ADVANTECH

ASMB-820I Intel® Xeon® E5-2400 series LGA 1356 Socket ATX Server Board with 4 PCIe & 2 PCI Expansion Slots
Startup Manual

Packing List

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

- 1 ASMB-820I Startup Manual
- 1 Driver CD (user's manual is included)
- 2 Serial ATA HDD data cables
- 2 Serial ATA HDD power cables
- 1 I/O port bracket
- 1 Warranty card

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

Note: Acrobat Reader is required to view any PDF file.Acrobat Reader can be downloaded at: www.adobe.com/Products/acrobat/readstep2. html (Acrobat is a trademark of Adobe)

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 ASMB-820I series Rev. A1

Specifications

Standard SBC Functions

- **CPU:** LGA1356 Intel ® Xeon® E5-2400 series
- **BIOS:** AMI 64 Mb SPI BIOS
- **Chipset:** Intel® C602J
- **System memory:** 6* DDR3 REG/ECC/Non-ECC 1066/1333/1600 unbuffered DIMM, Max. 96 GB

Note: Due to the inherent limitations of PC architecture, the system may not fully detect 96 GB RAM when 96 GB RAM is installed.

- **SATA Interface:** 4 SATA2 3 Gb/s ports, 2 SATA3 6Gb/s, supports Intel Matrix Storage (for Windows only) software RAID 0, 1, 10 & 5.
- **Serial ports:** Two serial ports, only support RS-232
- **Keyboard/mouse connector:** Supports standard PS/2 keyboard and mouse
- **Watchdog timer:** 255 level timer intervals
- **USB 2.0:** Supports up to eleven USB 2.0 ports (2* Type-A)

VGA Interface

- **Chipset:** Aspeed AST2300
- **Display Memory:** 64 MB
- **Resolution:** Supports VGA up to resolution 1920 x 1200 @ 60 Hz refresh rate

Ethernet interface

- **Interface:** 10/100/1000 Mbps
- **Controller:** LAN1:Intel 82579LM; LAN2: Intel 82574L; LAN3: Realtek 8201EL(10/100Mbps for IPMI,ASMB-820I sku only)

Mechanical and Environmental

- **Dmensions (L x W):** 304 x 244 mm (12" x 9.6")
- **Power supply voltage:** +3.3 V, +5 V, ±12 V, +5 Vsb
- **Power consumption(Main board only, excluded IO device):** Max. load: +3.3 V @ 24.75 A, +5 V@ 16.77 A, +12 V @ 13.06 A, +12 V(8P) @ 22 A, +5 Vsb@ 2 A
- **Operating temperature:** 0 ~ 60° C (depending on CPU)
- **Weight:** 1 kg (weight of board)

Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application. The table below lists the function of each jumper and connector.

Connector list

Label	Function
ATX24P_P1	ATX 24 Pin main power connector
ATX8P_P0	Processor power connector(for CPU0)
SATA0~SATA5	Serial ATA0~5
USB45,USB67, USB89	USB port 4,5,6,7,8,9 (Header)
USB01,USB23 USB10,USB11	USB port 0,1,2,3,10 & 11(type A)
DIMMA1 ~ DIMMC1	DDR3 slot
CPUFAN0	CPU FAN connector
SYSFAN0,SYSFAN1, SYSFAN2,SYSFAN3	System FAN connector
LAN1,LAN2	LAN connector
BMC LAN1	LAN connector for IPMI
VGA_COM1	VGA+COM connector
KBMS1	Keyboard and mouse connector
KBMS2	External keyboard and mouse connector(6 pin)
BIOS_SKT1	BIOS SPI ROM
LANLED1	LAN LED extension connector
SMBUS1	Front panel SMBus header
IPMI1	IPMI header
SATA_SGPIO_1	SATA SGPIO header
AUDIO1	Audio header
COM2	Serial port: RS-232
JFP1	Front panel header

Jumper list

Label	Function
JCMOS1	CMOS clear
JME1	ME update
JWDT1	Watch dog selection

Jumpers and Connectors

JCMOS1/JME1: CMOS clear/ME update function

Closed pins	Result
1-2	Keep CMOS data/Disable ME update*
2-3	Clear CMOS data/Enable ME update
*: Default	

Keep CMOS data/Disable ME update   Clear CMOS data/Enable ME update

JWDT1: Watchdog timer function selection

Pins	Result
1-2	Enable*
2-3	Disable

*: Default
**Note: To enable WDT function must to be set as Enable both in Jumper & BIOS setting.

Enable   Disable

Installation Note

RSTBTN	Case Open	SPEAKER	
PWRBTN	HDDLED	PWRLED	NC

JFP1

Pin.1	#PWR_SW
Pin.3	GND
Pin.2	#RST_SW
Pin.4	GND

*Power button pin is located in Pin 1 & 3 of front panel connector

Software Installation

The CD disc contains a driver installer program that will lead you through the installation of various device drivers needed to take full advantage of your motherboard.
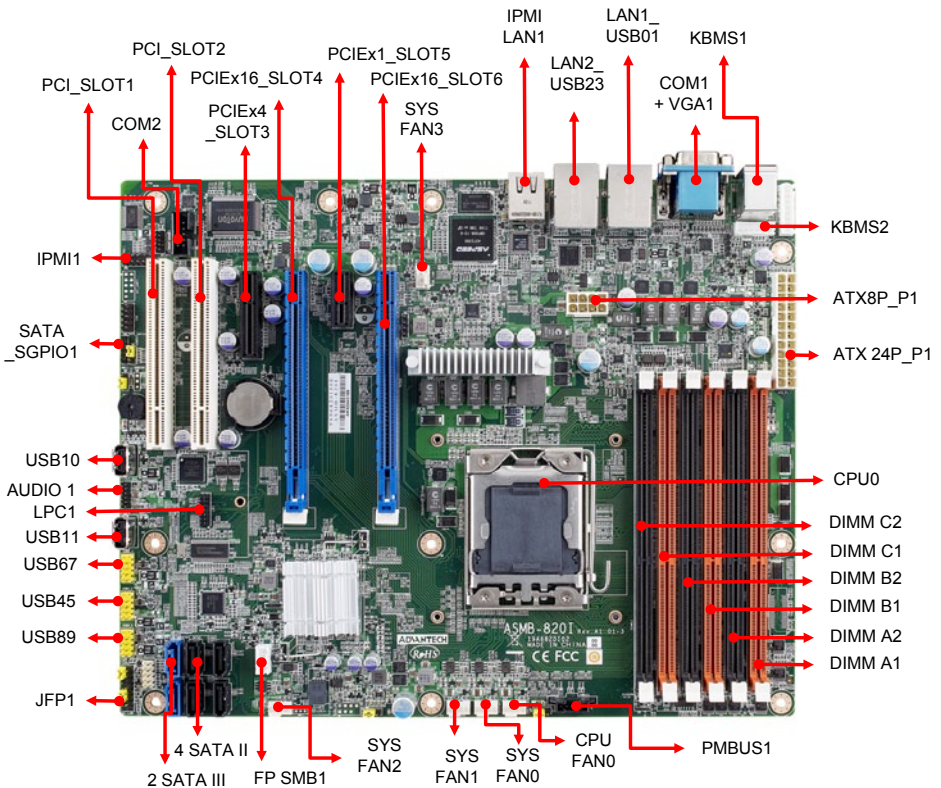
The computer is supplied with a battery-powered realtime clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.

Declaration of Conformity

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.

Board Layout

Board Layout: Jumper and Connector Locations