**Features**

<table>
<thead>
<tr>
<th>MEMORY</th>
<th>2 DDR3L SODIMM up to 16GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPANSION</td>
<td>1 PCIe x16, 6 PCIe x1, 4 PCI</td>
</tr>
<tr>
<td></td>
<td>1 LPC, 1 SMBus, 1 I²C, 1 IDE</td>
</tr>
<tr>
<td></td>
<td>1 VGA, 1 LVDS</td>
</tr>
<tr>
<td></td>
<td>8 USB 2.0</td>
</tr>
<tr>
<td></td>
<td>4 SATA 3.0</td>
</tr>
<tr>
<td></td>
<td>SSD (optional)</td>
</tr>
<tr>
<td></td>
<td>4-bit input and 4-bit output GPIO</td>
</tr>
<tr>
<td>LAN</td>
<td>1 LAN</td>
</tr>
<tr>
<td>DIMENSIONS</td>
<td>COM Express® R2.1 Basic, Type 2</td>
</tr>
<tr>
<td></td>
<td>95mm x 125mm (3.74&quot; x 4.9&quot;)</td>
</tr>
</tbody>
</table>

**Mechanical Drawing**

**Block Diagram**
Specifications

PROCESSOR
- 4th generation Intel® Core™ processors
- BGA 1364 packaging technology
- 22nm process technology

Please refer to the Ordering Information below

CHIPSET
- Intel® QM87 Express Chipset

SYSTEM MEMORY
- Two 204-pin DDR3L SODIMM sockets
- Supports DDR3L 1333/1600MHz SODIMM
- Supports up to 16GB system memory
- DRAM device technologies: 1Gb, 2Gb and 4Gb DDR3L DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

ONBOARD GRAPHICS FEATURES
- Intel® HD Graphics 4600
- Supports 1 VGA and 1 LVDS
- VGA: resolution up to 2048x1536 @ 60Hz
- LVDS: NXP P7N3460, 24-bit, dual channel, resolution up to 1920x1200 @ 60Hz
- Intel® Clear Video Technology
- Intel® Advanced Vector Extensions (Intel® AVX) Instructions
- Supports DirectX 11.1, OpenGL 3.2, OpenCL 1.2

ONBOARD AUDIO FEATURES
- Supports High Definition Audio interface

ONBOARD LAN FEATURES
- Intel® I217LM with iAMT9.0 Gigabit Ethernet Phy
- Monitors Vcore/1.05V/DDR voltages and failure alarm
- Monitors CPU fan speed and failure alarm
- Hardware-based agent presence checking
- Proactive alerting
- Remote hardware and software asset tracking
- Supports SMBus interface
- Supports LPC interface
- Supports 4-bit input and 4-bit output GPIO

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

TRUSTED PLATFORM MODULE (TPM) - optional
- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

EXPANSION INTERFACES
- Supports 8 USB 2.0 interfaces
- Supports 1 PCIe x16 Gen 3 interface
- Supports 6 PCIe x1 interfaces
- Supports 4 PCI interfaces (PCI 2.3)
- Supports LPC interface
- Supports SMBus interface
- Supports IDE interface
- Supports 4-bit input and 4-bit output GPIO

ONBOARD GRAPHICS FEATURES
- Supports up to two IDE devices
- DMA mode: Ultra ATA up to 100MB/s

OVERVIEW
- Supports 1 HDD or 1 SSD (write: 30MB/sec (max), read: 70MB/sec (max))
- SATA-optional

BIOS
- AMI BIOS
- 64Mbit SPI BIOS

WATCHDOG TIMER
- Software programmable from 1 to 255 seconds

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

POWER CONSUMPTION
- TBD

OS SUPPORT
- Windows 8 Enterprise x64 (32-bit)
- Windows 8 Enterprise x64 (32-bit)
- Windows 7 Ultimate x64 & SP1 (32-bit)
- Windows XP Professional x64 & SP2 (32-bit)

TEMPERATURE
- Operating: 0°C to 60°C
- Storage: -20°C to 85°C

HUMIDITY
- 5% to 90%

PCB
- Dimensions
  - COM Express Basic
  - 95mm (3.74") x 125mm (4.9")
- Compliance
  - PICMG COM Express R2.1, Type 2

INTEL ACTIVE MANAGEMENT TECHNOLOGY (AMT)
- Supports iAMT9.0
- Out-of-band system access
- Remote troubleshooting and recovery
- Hardware-based agent presence checking
- Proactive alerting
- Remote hardware and software asset tracking

Ordering Information

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Chipset</th>
<th>Temperature</th>
<th>Memory</th>
<th>SSD</th>
<th>Processors</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM920</td>
<td>QM87</td>
<td>B</td>
<td>S</td>
<td>0</td>
<td>4700EQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0: None</td>
<td>2: 2GB</td>
<td>4: 4GB</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8: 8GB</td>
<td>1: 16GB</td>
<td>3: 32GB</td>
<td>6: 64GB</td>
</tr>
</tbody>
</table>

Packing List
- 1 HM920 board
- 1 QR (Quick Reference)
- 1 DVD

Optional Items
- COM330-B carrier board kit
- Heat spreader with heat sink and fan: 761-HSWMBL-000G

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