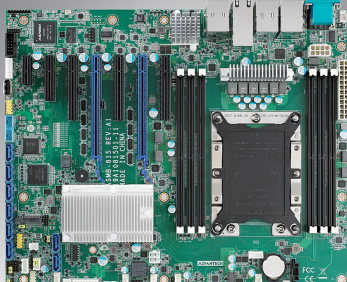


# ASMB-815

**LGA 3647-PO Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 5 PCIe x8 or 2 PCIe x16 and 1 PCIe x8, 8 SATA3.0, 6 USB3.0, Dual 10GbE, IPMI**



## Features

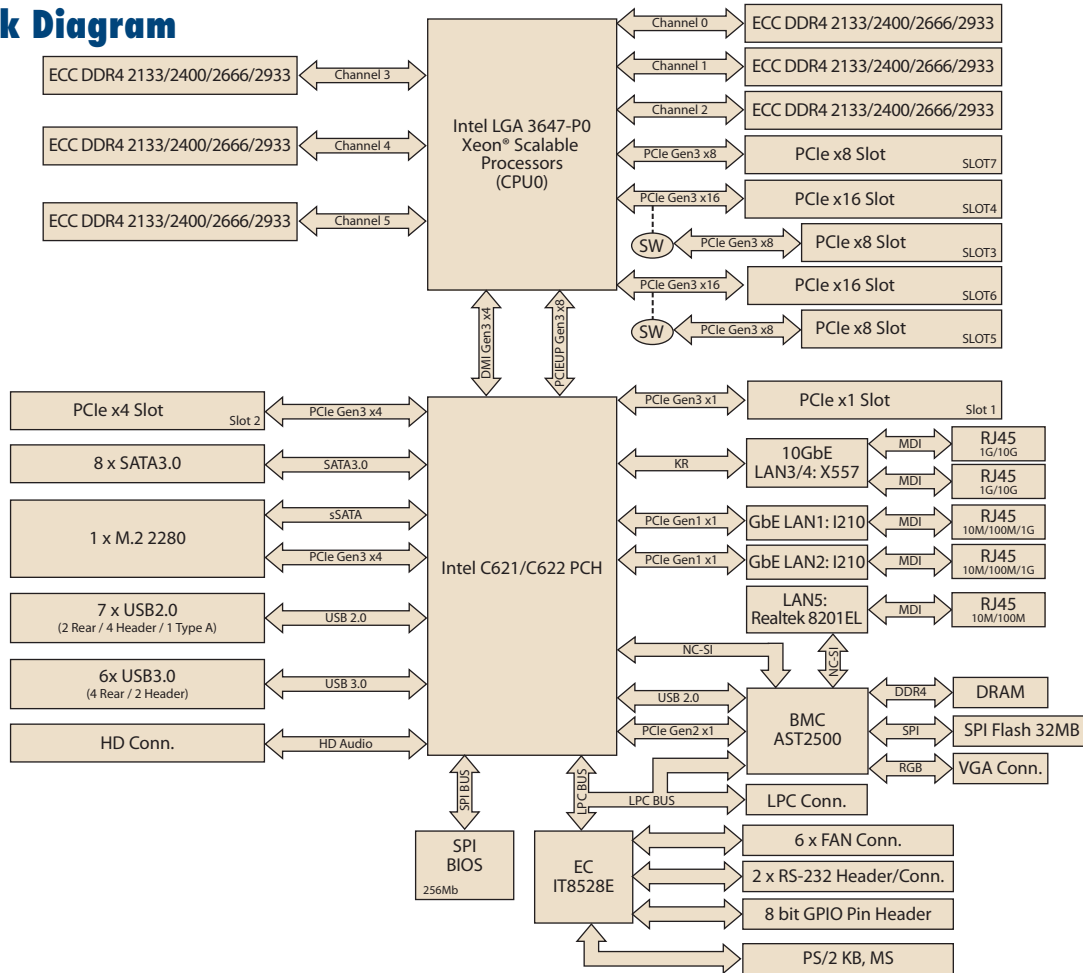
- ATX server board with Xeon® Scalable processors
- DDR4 2933MHz RDIMM up to 768GB, support Intel Optane DC Persistent Memory
- Five PCIe x8 or two PCIe x16 and 1 PCIe x8
- Intel® X557-AT2 dual 10GbE ports
- Eight SATA3.0 and one M.2 connectors (SATA / PCIe compatible)
- 0 ~ 60 °C ambient operating temperature range

