

# EPC-B3588

## Embedded System with Alder Lake-S/ Raptor Lake-S/Raptor Lake-S Refresh Platform and 3 PCIe Expansion Slots



### Features

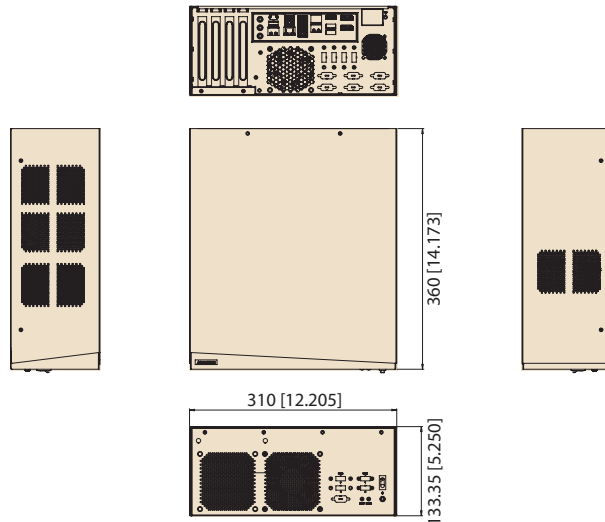
- Intel Alder Lake-S/Raptor Lake-S/Raptor Lake-S Refresh platform to support 12th/13th/14th Gen processors
- 3U Embedded System with 3 PCIe expansion slots
- Up-to 8x 2.5" SATA SSD
- To accommodate 500W PSU for different applications
- Plentiful IO Ports for Various Applications
- NVIDIA Certified with RTX A4500 graphic card
- Win10 IoT, and Ubuntu 20.04 OS compatible

### Specifications

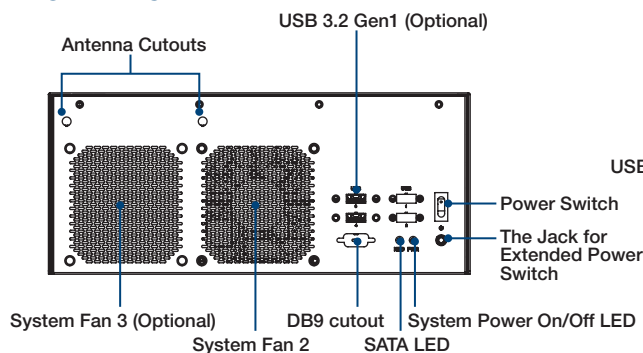
|  |  |  |
|--|--|--|
| Model Name                                   | EPC-B3588                                    |  |
| Motherboard                                  | AIMB-588Q-00A1                               |  |
| Dimensions (W x H x D)                       | Dimensions (W x H x D)                       | 310 x 133.35 x 360 mm  |
| System Thermal Design                        | CPU Cooler                                   | CPU cooler   |
|  | PSU  | 500W   |
|  | System Fan                                   | 2  |
| Environmental Conditions                     | Operating Temperature                        | 0 ~ 50 °C (w/o Graphic card), 0 ~ 45 °C (with RTX-A4500)               |
|  | Non-operating Temperature                    | -20 ~ 60 °C  |
|  | Humidity                                     | 95% @ 40 °C, non-condensing  |
|  | Operating Shock                              | 10G/11ms   |
|  | Operating Random Vibration (5 ~ 500 Hz)      | 1.0Grms (w/o Expansion Cards)  |
| CPU  | 14th Processor System                        | i9-14900/i9-14900T   |
|  |  | i7-14700/i7-14700T   |
|  |  | i5-14500/i5-14500T   |
|  |  | i5-14400/i5-14400T   |
|  |  | i3-14100/i3-14100T   |
|  | Intel® Processor 300/Intel® Processor 300T   |  |
|  | 13th Processor System                        | i9-13900E/i9-13900TE   |
|  |  | i7-13700E/i7-13700TE   |
|  |  | i5-13500E/i5-13500TE   |
| 12th Processor System                        | i3-13100E/i3-13100TE                         |  |
|  | i9-13900/i7-13700/i5-13500/i5-13400/i3-13100 |  |
|  | i9-12900E/i9-12900TE                         |  |
|  | i7-12700E/i7-12700TE                         |  |
|  | i5-12500E/i5-12500TE                         |  |
| i3-12100E/i3-12100TE                         |  |  |
| G7400E/G7400TE                               |  |  |
| G6900E/G6900TE                               |  |  |
| i9-12900/i7-12700/i5-12500/i5-12400/i3-12100 |  |  |
| Chipset                                      | Chipset                                      | Q670E  |
| Storage                                      | Storage Bay                                  | Up-to 8x 2.5" SSD  |
|  | Power switch                                 | 1  |
| Front IO                                     | LED  | 1 Power LED<br>1 HDD LED   |
|  | Power remote Jack                            | 1 2.5Φ Jack  |
|  | USB  | Up-to 2 USB3.2 Gen1 (Optional)   |
|  | GPIO   | 1 8 bit GPIO via DB9 (Optional)  |
|  | Display ports                                | HDMI x1, DP x2   |
| Rear IO (By Motherboard)                     | USB  | 1 USB3.2 Gen2 x2 Type C;<br>5 USB 3.2 Gen2 type A;<br>4 USB 2.0 type A |
|  | Serial port                                  | Up-to 6 COM (Optional)   |
|  | LAN  | 2 RJ45 GbE (1 2.5GbE, 1 GbE)   |
|  | Audio  | 1 Mic-in, 1 Line-out   |
|  | Certification                                | EMC / Safety / Certifications  |
| Power Requirements                           | 500W<br>ATX / AT mode                        |  |
| Weight                                       | Weight                                       | 15 Kg  |
| PCIe Expansions                              | 1 PCIe x16<br>2 PCIe x4                      |  |

