ASMB-923I Intel Xeon® E5-2600v3 Series EATX Server Board with DDR4, 4 PCIe x16 + 2 PCIe x8, 4 USB 3.0 Startup Manual

Packing List

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

- 1 ASMB-923I Startup Manual
- 1 Driver CD (user's manual is included)
- 2 Serial ATA HDD data cables
- 2 Serial ATA HDD power cables
- 2 CPU power cables (8P)
- 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 1: 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://support.advantech.com

This manual is for the ASMB-923I series Rev. A1

Part No. 2006923I11 2nd Edition
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Specifications

Standard SBC Functions

- **CPU:** Dual LGA2011-R3 Intel Xeon® E5-2600v3 series
- **BIOS:** AMI 128 Mb SPI BIOS
- **Chipset:** Intel® C612 PCH
- **System Memory:** 8* DDR4 REG 1600/1866/2133 DIMM, Max. 256 GB

Note: Due to the inherent limitations of the PC architecture, the system may not fully detect 256 GB RAM when 256 GB RAM is installed.

- **SATA Interface:** 10 SATA3 6 Gb/s ports Intel Matrix Storage (for Windows only) (SATA0-SATA5 and sSATA0-sSATA3 supports software RAID 0, 1, 10 & 5)
- **Serial ports:** Two serial ports, only supports RS-232
- **Keyboard/mouse connector:** Supports standard PS/2 keyboard and mouse
- **Watchdog timer:** 255 level timer intervals
- **USB port:** Supports up to seven USB 2.0 ports (1*Type-A) and four USB 3.0 ports (2 ports from on-board 20-pin header)

VGA Interface

- **Chipset:** Aspeed AST2400/1400
- **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 I210; LAN2: Intel I210; LAN3: Realtek 8201EL(10/100Mbps for IPMI, ASMB- 923I sku only)

Mechanical and Enviroment

- **Dimensions (L x W):** 330 x 304 mm (13" x 12")
- **Power supply voltage:** +3.3 V, +5 V, ±12 V, +5 Vsb
- **Power consumption (mainboard only, excluding IO device):** Max. load: +3.3 V @ 1.69 A, +5 V@ 1.00 A, +12 V @ 17.42 A,+5 Vsb@ 0.05 A, -12 V@ 0.01 A
- **Operating temperature:** 0 ~ 40° C (depending on CPU)
- **Weight:** 1.7 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 of the jumpers and connectors.

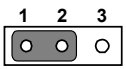
Connectors	
Label	**Function**
ATXPWR1	ATX 24 Pin main power connector
ATX12V1	Processor power connector (for CPU0)
ATX12V2	Processor power connector(for CPU1)
SLOT12V1	For PCIe slot 12V input only
SATA0~SATA5 sSATA0~sSATA3	Serial ATA0~5, Slave serial ATA0~3
USB6_7, USB8_9	USB 2.0 header 6, 7, 8, 9
USB4_5, USB10	USB 2.0 port 4, 5; USB 2.0 port 10 (Type-A)
USB0_1, USB2_3	USB 3.0 port 0, 1; USB 3.0 port 2, 3 (20-pin header)
SLOT1	PCIE x16 slot
SLOT2	PCIE x16 slot (x8 link)
SLOT3	PCIE x16 slot
SLOT4	PCIE x8 slot (x4 link)
SLOT5	PCIE x16 slot
SLOT6	PCIE x16 slot (x8 link)
SLOT7	PCIE x16 slot
DIMMA1 ~ DIMMH1	DDR4 slot
CPUFAN0,CPUFAN1	CPU FAN connector
SYSFAN0,SYSFAN1, SYSFAN2	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)
BIOS1	BIOS SPI ROM
LANLED1	LAN LED extension connector
SMBUS1	Front panel SMBus header
BMC1/BMC2	IPMI module header
SGPIO1/SGPIO2	SATA SGPIO header
JCASE1	Chassis case open alarm header
HDAUD1	Audio header

