



# PEAI-9820-RLR

Barebone system with 14th/13th/12th Generation  
Intel® Core™ i3/i5/i7/i9 based micro ATX board

Preliminary



PEAI-9820-RLR builds on Intel® Q670E chipset and takes advantages of 14th/13th/12th Generation Intel® Core™ i3/i5/i7/i9 processors technologies that can support 4 x DDR5 memory. With the advantage of 850w 80 plus gold ATX PSU, it can support 355mm long GPU as a powerful edge AI device.

## FEATURES

- Support 14th/13th/12th Generation Intel® Core™ i9/i7/i5/i3 processors
- Four U-DIMM support DDR5 DRAM up to 128GB
- Support four DP
- Support One M.2 E Key, One M.2 M Key
- Support 1 x COM ports (1x RS-232/422/485)



## System

|                |                                                                                                                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU            | Supporting Intel® 14th /13th /12th -Gen Core™ CPU (LGA1700 socket, 65W TDP)                                                                                                                                                             |
| BIOS           | AMI uEFI BIOS                                                                                                                                                                                                                           |
| Memory         | 4x DDR5 U-DIMM ( Max 128GB )                                                                                                                                                                                                            |
| Storage        | 1 x 3.5" HDD & 2 x 2.5" HDD                                                                                                                                                                                                             |
| Watchdog Timer | Yes                                                                                                                                                                                                                                     |
| TPM            | SPI TPM header                                                                                                                                                                                                                          |
| Expansion      | 2 x PCIe 5.0 x16 Slots ( 1 x16/2 x8 mode )<br>2 x PCIe 4.0 x4 Slots<br>1 x M.2 E Key, Type 2230 ( PCIe x1/ USB 2.0/ CNVI )<br>1 x M.2 M Key, Type 2242/2260/2280 ( PCIe x4/ SATA )                                                      |
| Internal I/O   | 9 x COM header support 9 COM ports ( 9 x RS232 )<br>1 x USB 3.2 Gen1 header supports additional 2 x USB 3.2 Gen 1 ports<br>1 x USB 3.2 Gen 1 vertical connector<br>1 x USB 2.0 header support 2x USB 2.0 ports<br>1 x 8 bit GPIO header |

## External I/O

|             |                                                                                                              |
|-------------|--------------------------------------------------------------------------------------------------------------|
| Serial Port | 1 x COM ports ( 1 x RS-232/422/485 )                                                                         |
| Display     | 4 x DP, Support 3840 x 2160 @ 60Hz                                                                           |
| USB         | - 4 x USB 3.2 Gen 2 ( 3 x Type A+ 1 x Type C )<br>- 2 x USB 3.2 Gen 1 ( Type A )<br>- 2 x USB 2.0 ( Type A ) |
| Audio       | 3 ( Line in, Line out, Mic In )                                                                              |
| Ethernet    | 3x RJ-45 ( GbE x1 and 2.5GbE x2 )                                                                            |

## Power Supply Unit

|             |                       |
|-------------|-----------------------|
| Power Input | ATX 850w 80 plus gold |
|-------------|-----------------------|

## Environmental

|                       |                                            |
|-----------------------|--------------------------------------------|
| Operation Temperature | 0°C ~ 50°C                                 |
| Storage Temperature   | -20°C ~ 60°C                               |
| Relative Humidity     | 40°C, 85%RH non-condensing                 |
| Operation Vibration   | 1 Grms/5-500Hz, IEC 60068-2-6 ( With SSD ) |
| Operation Shock       | 10G, 11 msec, IEC 60068-2-27 ( With SSD )  |

## Mechanical

|           |                                |
|-----------|--------------------------------|
| Dimension | 270 (W) x 410 (D) x 180 (H) mm |
| Weight    | 8 Kg                           |
| Mounting  | Wallmount                      |



Windows