## Dimensions

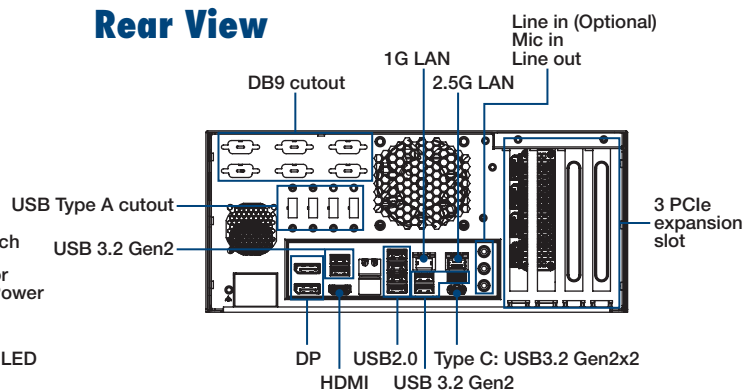
Unit: mm



## Front View



## Rear View



## Ordering Information

| Model                    | PSU  | Chipset | DDR5 UDIMM Socket | 2.5" SATA Bay           | Rear IO      |      |         |     |                |             |        | Expansion |          |
|--------------------------|------|---------|-------------------|-------------------------|--------------|------|---------|-----|----------------|-------------|--------|-----------|----------|
|                          |      |         |                   |                         | Display Port | HDMI | 2.5 GbE | GbE | USB3.2 Gen2 x2 | USB3.2 Gen1 | USB2.0 | PCIe x4   | PCIe x16 |
| EPC-B3588-AB00 Bare-bone | 500W | Q670E   | 4                 | 1 (support 4x 2.5" SSD) | 2            | 1    | 1       | 1   | 1              | 5           | 4      | 2         | 1        |

Remarks  
Bare-bone, w/o CPU, w/o RAM, w/o Storages

## Packing List

| Item                        | Part Number    | Quantity |
|-----------------------------|----------------|----------|
| CPU Cooler                  | 1970005349T001 | 1        |
| 2.5" Storage Metal Tray     | 1960109003N000 | 1        |
| HDD damper rubber           | 1990015239T000 | 4        |
| Screw for HDD Tray          | 1930004828     | 4        |
| SATA2 Cable                 | 1700003194     | 2        |
| SATA1 Cable                 | 1700033607-01  | 2        |
| Screw M3x5L to fix 2.5" SSD | 1930001241     | 16       |
| CABLE TIE (P.G. GT-160M)    | 1992822010     | 4        |

## Optional Accessory

| Item        | Part Number   | Description                          |
|-------------|---------------|--------------------------------------|
| Power Cable | 1700000596-11 | Power cable 3-pin 183cm, China type  |
|             | 1702031801    | Power cable 3-pin 183cm, UK type     |
|             | 1702002600    | Power cable 3-pin 183cm, USA type    |
|             | 1702002605    | Power cable 3-pin 183cm, Europe type |
|             | 1700000237-01 | Power cable 3-pin 183cm, Japan type  |
| USB Cable   | 1700033970-01 | Front IO USB3.2 Gen1 Cable           |
|             | 1700033421-01 | 1 to 4 DB-9 cable                    |
| COM Cable   | 1700034131-01 | 1 to 2 DB-9 cable                    |
| GPIO Cable  | 1700034192-01 | 8-bit GPIO cable                     |

## Embedded OS/API

| OS/API | Part Number | Description                    |
|--------|-------------|--------------------------------|
| Ubuntu | TBD         | Ubuntu 20.04                   |
| Win 10 | TBD         | Windows 10 IoT Enterprise 2021 |