

ASMB-807 Series LGA 4677 Intel® Xeon® W Processors ATX Server Board with 8 x DDR5, 3 x PCIe x16, 8 x SATA 3.0, 9 x USB 3.2, 2 x M.2, Dual 10GbE, and IPMI Startup Manual

Packing List

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

- 1 x ASMB-807 startup manual
- 2 x SATA data cables
- 2 x SATA power cables
- 2 x CPU carrier (E1A & E1B)
- 1 x I/O port bracket
- 2 x M.2 screws

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

Specifications

Standard M/B Functions

- **CPU:** LGA4677 Intel Xeon® W-3500/2500 series and Xeon® W-3400/2400 series processors
- **BIOS:** AMI 512 Mbit SPI BIOS
- **Chipset:** Intel® W790 PCH
- **System Memory:** 8* DDR5 4400/4800 Registered ECC DIMM, Max. Capacity 2TB
- Note1:** Due to the inherent limitations of older PC architectures, the system may not fully detect 512 GB RAM when 512 GB RAM is installed.
- Note2:** Max speed of 4800 MT/s can only be supported with 1 DIMM per channel configuration (Total 4 DIMMs installed on DIMMA1/B1/E1/F1 slots)

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This manual is for the ASMB-807 series Rev. A1.

Part No. 2042080700

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1st Edition

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Specifications (Cont.)

- **SATA Interface:** 8 x SATA3 6Gb/s ports Intel Rapid Storage (for Windows only) (SATA0-SATA7 supports software RAID 0, 1, 10 & 5)
- **Serial Ports:** One external serial port and one onboard header, RS-232 only
- **Keyboard/Mouse Header (KBMS1):** Supports the standard PS/2 keyboard and mouse via PS/2 cable.
- **Watchdog Timer:** 255 level timer intervals
- **USB Port:** Supports up to 6 x USB 3.2 Gen2x1 ports, 2 x USB 3.2 Gen1x1 (onboard 20-pin header), 3 x USB 2.0 (2 ports from onboard 10-pin header + 1 x onboard Type A), and 1 x USB 3.2 Gen2x2 ports (onboard Type-E A-Key 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:** 10/100/1000/2500 Mbps & 10 GbE Base-T
- **Controller:** LAN1/2: Intel I226; LAN3/4: Intel X710

CPU Carrier Information

- **E1A:** Intel Xeon® W-3500/3400 series processors
- **E1B:** Intel Xeon® W-2500/2400 series processors

Mechanical and Environment

- **Dimensions (L x W):** 244 x 304 mm (9.6" 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 @ 2.94A, +5 V @ 1.81A, +12 V @ 0.03A, +5 Vsb @ 0.14A, 12 V_8P @ 19.36A
- **Operating Temperature:** 0 ~ 60°C (depending on CPU speed and cooler solution)
- **Net Weight:** 0.97 kg

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, ATX12V2	Processor power connector

Jumpers and Connectors

BH1	For optional battery kit
BIOS_SKT1	BIOS SPI ROM
COM2	Serial port: RS-232
CPUFAN0	CPU FAN connector
DIMMA1, DIMMA2, DIMMB1, DIMMB2, DIMME1, DIMME2, DIMMF1, DIMMF2	DDR5 slot
EX_THR1	Connector for external thermistor
GPIO1	GPIO connector
HDAUD1	Audio header
KBMS1	External keyboard and mouse connector (6-pin)
LAN1, LAN2, LAN3_4	RJ-45 LAN connector
BMCLAN_USB3C3	IPMI dedicated LAN connector
SPL_TPM1	TPM connector
M2_2280_1, M2_2280_2	M.2 connector (SATA & PCIe x4)
PMBUS1	PMBUS connector to communicate with power supply
SATA0~SATA7	SATA connector 0~7
SGPIO1,SGPIO2	SATA SGPIO header
PCIEX4_SLOT1	PCIe 4 slot, open end (x4 link) (PCH)
PCIEX16_SLOT2	PCIe x16 slot (x16 link) (CPU)
PCIEX16_SLOT3	PCIe x16 slot (x16 link) (CPU)
PCIEX8_SLOT5	PCIe x8 slot, open end (x8 link) (CPU)
PCIEX4_SLOT6	PCIe x4 slot, open end (x4 link) (PCH)
PCIEX16_SLOT7	PCIe x16 slot (x16 link) (CPU)
SLOT12V1	For PCIe slot 12V input only
SMBUS1	SMBus header
SPL_CN1	Connector for BIOS update tool
BMC_SPI1	BMC EEPROM
SYSFAN0~SYSFAN5	System FAN connector
USB2H1	USB 2.0 port 9, 10, (9-pin header)
USB2A1	USB 2.0 port 14 (Type-A)
USB3C1, USB3C2, USB3C3	USB 3.2 Gen2x1 port 1, 2, 3, 4, 5, 6
USB3H1	3.2 Gen1x1 port 7, 8 (19-pin header)
USB3E1	USB 3.2 Gen2x2 port 11(Type-E)
VGA1_COM1	VGA + COM connector, Serial: RS-232
ESPI1	eSPI connector
SYS_LED1	System LED connector
LANLED1	LAN LED connector
PEHP1	NVMe Raid Status SMBus for NVMe BP LED Control
VROC1	Intel Virtual RAID (VROC) key

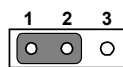
Jumpers and Connectors (Cont.)