## Specifications

|                          |                                  |                                                                                                               |      |      |                            |      |        |
|--------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------|------|------|----------------------------|------|--------|
| Form Factor              |                                  | ATX form factor                                                                                               |      |      |                            |      |        |
| Processor System         | Socket                           | Intel LGA 3647                                                                                                |      |      |                            |      |        |
|                          | CPU type                         | Intel Xeon 1st and 2nd Gen Scalable processors (CPU cooler should be purchased separately and TDP up to 205W) |      |      |                            |      |        |
| Core Logic               | Chipset                          | Intel C621/C622 chipset                                                                                       |      |      |                            |      |        |
| Memory                   | Total slots                      | 6 (1 DIMM per channel)                                                                                        |      |      |                            |      |        |
|                          | Capacity                         | Maximum 768GB ECC LRDIMM                                                                                      |      |      |                            |      |        |
|                          |                                  | Maximum 768GB ECC 3DS RDIMM                                                                                   |      |      |                            |      |        |
|                          | Memory type                      | Maximum 1TB Intel Optane DC Persistent Memory in memory mode                                                  |      |      |                            |      |        |
|                          | Memory size                      | DDR4 2133/2400/2666/2933MHz RDIMM, LRDIMM*                                                                    |      |      |                            |      |        |
|                          |                                  | 4GB, 8GB, 16GB, 32GB, 64GB, 128GB                                                                             |      |      |                            |      |        |
| Expansion Slots          | Total PCI/PCI-X/PCIe slots       | 7                                                                                                             |      |      |                            |      |        |
|                          | Slot location 1                  | PCIe x1 slot (x1 link), signal from PCH                                                                       |      |      |                            |      |        |
|                          | Slot location 2                  | PCIe x4 slot (x4 link), signal from PCH                                                                       |      |      |                            |      |        |
|                          | Slot location 3                  | PCIe x8 slot (0 or x8 link), signal from CPU                                                                  |      |      |                            |      |        |
|                          | Slot location 4                  | PCIe x16 slot (x8 or x16 link), signal from CPU                                                               |      |      |                            |      |        |
|                          | Slot location 5                  | PCIe x8 slot (0 or x8 link), signal from CPU                                                                  |      |      |                            |      |        |
|                          | Slot location 6                  | PCIe x16 slot (x8 or x16 link), signal from CPU                                                               |      |      |                            |      |        |
|                          | Slot location 7                  | PCIe x8 slot (x8 link), signal from CPU                                                                       |      |      |                            |      |        |
| Graphics                 | VGA                              | Aspeed AST 2500/2510                                                                                          |      |      |                            |      |        |
| Storage                  | SATA controller                  | Intel C621/C622: 8 x SATA3.0 (6 Gb/s) support software RAID 0,1,5,10                                          |      |      |                            |      |        |
| Networking               | GbE/10GbE LAN                    | 2 x Intel I210AT / Intel X557-AT2 (dual 10GbE ports)                                                          |      |      |                            |      |        |
| Onboard I/O Connector    | PSU connector                    | 24-pin SSI power connector + 1 x 8-pin SSI 12 V power connector + 4-pin SSI 12 V power connector              |      |      |                            |      |        |
|                          | USB connector                    | 4 x USB2.0 ports (two onboard headers) + 2 x USB3.0 ports (one onboard header) + 1 x Type-A USB2.0 port       |      |      |                            |      |        |
|                          | Fan header                       | 6 x 4-pin (5 for system + 1 for CPU)                                                                          |      |      |                            |      |        |
|                          | M.2                              | 1 x M.2 2280 B+M key (SATA and PCIe)                                                                          |      |      |                            |      |        |
|                          | SMBus                            | 1                                                                                                             |      |      |                            |      |        |
|                          | Chassis intrusion                | 1                                                                                                             |      |      |                            |      |        |
|                          | Front LAN LED                    | 1                                                                                                             |      |      |                            |      |        |
|                          | Audio Header                     | 1                                                                                                             |      |      |                            |      |        |
|                          | PS/2 Keyboard/Mouse header       | 1                                                                                                             |      |      |                            |      |        |
|                          | Serial port header               | 1                                                                                                             |      |      |                            |      |        |
| Rear I/O Connector       | External serial port             | 1                                                                                                             |      |      |                            |      |        |
|                          | External USB port                | 4 (USB3.0) + 2 USB (2.0)                                                                                      |      |      |                            |      |        |
|                          | VGA port                         | 1                                                                                                             |      |      |                            |      |        |
|                          | RJ-45                            | 5 (1 port dedicated and 1 port shared with BMC)                                                               |      |      |                            |      |        |
| Management Solution      | Software                         | Advantech remote monitoring utility                                                                           |      |      |                            |      |        |
|                          | Out of band remote management    | Yes (ASMB-815I & ASMB-815T2 SKUs)                                                                             |      |      |                            |      |        |
| Monitoring               | CPU temperature                  | Yes                                                                                                           |      |      |                            |      |        |
|                          | System Monitoring                | Yes                                                                                                           |      |      |                            |      |        |
| Watchdog Timer           | Output                           | System reset                                                                                                  |      |      |                            |      |        |
|                          | Interval                         | Programmable 1 ~ 255 sec/min                                                                                  |      |      |                            |      |        |
| Power Requirement        | Power On                         | 3.3V                                                                                                          | 5V   | 12V  | 5Vsb                       | -12V | 12V_8P |
|                          | (205W CPU@2.5GHz DDR4 2400 4G*6) | 2.8A                                                                                                          | 7.0A | 0.6A | 0.1A                       | 0.0A | 17.6A  |
| Environment              | Temperature                      | Operating                                                                                                     |      |      | Non-operating              |      |        |
|                          |                                  | 0 ~ 60 °C, depends on CPU speed and cooler solution                                                           |      |      | -40 ~ 85 °C                |      |        |
|                          | Humidity                         | 10% ~ 95%                                                                                                     |      |      | 10% ~ 95% (Non condensing) |      |        |
| Physical Characteristics | Dimension (L x H)                | 304.8 x 244 mm (12" x 9.6")                                                                                   |      |      |                            |      |        |

