LGA1150 4th Generation Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA, DDR3, SATA III

**Features**
- 4th generation Intel® Core™ processor-based platform
- Supports Intel® Core™ i7/i5/i3 processor with Q87 chipset
- Four DIMM sockets support up to 32 GB DDR3 1333/1600
- Supports triple display VGA/DVI-D and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, USB 3.0
- Supports Intel vPro, IAMT 9.0 & TPM technologies
- Note: PCA-TPM-00A1E module is required to enable Intel vPro and TPM technologies

**Specifications**

**Processor System**
- CPU: i7-4790S, i7-4790T, i7-4770S, i7-4770TE, i5-4590S, i5-4590T, i5-4570S, i5-4570TE, i3-4360, i3-4350T, i3-4330, i3-4330TE, i3-4320, i3-4310TE, G3420, G3320TE, G1820, G1820TE
- Speed: 3.2GHz, 2.7GHz, 3.1GHz, 2.3GHz, 3.0GHz, 2.0GHz, 2.9GHz, 2.7GHz, 3.7GHz, 3.1GHz, 3.5GHz, 2.4GHz, 3.2 GHz, 2.3 GHz, 2.7 GHz, 2.2 GHz
- L3 Cache: 8MB, 8MB, 6MB, 6MB, 6MB, 6MB, 4MB, 4MB, 4MB, 4MB, 4MB, 3MB, 3MB, 2MB, 2MB
- Socket: LGA1150
- Chipset: Q87
- BIOS: AMI 128 Mbit SPI

**Expansion Slot**
- PCI: 32-bit/33 MHz, 4 slots
- PCIe x 1 (Gen2): 2.0 Gbps per direction, 1 slot
- PCIe x16 (Gen3): 16 Gbps per direction, 1 slot

**Memory**
- Technology: Dual Channel DDR3 1333/1600
- Max. Capacity: 32 GB
- Socket: 4 x 240-pin DIMM

**Graphics**
- Controller: Intel HD Graphics (Depends on processor)
- VRAM: 1 GB maximum shared memory with 2 GB and above system memory installed

**Ethernet**
- Interface: 1/10/100/1000 Mbps
- Controller: GbE LAN1: Intel i217LM, GbE LAN2: Intel i211AT
- Connector: RJ-45 x 2

**SATA**
- Max Data Transfer Rate: 600 MB/s
- Channel: 6

**Rear I/O**
- VGA: 1
- DVI: 2
- Ethernet: 2 (GbE)
- USB: 4 (Two USB 3.0)
- Audio: 2 (Mic-in, Line-out)
- Serial: 1 (RS-232)
- PS/2: 2 (1 x keyboard and 1 x mouse)
- USB: 9 (Two USB 3.0)
- Serial: 5 (4 x RS-232, 1x RS-232/422/485 with auto-flow control)
- SATA: 6
- Parallel: 1
- Display Port: -
- iKVM: -
- GPIO: -

**Watchdog Timer**
- Output: System reset
- Interval: Programmable 1 – 255 sec

**Power Requirement**
- Power On: Intel Core i7-4790S processor; DDR3 8GB x4
- 3.3V: 1.069
- 5V: 1.554
- 12V: 4.922
- 5VSB: 0.048
- -12V: 0.044

**Environment**
- Operating: 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution
- Non-Operating: -40 ~ 85° C (-40 ~ 185° F)
- Temperature: 0 ~ 60° C (32 ~ 140° F), depends on CPU speed and cooler solution

**Physical Characteristics**
- Dimensions: 304.8 x 244 mm (12" x 9.6")
### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Chipset</th>
<th>Memory</th>
<th>Display</th>
<th>USB 3.0</th>
<th>USB 2.0</th>
<th>COM</th>
<th>GbE LAN</th>
<th>AMT</th>
<th>SATA III</th>
<th>SW RAID</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIMB-784G2-00A1E</td>
<td>Q87</td>
<td>Non-ECC DDR3</td>
<td>VGA + dual DVI</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>Yes</td>
<td>2</td>
<td>6</td>
<td>Yes</td>
</tr>
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</table>

### Packing List

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700003194</td>
<td>SATA HDD cable</td>
<td>x 2</td>
</tr>
<tr>
<td>1700022749-11</td>
<td>SATA power cable</td>
<td>x 1</td>
</tr>
<tr>
<td>1920000454T000</td>
<td>I/O port bracket</td>
<td>x 1</td>
</tr>
<tr>
<td>2006078410</td>
<td>Startup manual</td>
<td>x 1</td>
</tr>
<tr>
<td>2066078401</td>
<td>Driver CD</td>
<td>x 1</td>
</tr>
</tbody>
</table>

### Optional Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700002204</td>
<td>Dual port USB 2.0 cable (27 cm) with bracket</td>
</tr>
<tr>
<td>1700020277-01</td>
<td>Dual port USB 3.0 Cable with bracket</td>
</tr>
<tr>
<td>1960047669N001</td>
<td>CPU cooler for 4U and wallmount chassis</td>
</tr>
<tr>
<td>1960047831N001</td>
<td>CPU cooler for 2U and wallmount chassis</td>
</tr>
<tr>
<td>1960049408N001</td>
<td>CPU passive heatsink for 1U chassis</td>
</tr>
<tr>
<td>1960069682N001</td>
<td>I/O port bracket for 1U chassis</td>
</tr>
<tr>
<td>1700002254-01</td>
<td>Printer port cable kit (42 cm)</td>
</tr>
<tr>
<td>1701092300</td>
<td>COM port cable kit</td>
</tr>
<tr>
<td>PCA-TPM-00A1E</td>
<td>TPM module to enable TPM and vPro technologies</td>
</tr>
</tbody>
</table>

Note: Purchasing AIMB-784's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-784.

### Riser Card

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIMB-RF10F-01A1E</td>
<td>1U riser card with 1 PCIe x 16 expansion</td>
</tr>
<tr>
<td>AIMB-R43PF-21A1E</td>
<td>2U riser card with 1 PCIe &amp; 2 PCI expansion</td>
</tr>
</tbody>
</table>