ASMB-818 Series LGA 4710 6th Gen Intel® Xeon® Scalable ATX Server Board with 8 DDR5, 3 PCIe x16, 5 SATA3, 4 USB 3.2 (Gen1), 1 M.2, Dual 10GbE, IPMI Startup Manual

Packing List

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

- 1 x ASMB-818 Startup Manual
- 1 x SATA data cables
- 1 x SATA power cables
- 2 x CPU power cables (8P)
- 1 x CPU carrier - E2A (XCC)
- 1 x CPU carrier - E2B (MCC)
- 1 x PCIe I/O support
- 1 x front panel converter cable
- 1 x I/O port bracket
- 1 x M.2 screw

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

Specifications

Standard M/B Functions

- **CPU:** LGA4710 6th Gen Intel® Xeon® Scalable processor
- **BIOS:** AMI 512 Mbit SPI BIOS
- **System Memory:** 8 x DDR5 6400 MT/s registered ECC DIMM, Max. capacity 2TB

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This manual is for the ASMB-818 Series Rev. A1.

Part No. 2042081800 1st Edition
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Specifications (Cont.)

Note: Due to the inherent limitations of older PC architectures, the system may not fully detect 2TB RAM when 2TB RAM is installed.

- **SATA Interface:** Asmedia ASM1165: 4 x SATA 3.0 (6 Gb/s) via Slim-SAS HD, 1 x SATA 3.0 (6Gb/s)
- **Serial Ports:** One at the rear I/O, only supporting RS-232
- **Watchdog Timer:** 255-level timer intervals
- **USB Port:** Supports up to 4 x USB 3.2 (Gen1) ports (2 rear ports, 2 ports from the onboard 20-pin header) and 5 x USB 2.0 ports (1 x Type-A, 4 rear ports)

VGA Interface

- **Chipset:** ASPEED AST2600
- **Display Memory:** 64 MB
- **Resolution:** Supports VGA, resolution up to 1920 x 1200 @ 60 Hz refresh

Ethernet Interface

- **Interface:** 10/100/1000/2500 Mbps & 10 GbE Base-T
- **Controller:** LAN1/2: Intel I226; LAN3/4: Intel X710

Mechanical and Environmental

- **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 I/O device):** Max. load: +3.3 V @ 0.59 A, +5 V@ 1.92 A, +12 V @ 6.65 A,+5 Vsb @ 0.01 A, +12V_8P_1 @ 17.22 A, +12V_8P_2 @ 15.91 A
- **Operating Temperature:** 0 ~ 60°C (depending on CPU)
- **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 (for CPU0)
BH2	For optional battery kit
BIOS_SKT1	BIOS SPI ROM
COM1	Serial port: RS-232
CPUFAN0	CPU FAN connector

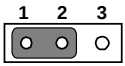
Jumpers and Connectors (Cont.)

C0_DIMM_A1, C0_DIMM_B1, C0_DIMM_C1, C0_DIMM_D1, C0_DIMM_E1, C0_DIMM_F1, C0_DIMM_G1, C0_DIMM_H1	DDR5 slot
GPIO1	GPIO connector
LAN1_USB2C1, LAN2_USB2C2, LAN4_3	RJ-45 LAN connector and USB 2.0 port 1, 2, 3, 4
BMC_LAN_USB3C1	IPMI dedicated LAN connector & USB 3.2 Gen1 port 1, 2
EX_THR1	Connector for external thermistor
M2_2280_1	M.2 connector (PCIe Gen5 x4)
PMBUS1	PMBUS connector to communicate with power supply
SATA_CON1, SATA4	4 x SATA 3.0 via Slim-SAS HD, and one SATA connector
PCIEX4_SLOT1	PCIe x4 slot (x4 link) (CPU)
PCIEX16_SLOT2	PCIe x16 slot (x16 link) (CPU)
PCIEX4_SLOT3	PCIe x4 slot, close end (x4 link) (CPU)
PCIEX16_SLOT4	PCIe x16 slot (x16 link) (CPU)
PCIEX8_SLOT5	PCIe x8 slot (0 or x8 link) (CPU)
PCIEX16_SLOT6	PCIe x16 slot (8 or x16 link) (CPU)
PCIEX8_SLOT7	PCIe x8 slot (x8 link) (CPU)
SLOT12V1	For PCIe slot 12V input only
SMBUS1	SM Bus header
SPI_CN1	Connector for BIOS update tool
BMC_SPI1	BMC SPI ROM
SYSFAN0~ SYSFAN5	System FAN connector
USB3H1, USB2A1	USB 3.2 Gen1 port 3, 4 (20-pin header); USB 2.0 port 5 (Type-A)
SKY_SB1	SMBUS for SKY series HDD BP
VGA1	VGA connector
ESPI1	eSPI connector
SYS_LED1	System LED connector
LANLED1	LAN LED connector
PEHP1	NVMe RAID LED control
VROC1	Enables NVMe RAID, hot-plug, and LED control via direct PCIe CPU link

