

## ASMB-805 ATX Server Board with LGA 2066 Intel® Xeon® W CPU, 8 x DDR4, 3 x PCIe x16 + 6 x SATA3, 8 x USB 3.0, and IPMI

### Startup Manual

#### Packing List

Before installation, check to ensure that the following items have been included with the product:

- 1 x ASMB-805 startup manual
- 2 x Serial ATA HDD data cables
- 2 x Serial ATA HDD power cables
- 1 x CPU power cables (8 pin)
- 1 x 2U I/O shield
- 1 x Warranty card
- 1 x M.2 screw

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

**Note 1:** Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded from <https://www.adobe.com/downloads.html> (Acrobat is a trademark of Adobe)

For more information about this or other Advantech products, visit our website at

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For technical support and customer service, visit our support website for ASMB-805 at

<https://advt.ch/82q>



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This manual is for the ASMB-805 series, Rev. A1.

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#### Specifications

##### Standard Motherboard

- **CPU:** Dual LGA2066 Intel® Xeon® W processor
- **BIOS:** AMI 256 Mb SPI BIOS
- **Chipset:** Intel® C422 PCH
- **System Memory:** 8 x DDR4-1866/2133/2400/2666 non-3DS RDIMM/LRDIMM, max. capacity 512 GB

**Note 2:** Due to the inherent limitations of the PC architecture, the system may not fully detect 512 GB RAM when 512 GB RAM is installed.

- **SATA Interface:** 6 x SATA3 ports; Intel® RSTe; software RAID 0, 1, 5, 10
- **Serial Ports:** 2 x RS-232 (1 at rear I/O and 1 via pin header)
- **Keyboard/Mouse Header (KBMS1):** Supports the standard PS/2 keyboard and mouse via PS/2 cable
- **Watchdog Timer:** 255-level timer intervals (in seconds)
- **USB:** Supports up to 8 x USB 3.0 (2 via onboard header and 4 at rear I/O) and 5 x USB 2.0 ports (1 x Type-A and 4 x via onboard header)

##### VGA Interface

- **Chipset:** ASPEED 2500
- **Display Memory:** 64 MB
- **Resolution:** Supports VGA up to 1920 x 1200 resolution @ 60 Hz refresh rate

##### Ethernet Interface

- **Interface:** 10/100/1000 Mbps
- **Controller:** LAN1/2: Intel® I210

##### Mechanical and Environment

- **Dimensions (L x W):** 304.8 x 244 mm (12 x 9.6 in)
- **Power Supply Voltage:** +3.3 V, +5 V, ±12 V, +5 Vsb
- **Power Consumption (mainboard only, excluding I/O):** Maximum load: +3.3V@0.88A, +5V@0.43A, +12V@0.65A, +5V\_SB@0.05A, -12V@0A, +12V\_8P\_0@12.74A
- **Operating Temperature:** 0 ~ 60 °C (32 ~ 140 °F) depending on CPU
- **Weight (board only):** 0.91 kg (2 lb)

## Jumpers and Connectors

The board is equipped with several jumpers that allow the system to be configured for specific applications. The function of each jumper and connector is listed in the table below.

Connectors	
Label	Function
ATXPWR1	ATX 24-pin main power connector
ATX12V1	Processor power connector
BH2	For optional battery kit
BIOS_SPI1	BIOS ROM
BMC_CN1, BMC_CN2	IPMI module header
COM2	Serial port RS-232
CPUFAN0	CPU fan connector
DIMMA1, DIMMA2, DIMMB1, DIMMB2, DIMMC1, DIMMC2, DIMMD1, DIMMD2,	DDR4 slots
EX_THR1	Connector for external thermistor
GPIO1	GPIO connector
HDAUD1	Audio header
JFP1, JFP2, JFP3	Front panel header
KBMS1	External keyboard and mouse connector (6 pin)
LAN1_USB3_12	RJ-45 LAN port 1 + USB 3.0 port 1/2 connector
LAN2_USB3_34	RJ-45 LAN port 2 + USB 3.0 port 3/4 connector
LANLED1	LAN LED extension connector
LPC2	TPM connector
M2_2280_1	M.2 22110/2280/2242
PCIEX4_SLOT1	PCIEx4 slot
PCIEX16_SLOT2	PCIEx16 slot
PCIEX8_SLOT3	PCIEx8 slot (0 or x8 link)
PCIEX16_SLOT4	PCIEx16 slot (x16 or x8 link)
PCIEX8_SLOT5	PCIEx8 slot (0 or x8 link)
PCIEX16_SLOT6	PCIEx16 slot (x16 or x8 link)
PEHP1	CPU SMBUS header
PMBUS1	PMBUS connector for linking to the power supply
SATA0~SATA5	Serial ATA0~5
SGPIO1	HDD LED control header
Slot12V1	For PCIe slot 12V input only

