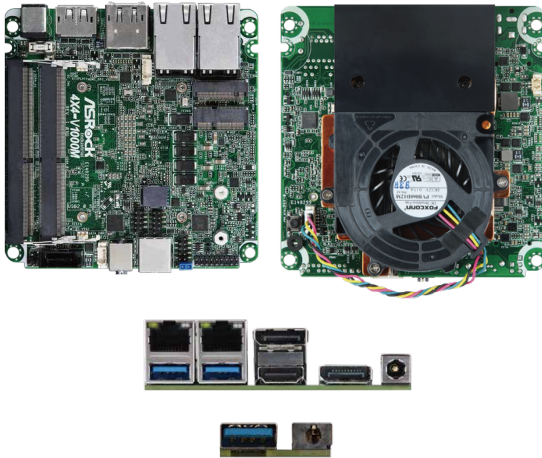




## 4X4-R1000/ 4X4-V1000M

4X4 Motherboard



### KEY FEATURES

- AMD Ryzen™ Embedded R1000 SoC processors (4X4-R1000M, 4X4-R1000V)
- AMD Ryzen™ Embedded V1000 SoC processors (4X4-V1000M)
- 2 x 260-pin SO-DIMM up to 32GB DDR4 2400 MHz with ECC support (16GB per DIMM)
- 3 x USB 3.2 Gen2, 2 x USB 2.0, 1 x M.2 Key M, 1 x M.2 Key E, 1 x COM, 1 x SATA3
- 2 x Realtek 1 Gigabit LAN
- Supports triple display, 1 x HDMI 2.0, 2 x DP 1.2a
- TPM Header
- 12V DC-In

### SPECIFICATIONS

| Form Factor      | 4X4-R1000                                                                                                                | 4X4-V1000M                                                 |
|------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Dimensions       | 4X4 (4.09-in x 4.02-in)                                                                                                  |                                                            |
| Processor System |                                                                                                                          |                                                            |
| CPU              | AMD Ryzen™ Embedded R-Series<br>4x4-R1000M<br>(R1606G, DC, 2.6GHz, 12-25W)<br>4x4-R1000V<br>(R1505G, DC, 2.4GHz, 12-25W) | AMD Ryzen™ Embedded V-Series<br>(V1605B, QC, 2GHz, 12-25W) |
| Chipset          | SoC                                                                                                                      |                                                            |
| Socket           | N/A                                                                                                                      |                                                            |
| BIOS             | AMI SPI 64 Mbit                                                                                                          |                                                            |

|               |                            |  |
|---------------|----------------------------|--|
| <b>Memory</b> |                            |  |
| Technology    | Dual Channel DDR4 2400 MHz |  |
| Capacity      | 32 GB (16 GB per DIMM)     |  |
| Socket        | 2 x 260-pin SO-DIMM        |  |

|                 |                                                         |                             |
|-----------------|---------------------------------------------------------|-----------------------------|
| <b>Graphics</b> |                                                         |                             |
| Controller      | AMD Radeon™ Vega 3 Graphics                             | AMD Radeon™ Vega 8 Graphics |
| HDMI            | HDMI 2.0<br>Max resolution up to 4096x2160@60Hz         |                             |
| DisplayPort     | DisplayPort 1.2a<br>Max resolution up to 3840*2160@60Hz |                             |
| VGA             | N/A                                                     |                             |
| LVDS            | N/A                                                     |                             |
| eDP             | N/A                                                     |                             |
| DVI             | N/A                                                     |                             |
| MultiDisplay    | Triple Display                                          |                             |

|                       |                                                        |  |
|-----------------------|--------------------------------------------------------|--|
| <b>Expansion Slot</b> |                                                        |  |
| PCIe                  | N/A                                                    |  |
| PCI                   | N/A                                                    |  |
| mini-PCIe             | N/A                                                    |  |
| M.2                   | 1 x Key E (2230) with PCIe x1 and USB 2.0 for Wireless |  |
| SIM Socket            | N/A                                                    |  |

|              |                                                         |  |
|--------------|---------------------------------------------------------|--|
| <b>Audio</b> |                                                         |  |
| Interface    | Realtek ALC233, High Definition Audio. Line-out, Mic-in |  |

|                   |                                               |  |
|-------------------|-----------------------------------------------|--|
| <b>Ethernet</b>   |                                               |  |
| Controller/ Speed | 2 x Realtek RTL8111G-CG with 10/100/1000 Mbps |  |
| Connector         | 2 x RJ-45                                     |  |

|                  |                      |  |
|------------------|----------------------|--|
| <b>Front I/O</b> |                      |  |
| HDMI             | N/A                  |  |
| DisplayPort      | N/A                  |  |
| USB              | 1 x USB 3.2 (Gen2)   |  |
| Audio            | 1 (Mic-in, Line-out) |  |

|                 |                    |  |
|-----------------|--------------------|--|
| <b>Rear I/O</b> |                    |  |
| HDMI            | 1 x HDMI 2.0       |  |
| DisplayPort     | 2 x DP1.2a         |  |
| VGA             | N/A                |  |
| DVI             | N/A                |  |
| Ethernet        | 2 x 1 Gigabit LAN  |  |
| USB             | 2 x USB 3.2 (Gen2) |  |
| Audio           | N/A                |  |
| COM             | N/A                |  |
| PS2             | N/A                |  |

|                           |                                     |  |
|---------------------------|-------------------------------------|--|
| <b>Internal Connector</b> |                                     |  |
| USB                       | 2 x USB 2.0 (1 x 2.00 pitch header) |  |
| COM                       | 1 x COM(RS-232/422/485)             |  |
| Parallel                  | N/A                                 |  |
| GPIO                      | N/A                                 |  |
| TPM                       | TPM Header                          |  |
| LVDS                      | N/A                                 |  |
| eDP                       | N/A                                 |  |
| VGA                       | N/A                                 |  |
| SATA PWR Output           | 1                                   |  |
| Speaker Header            | N/A                                 |  |

|                |                                                                                                               |  |
|----------------|---------------------------------------------------------------------------------------------------------------|--|
| <b>Storage</b> |                                                                                                               |  |
| M.2            | 1 x M.2 (Key M, 2242/2260/2280) with PCIe4 and SATA3 for SSD<br>*M.2 Key M 2280(optional support, by bracket) |  |
| mSATA          | N/A                                                                                                           |  |
| SATA           | 1 x SATA3 (6Gb/s), SATA3_1 shared with M.2_Key M                                                              |  |
| eMMC           | N/A                                                                                                           |  |

|                       |                                  |  |
|-----------------------|----------------------------------|--|
| <b>Watchdog Timer</b> |                                  |  |
| Output                | From Super I/O to drag RESETCON# |  |
| Interval              | 256 Segments, 0, 1, 2, ...255sec |  |

|                           |                                                                                                                           |  |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------|--|
| <b>Power Requirements</b> |                                                                                                                           |  |
| Input PWR                 | 12V DC-In (DC Jack)                                                                                                       |  |
| Power On                  | AT/ATX Supported<br>- AT : Directly PWR on as power input ready<br>- ATX : Press button to PWR on after power input ready |  |

|                    |                |  |
|--------------------|----------------|--|
| <b>Environment</b> |                |  |
| Operating Temp     | 0°C ~ 60°C     |  |
| Storage Temp       | -40° C ~ 85° C |  |
| Operating Humidity | 5% ~ 90%       |  |
| Storage Humidity   | 5% ~ 90%       |  |

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

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