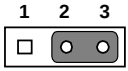
Jumpers and Connectors (Cont.)

Jumper list	
Label	**Function**
JCASE1	Chassis case open alarm
JCMOS1	CMOS clear
JFP1, JFP2	Front panel header
JWDT1	Watch Dog Reset
PSON1	AT(1-2)/ATX(2-3), default (2-3)

JCMOS1: CMOS clear function	
Closed pins	**Result**
1-2	Keep CMOS data update*
2-3	Clear CMOS data update
*: Default	



Keep CMOS data



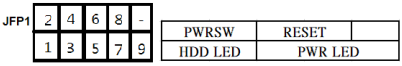
Clear CMOS data

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 Notes



JFP1	
Pin.2	#PWR_SW
Pin.4	GND
Pin.6	#RST_SW
Pin.8	GND
Pin.3, Pin.5	SATA_M.2_LED, BMC_SUSLED

*The power button pin is located at Pins 2 & 4 of the front panel connector.

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)
		Key	
(Orang) HDD_LED+	13	14	PWR LED+ (Red)
(Black) HDD_LED-	15		
	Key	16	PWR LED- (Black)

Board Layout

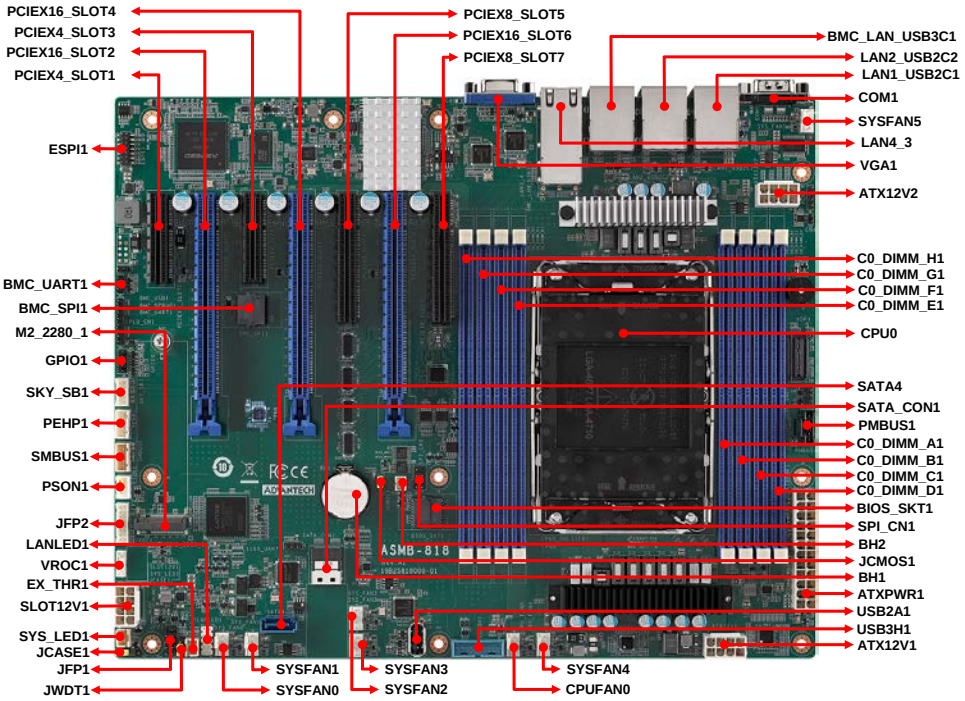


Figure 1: Board Layout: Jumper and Connector Locations