## Jumpers and Connectors (Cont.)

SMBUS1	SMBus header
SPI_CN1	Connector for BIOS update tool
SPI_SKT1	EC ROM
SYS_LED1	System LED connector
SYSFAN0~SYSFAN3, REAR_FAN	System FAN connector
USB9_10	USB 2.0 port 9 and 10 (9-pin header)
USB11	USB 2.0 port 11 (Type A)
USB13_14	USB 2.0 port 13 and 14
USB3_78	USB 3.0 port 7 and 8 (20-pin header)
VGA1_COM1	VGA and COM connector
VOLT1	Alarm board power connector
VROC1	Intel Virtual RAID (VROC) key

### Jumper List

Label	Function
JCASE1	Chassis case open alarm header
JCMOS1	CMOS clear
JME1	ME update
JTHR_SEL	Internal (default pin1-2) or external (pin2-3) thermistor selection
JWDT1	Watch dog reset
PSON1	AT(1-2) / ATX(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

## Jumpers and Connectors (Cont.)

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

### JFP1, JFP2

Pin 3	#PWR_SW
Pin 6	GND
Pin 9	#RST_SW
Pin 12	GND
Pins 8 and 11	HWM_SMB_DATA, HWM_SMB_CLK

Note: The power button pin is located between Pins 3 and 6 of the front panel connector.

## 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

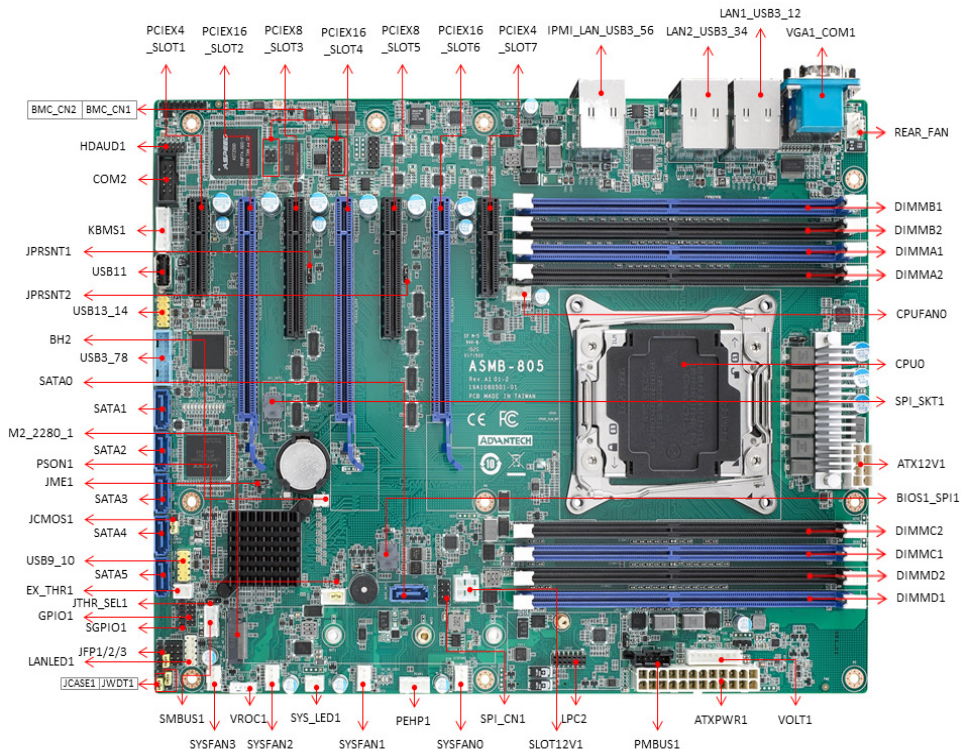


Figure 1. Jumper and Connector Locations