Jumpers and Connectors

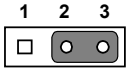
COM2	Serial port: RS-232
JFP1, JFP2, JFP3	Front panel header
GPIO1	GPIO connector
PMBUS1	Power supply SMBbus I²C Header
JWDT1	Enable (Default pin 1-2)/disable watch dog function
SYSFAN_SEL1	FAN PWM (Default pin 1-2)/DC mode
JTHER_SEL1	Thermistor choose for internal(Default pin 1-2)/externa
EX_THR1	For external thermistor cable use
SYS_LED1	For optional system LED indicator

Jumper list	
Label	**Function**
JCMOS1	CMOS clear
JME1	ME update

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	

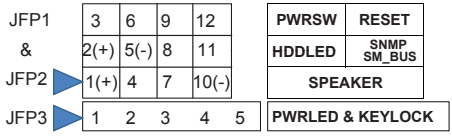


Keep CMOS data/Disable ME update



Clear CMOS data/Enable ME update

Installation Note



JFP1, JFP2	
Pin.3	#PWR_SW
Pin.6	GND
Pin.9	#RST_SW
Pin.12	GND

*Power button pin is located in Pin 3 & 6 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

The 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

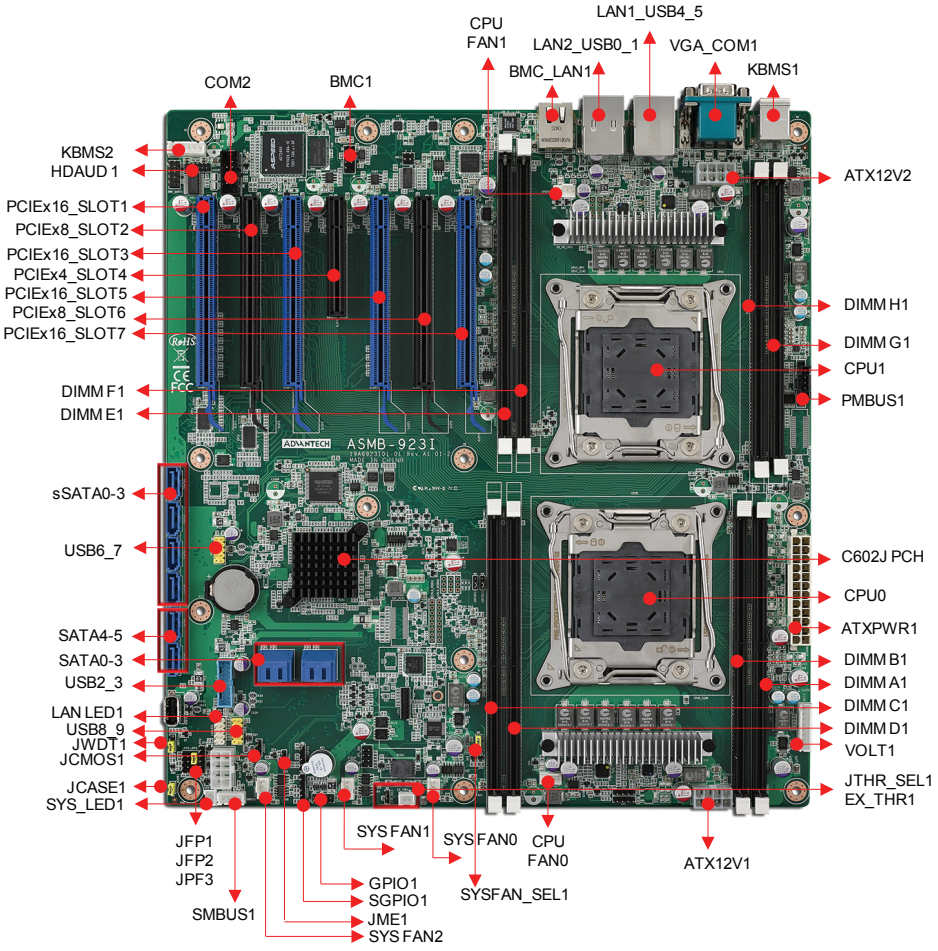


Figure 1: Board Layout: Jumper and Connector Locations