

SIMB-A21

Intel® H61 LGA1155 socket for Intel® Sandy Bridge ATX Motherboard Startup Manual

Packing List

Before you begin installing your card, please make sure that the following items have been shipped:

- 1 x SIMB-A21 ATX Motherboard
- 1 x CD ROM per carton, which contains Drivers
- 1 x SATA cable kit (SATA/Power)
- 1 x I/O Shield
- 1 x Startup Manual per carton

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

Note1:

Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: www.adobe.com/Prodindex/acrobat/readstep.html (Acrobat is a trademark of Adobe).

Disclaimer and Notice

The manufacturer reserves the right to make changes, without notice, to any product, including circuits and/or software described or contained in this manual in order to improve design and/or performance. The manufacturer assumes no responsibility or liability for the use of the described product(s), conveys no license or title under any patent, copyright, or masks work rights to these products, and makes no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. For the detail product information, please refer to user's manual.

Safety Declaration

This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

For more information on this and other Advantech products, please visit our website at:

<http://www.advantech.com>

<http://www.advantech.com/eplatform>

For technical support and service, please visit our support website at:

<http://www.advantech.com/support>

This manual is for the SIMB-A21 series Rev. A1.

Part No. 20060A2110

Printed in China

1st Edition

May 2012

Specifications

System

- **CPU:** LGA1155 socket for Intel Sandy Bridge Processor, Intel Core i7-2600 3.4GHz, Intel Core i5-2400 3.1GHz, Intel Core i3-2120 3.3GHz, Pentium G850 2.9GHz, Celeron G540 2.5GHz
- **FSB:** 1333 / 1066 MHz
- **BIOS:** AMI 32 Mb SPI BIOS
- **System Chipset:** Intel H61
- **I/O Chipset:** Nuvoton NCT6776F
- **Memory:** Two 240-pin DIMM sockets support up to 8 GB Dual Channel DDR3 1333/ 1066 SDRAM
 - * Base on OS limitation, when using the memory over 4GB capacity under 32-bit OS, system will only recognize less than 3GB. And 64-bit OS will don't have this limitation.
- **Watchdog Timer:** Reset: 1sec.~255 min. and 1sec. or 1 min./step
- **H/W Status Moniton:** Monitoring temperatures, voltages, and cooling fan status. Auto throttling control when CPU overheat
- **Expansion Slots:** 1 x PCI Express x16, 1 x PCI Express x1, 4 x PCI (PCI Rev. 2.3 compliant)
- **DIO:** 8 bit
- **S3 / S4:** Yes
- **TPM:** 2x10 Pin header
- **Wake up on LAN or Ring:** LAN (PME / RPL)
- **Smart Fan Control:** Yes

Display

- **Chipset:** Integrated HD Graphics 2000 †
- **Max. Resolution:** 2048 x 1536 bpp (@ 75Hz)
- **VGA:** Yes , Integrated Graphics
- **LVDS / DVI / HDMI:** Through ADD2 LVDS Card
- **Secondary VGA:** Yes , through ADD2 card

Audio

- **Audio Codec:** Realtek, ALC892, 5.1 HD Audio
- **Audio Interface:** Mic in, Line in, Line out

Ethernet

- **LAN1:** RTL8111E Gigabit LAN
- **LAN2:** RTL8111E Gigabit LAN

Jumpers		
Label	Function	Note
PSCN1	AT/ATX Mode setting	<p>AT mode ATX mode</p>
KBUSB_PWR1 USB_PWR1	K/B,M/S +5V/ +5Vsb select USB +5V/ +5Vsb select	<p>K/B,M/S select USB select</p> <p>5V 5Vsb 5Vsb K/BUSB_VCC 5V</p> <p>K/BUSB_VCC</p>
JCOMPWR_1	COM1 for Power select 5V&12V	<p>COM_RRI +5V RRI +12V</p>
JCOMPWR_2	COM2 for Power select 5V&12V	<p>+12V 1 RRI COM_RRI +5V</p>
JSETCOM2	COM2 RS-232/422/485 Setting jumper	<p>RS232 RS422 RS485</p>
JCMOS1	Clear CMOS	<p>Normal (Default) Clear CMOS</p>

Connectors																																
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JFP1+JFP2	Front Panel Header	<table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>SYS_RST_GND</td> <td>11</td> <td>SNMP_SCL</td> <td>10</td> <td>SPK_3</td> </tr> <tr> <td>9</td> <td>SYS_RST#</td> <td>8</td> <td>SNMP_SDA</td> <td>7</td> <td>SPK_4</td> </tr> <tr> <td>6</td> <td>PWRBTN_GND</td> <td>5</td> <td>SATA_LED#</td> <td>4</td> <td>SPK_2</td> </tr> <tr> <td>3</td> <td>PWRBTN_IN</td> <td>2</td> <td>SATA_LED</td> <td>1</td> <td>SPK_+5V</td> </tr> </tbody> </table>	Pin	Signal	Pin	Signal	Pin	Signal	12	SYS_RST_GND	11	SNMP_SCL	10	SPK_3	9	SYS_RST#	8	SNMP_SDA	7	SPK_4	6	PWRBTN_GND	5	SATA_LED#	4	SPK_2	3	PWRBTN_IN	2	SATA_LED	1	SPK_+5V
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JFP3	KEYLOCK pin Header	<p>GND KEYLOCK GND NC Power_LED</p>																														
SATA_PWR1	SATA_pin7 Voltage select	<p>GND SATA_pin7 +5V</p>																														

