

ASMB-925 Series Dual LGA3647 Intel Xeon® Server Board with 12 DDR4, 5 PCIe x16 + 1 PCIe x8 + 1 PCI, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI

Startup Manual

Packing List

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

- 1 ASMB-925 Series Startup Manual
- 1 Driver CD
- 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)

Specifications

Standard Functions

- **CPU:** Dual LGA3647-P0 Intel Xeon® 8100/6100/5100/4100/3100 series
- **BIOS:** AMI 128 Mb SPI BIOS
- **Chipset:** Intel® C622 PCH
- **System Memory:** 12" DDR4 REG 1866/2133/2400/2666 DIMM, Max. 384 GB

Note: Due to the inherent limitations of the PC architecture, the system may not fully detect 384 GB RAM when 384 GB RAM is installed.

- **SATA Interface:** 8 SATA3 6 Gb/s ports Intel Rapid Storage (for Windows only) (SATA0-SATA7 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 via PS/2 cable
- **Watchdog timer:** 255 level timer intervals
- **USB port:** Supports up to five USB 2.0 ports (4 ports from on-board 10-pin header, 1*Type-A) and six USB 3.0 ports (2 ports from on-board 20-pin header)

VGA Interface

- **Chipset:** ASPEED AST2500/2510
- **Display Memory:** 64 MB
- **Resolution:** Supports VGA up to resolution 1920 x 1200 @ 60 Hz refresh rate

Ethernet Interface

- **Interface:** 10/100/1000 Mbps and 10 Gbps
- **Controller:** LAN1/LAN2: Intel I210AT (LAN2 sharing with IPMI function); LAN3/LAN4: Intel X557-AT2 (10GbE, ASMB-T2 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 @ 1.51 A, +5 V @ 5.19 A, +12 V @ 40.66 A, +5 Vsb @ 0.05 A, -12 V @ 0 A
- **Operating temperature:** 0 ~ 40° C (depending on CPU)
- **Weight:** 1.5 kg (weight of board)

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-925 series Rev. A1

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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.

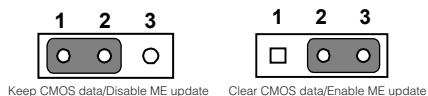
Connector / Jumper List	
Label	Function
ATXPWR1	ATX 24 pin main power connector
ATX12V1	Processor power connector (for CPU0)
ATX12V2	Processor power connector (for CPU1)
SLOT12V1	For PCIe slot 12V input only
SATA0~SATA7	Serial ATA0~7
USB7_8, USB9_10	USB 2.0 header 7, 8, 9, 10
USB11	USB 2.0 port 11 (Type-A)
USB1_2, USB3_4, USB5_6	USB 3.0 port 1, 2, 3, 4; USB 3.0 port 5, 6 (20-pin header)
PCI_SLOT1	PCI slot
PCIEX16_SLOT2	PCIe x16 slot
PCIEX16_SLOT3	PCIe x16 slot
PCIEX16_SLOT4	PCIe x16 slot
PCIEX16_SLOT5	PCIe x16 slot
PCIEX16_SLOT6	PCIe x16 slot
PCIEX8_SLOT7	PCIe x8 slot
DIMMA1~DIMML1	DDR4 slot
CPUFAN0, CPUFAN1	CPU FAN connector
SYSFAN0~SYSFAN4	System FAN connector
LAN1,LAN2	GbE LAN connector
LAN34	10GbE LAN connector
VGA1_COM1	VGA and COM connector
COM2	Serial port: RS-232
KBMS1	External keyboard and mouse connector (6 pin)
BIOS_SKT1	BIOS ROM
LANLED1	LAN LED extension connector
SMBUS1	Front panel SMBus header
BMC_CN1, BMC_CN2	IPMI module header
GPIO1	GPIO connector
SGPIO1	SATA SGPIO header
JCASE1	Chassis case open alarm header

Jumpers and Connectors

HDAUD1	Audio header
JFP1, JFP2, JFP3	Front panel header
PMBUS1	Power supply SMBbus I2C header
JWDT1	Enable (default pin 1-2)/disable watch dog function
EX_THR1	For external thermistor cable use
JTHR_SEL1	Thermistor choose for internal(default pin 1-2)/external
SYS_LED1	For optional system LED indicator
LPC1	Low pin count connector for Advantech designed LPC modules
VOLT1	Alarm Board Power connector
SPI_CN1	SPI flash card pin header
PSO1	AT(1-2) / ATX(2-3 default) mode selector
PEHP1	CPU SMBUS header
BH2	Battery connector
VROC1	VROC hardware key header
CN1	CPLD code update header
PCN1	CPU power code update header
SPI_SKT1_U512	EC ROM
EC_SMBUS1	EC SMBus header
JCMOS1	CMOS clear
JME1	Intel ME update
JPCICLK1	PCI Clock selection (1-2): 66 MHz (2-3): 33 MHz (default)

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	



Installation Note

JFP1	3	6	9	12		PWRSW	RESET
&	2(+)	5(-)	8	11		HDDLED	SNMP SM_BUS
JFP2	1(+)	4	7	10(-)		SPEAKER	
JFP3	1	2	3	4	5	PWRLD & KEYLOCK	

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

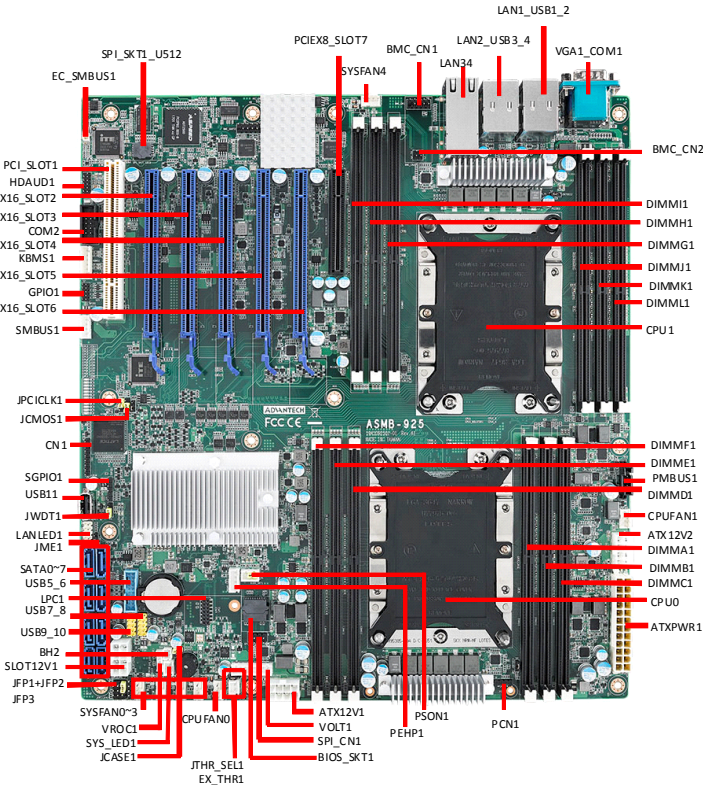


Figure1: Board Layout: Jumper and Connector Locations