\*2933MHz memory is supported by the 82xx and 62xx series processors

## Block Diagram



## Ordering Information

| Part Number     | Chipset | Memory                | GbE/10GbE LAN | IPMI | Graphics |
|-----------------|---------|-----------------------|---------------|------|----------|
| ASMB-815-00A2   | C621    | 6 x DDR4 RDIMM/LRDIMM | 2/-           | -    | AST2510  |
| ASMB-815I-00A2  | C621    | 6 x DDR4 RDIMM/LRDIMM | 2/-           | Yes  | AST2500  |
| ASMB-815T2-00A2 | C622    | 6 x DDR4 RDIMM/LRDIMM | 2/2           | Yes  | AST2500  |

## Packing List

| Part Number    | Description          | Quantity |
|----------------|----------------------|----------|
| 2066815100     | Driver CD            | x 1      |
| 2006815110     | Startup manual       | x 1      |
| 1700003194     | SATA data cables     | x 2      |
| 1700022749-11  | SATA power cables    | x 2      |
| 1700019748     | CPU power cable      | x 2      |
| 1930008089     | Screw for M.2 device | x 2      |
| 1960076488T000 | I/O shield           | x 1      |
| 1651003167-01  | LGA3647 CPU clip     | x 1      |

## Optional Accessories

| Part Number     | Description                                         |
|-----------------|-----------------------------------------------------|
| PCA-AUDIO-HDB1E | HD audio card                                       |
| PCA-TPM-00B1E   | TPM 2.0 module                                      |
| 1960081155N001  | LGA-3647 narrow CPU heatsink for 1U chassis (85W)   |
| 1960088272T001  | LGA-3647 narrow CPU cooler for 2U/4U chassis (150W) |
| 1960081603N101  | LGA-3647 narrow CPU cooler for 4U chassis (205W)    |
| 1700002204      | Dual port USB cable (27 cm) with bracket            |
| 1700008461      | Four port USB cable (30.5 cm) with bracket          |
| 1700020277-01   | Dual port USB 3.0 cable (30 cm) with bracket        |
| 1701090401      | COM port cable (40 cm) with bracket                 |
| 1700019268-11   | PS/2 port cable (35 cm)                             |
| 1960063434N000  | Cable bracket for 1700019268-11                     |
| 1960082347T000  | 1U chassis IO shield                                |

Note: PCA-AUDIO-HDB1E is not compatible with Advantech 3U chassis.

## I/O View



ASMB-815T2-00A2



ASMB-815I-00A2



ASMB-815-00A2

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Advantech:](#)

[ASMB-815T2-00A2U](#)