**Features**

- **CHIPSET**
  - Intel® QM67

- **CPU**
  - 3rd Generation Intel® Core™ processors
  - 2nd Generation Intel® Core™ processors

- **MEMORY**
  - 2 DDR3 SODIMM up to 16GB

- **EXPANSION**
  - 5 PCIe x1, 1 PCIe x16, 4 PCI
  - 1 LPC, 1 IDE, 1 SMBus
  - 1 VGA, 1 LVDS
  - Multiplex digital display with PCIe x16 (SDVO/HDMI/Display Port)
  - 8 USB
  - 4 SATA: 2 SATA 3.0, 2 SATA 2.0
  - 8-bit DIO

- **LAN**
  - 1 Gigabit LAN interface

- **DIMENSIONS**
  - 95mm x 125mm (3.74" x 4.9")

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**Mechanical Drawing**

**Block Diagram**
Specifications

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
• Intel® Advanced Vector Extensions (Intel® AVX) Instructions
• Intel® Turbo Boost Technology

CHIPSET
• Intel® QM67 Express Chipset

SYSTEM MEMORY
• Two 204-pin DDR3 SODIMM sockets
• Supports DDR3 1066/1333MHz
• 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

ONBOARD GRAPHICS FEATURES
• Intel® HD Graphics
• Supports LVDS and VGA interfaces
• LVDS: Single Channel - 18/24-bit; Dual Channel: 36/48-bit
• Supports 6 Graphics Execution Units (EUs)
• Intel® Clear Video Technology
• DirectX Video Acceleration (DXVA) support for accelerating video processing

ONBOARD AUDIO FEATURES
• Supports High Definition Audio interface

ONBOARD LAN FEATURES
• Intel® 82579LM Gigabit Ethernet PHY
• Integrated 10/100/1000 transceiver
• Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

SERIAL ATA (SATA) INTERFACE
• Supports 4 Serial ATA interfaces
• 2 SATA 2.0 with data transfer rate up to 3Gb/s
• 2 SATA 3.0 with data transfer rate up to 6Gb/s
• Integrated Advanced Host Controller Interface (AHCI) controller

IDE INTERFACE
• Supports up to two IDE devices
• DMA mode: Ultra ATA up to 100MB/s
• PIO mode: up to 16MB/s

EXPANSION INTERFACES
• Supports 8 USB ports (USB 1.1/2.0 host controllers)
• Supports 4 PCI slots (PCI 2.3 interface)
• Supports PCIe x16 / SDVO / HDMI / Display Port switchable interface
• Uses QM67's DDI (Digital Display Interface) Port B for SDVO/ HDMI and DDI Port C for Display Port / HDMI
• VBios default setting at Port C only; VBios settings modified upon request
• Supports 1 PCIe x16 Gen2 interface
• Supports 5 PCIe x1 interfaces
• Supports LPC interface
• Supports SMBus interface
• Supports IDE interface
• Supports 8-bit Digital I/O

DAMAGE FREE INTELLIGENCE
• Monitors CPU temperature and overheat alarm
• Monitors CPU fan speed and failure alarm
• Monitors VCore/VGFX/1.5V voltages and failure alarm
• Watchdog timer function

BIOS
• 64Mbit UEFI SPI BIOS

POWER CONSUMPTION
• 54.70 W with i7-2710QE at 2.10GHz and 2x 4GHz DDR3 SODIMM

TEMPERATURE
• 0°C to 60°C

HUMIDITY
• 10% to 90%

POWER
• Input: 12V, 5VSB (optional), VCC_RTC

PCB
• Dimensions
  - COM Express® Basic
  - 95mm (3.74") x 125mm (4.9")
• Compliance
  - PICMG COM Express® R1.0 basic form factor, Type 2

CERTIFICATION
• CE
• FCC Class B
• UL
• RoHS

Packing List
• 1 HR900-B board
• 1 Heat sink kit
• 1 Drivers/utilities disk
• 1 QR (Quick Reference)

Optional Items
• COM630-B carrier board kit
• Cable kit for carrier board