controllers
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

**SERIAL ATA (SATA) INTERFACE**

- 4 Serial ATA ports
  - 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

**REAR PANEL I/O PORTS**

- 1 12V DC-in
- 1 DB-9 serial port
  - Supports RS232/422/485 (RS232 and/or Power)
- 1 DVI-I port
- 1 HDMI port
- 2 RJ45 LAN ports
- 4 USB 3.0/2.0/1.1 ports
- Mic-in/Center+Subwoofer, line-in/surround and line out jacks

**I/O CONNECTORS**

- 2 connectors for 4 external USB 2.0/1.1 ports
- 1 connector for 1 RS232/422/485 serial port
- 1 LVDS LCD panel connector
- 1 LCD/inverter power connector
- 1 front audio connector for line-out and mic-in jacks
- 1 S/PDIF connector
- 4 Serial ATA ports
- 1 4-pin peripheral power connector
- 1 4-pin 12V power connector
- 1 chassis intrusion connector
- 1 front panel connector
- 1 LPC connector
- 3 fan connectors

**BIOS**

- AMI BIOS
  - 64Mbit SPI BIOS

**ENERGY EFFICIENT DESIGN**

- Supports ErP Lot6 power saving\*
- ACPI v3.0 specification
- System Power Management
- Wake-On-Events include:
  - Wake-On-USB KB/Mouse
  - Wake-On-LAN
  - RTC timer to power-on the system
- AC power failure recovery

**DAMAGE FREE INTELLIGENCE**

- Monitors CPU/system temperature and overheat alarm
- Monitors VCore/1.05V/DDR/3.3V/5V/12V 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**

- 61.71 W with i7-3610QE at 2.3GHz and 2x 4GB DDR3 SODIMM

**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**

- 10% to 90%

**DIMENSIONS**

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

**CERTIFICATION**

- CE
- FCC Class B
- UL
- RoHS

**Packing List**

• 1 CR101-D motherboard
• 1 Serial ATA data cable
• 1 Serial ATA power cable
• 1 I/O shield
• 1 DVD

**Optional Items**

• USB port cable
• Serial ATA data cable
• Serial ATA power cable
• COM port cable
• I/O shield
• Power adapter (100W, 12V, Level 6) : 671-110002-100G

## 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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