Connectors

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USB56 USB78 USB910	USB Header																									
F_AUDIO	Front Panel Audio Header for Intel HD Audio																									
SPDIF_OUT_L	SPDIF header																									
SPI_CN1	SPI Headers																									
LANLED1	Lan LED	<table border="1"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Pin</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LAN1_ACT#</td> <td>2</td> <td>LAN2_ACT#</td> </tr> <tr> <td>3</td> <td>LAN_+VCC3</td> <td>4</td> <td>LAN_+VCC3</td> </tr> <tr> <td>5</td> <td>LAN1_SPEED1G</td> <td>6</td> <td>LAN2_SPEED1G</td> </tr> <tr> <td>7</td> <td>LAN1_SPEED100M</td> <td>8</td> <td>LAN2_SPEED100M</td> </tr> <tr> <td>9</td> <td>LAN_+VCC3</td> <td>10</td> <td>Key (no pin)</td> </tr> </tbody> </table>	Pin	Signal	Pin	Signal	1	LAN1_ACT#	2	LAN2_ACT#	3	LAN_+VCC3	4	LAN_+VCC3	5	LAN1_SPEED1G	6	LAN2_SPEED1G	7	LAN1_SPEED100M	8	LAN2_SPEED100M	9	LAN_+VCC3	10	Key (no pin)
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KBMS2	Keyboard/ Mouse Header																									
VOLT1	Voltage Display header																									
JWDT1+JOBS1	Watch/ HW monitor alarm header																									
SMBUS1	SM BUS																									
GPIO1	GPIO																									

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CPUFAN1	CPU FAN Header																																																																																					
COM3456	Box header for COM3~COM6	<table border="1"> <thead> <tr> <th>Pin</th> <th>Signal Name</th> <th>Pin</th> <th>Signal Name</th> </tr> </thead> <tbody> <tr><td>1</td><td>DDCD3#</td><td>2</td><td>DDSR3#</td></tr> <tr><td>3</td><td>RRXD3</td><td>4</td><td>RRTS3#</td></tr> <tr><td>5</td><td>TTXD3</td><td>6</td><td>CCTS3#</td></tr> <tr><td>7</td><td>DDTR3#</td><td>8</td><td>RRI3#</td></tr> <tr><td>9</td><td>GND</td><td>10</td><td>GND</td></tr> <tr><td>11</td><td>DDCD4#</td><td>12</td><td>DDSR4#</td></tr> <tr><td>13</td><td>RRXD4</td><td>14</td><td>RRTS4#</td></tr> <tr><td>15</td><td>TTXD4</td><td>16</td><td>CCTS4#</td></tr> <tr><td>17</td><td>DDTR4#</td><td>18</td><td>RRI4#</td></tr> <tr><td>19</td><td>GND</td><td>20</td><td>GND</td></tr> <tr><td>21</td><td>DDCD5#</td><td>22</td><td>DDSR5#</td></tr> <tr><td>23</td><td>RRXD5</td><td>24</td><td>RRTS5#</td></tr> <tr><td>25</td><td>TTXD5</td><td>26</td><td>CCTS5#</td></tr> <tr><td>27</td><td>DDTR5#</td><td>28</td><td>RRI5#</td></tr> <tr><td>29</td><td>GND</td><td>30</td><td>GND</td></tr> <tr><td>31</td><td>DDCD6#</td><td>32</td><td>DDSR6#</td></tr> <tr><td>33</td><td>RRXD6</td><td>34</td><td>RRTS6#</td></tr> <tr><td>35</td><td>TTXD6</td><td>36</td><td>CCTS6#</td></tr> <tr><td>37</td><td>DDTR6#</td><td>38</td><td>RRI6#</td></tr> <tr><td>39</td><td>GND</td><td>40</td><td>GND</td></tr> </tbody> </table>	Pin	Signal Name	Pin	Signal Name	1	DDCD3#	2	DDSR3#	3	RRXD3	4	RRTS3#	5	TTXD3	6	CCTS3#	7	DDTR3#	8	RRI3#	9	GND	10	GND	11	DDCD4#	12	DDSR4#	13	RRXD4	14	RRTS4#	15	TTXD4	16	CCTS4#	17	DDTR4#	18	RRI4#	19	GND	20	GND	21	DDCD5#	22	DDSR5#	23	RRXD5	24	RRTS5#	25	TTXD5	26	CCTS5#	27	DDTR5#	28	RRI5#	29	GND	30	GND	31	DDCD6#	32	DDSR6#	33	RRXD6	34	RRTS6#	35	TTXD6	36	CCTS6#	37	DDTR6#	38	RRI6#	39	GND	40	GND
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Board Diagram