Jumper list	
Label	Function
JCASE1	Chassis case open alarm
JCMOS1	CMOS clear
JFP1, JFP2	Front panel header
JME1	ME update
JTHR_SEL1	To select on board or external thermistor
JWDT1	Watchdog Reset
PSON1	AT(1-2)/ATX(2-3), default (2-3)

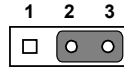
JCMOS1/JME1: CMOS clear/ME update function

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



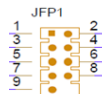
Clear CMOS data/
Enable ME update

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.

Installation Note



JFP1			
1	HDD_LED +	2	PWR BTN
3	HDD_LED -	4	GND
5	PWR LED +	6	RST BTN
7	GND	8	GND
9	GND		

Installation Note (Cont.)

2.0 mm JFP2 connector on board

Description	Pin Number		Description
RST BTN	2	▼1	PWD BTN
PWD GND	4	3	PWD GND
LAN1_LED+	6	5	LAN2_LED+
LAN1_LED-	8	7	LAN2_LED-
X	10	9	SYS_LED+
GND	12	11	SYS_LED-
PWR LED+	14	13	HDD_LED+
PWR LED-	16	15	HDD_LED-

Installation Note (Cont.)

2.0 mm JFP2 connector to 2.54 mm pitch header

Description	Pin Number		Description
(Red) PWD BTN	▼1	2	RST BTN (White)
(Black) PWD GND	3	4	PWD GND (Black)
(Blue) LAN1_LED+	5	6	LAN2_LED+(Brown)
(Red) LAN1_LED-	7	8	LAN2_LED-(Black)
(Orange) HDD_LED+	13	14	PWR LED+ (Red)
(Black) HDD_LED-	15		
Key	16		PWR LED- (Black)

Note 2.0 mm JFP2 to 2.54mm cable will be adopted when there is an interference in between the full length expansion card and JPF1 cable.

Board Layout

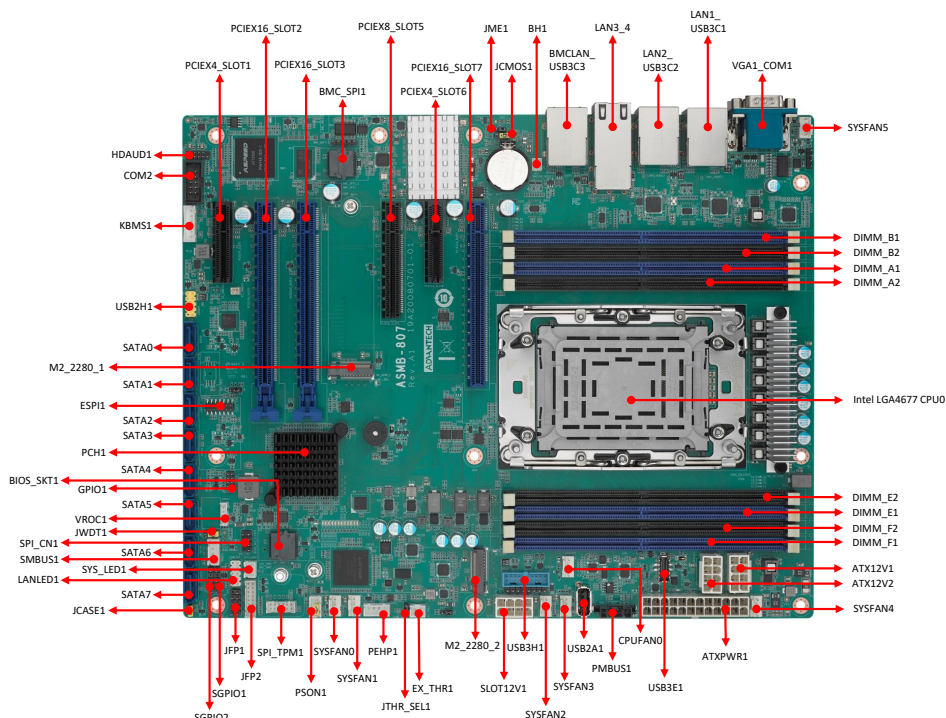


Figure 1: Board Layout: Jumper and Connector Locations