

# Datasheet

## 2U Intel single-CPU RI1208-SMXE server

[Ver. 1.0]

### Highlights at a glance:

- Incl. Intel Pentium G6405, can be equipped with a CPU (Intel Xeon E-2300 (Rocket Lake)) up to 8 cores
- Incl. 4 GB RAM, upgradable to 128GB RAM, (4 DIMMs)
- 8x 3.5" / 2.5" (Hot-swap) up to 176 TB, SSDs: 61.44 TB
- Optional additional drives: 2x 2.5" (Internal, non-hot-swap)
- 4 x 1 GBit/s LAN (RJ-45)
- Expandable with 3 LP/ HL/ FL add-on card(s), 1x PCIe 4.0 x16 1x PCIe 4.0 x8
- Energy-efficient power supply 80 PLUS Platinum (>94%) red. NT (opt.)
- Integrated IPMI (dedicated NIC)



## Mainboards

|                              |                                                                          |                                                                                     |                                                                                     |
|------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Manufacturer                 | ASUS                                                                     | Supermicro                                                                          | Supermicro                                                                          |
| Mainboards                   | ASUS P12R-M                                                              | X12STH-F                                                                            | X12STH-LN4F                                                                         |
| Chipset                      | Intel C252                                                               | Intel C252                                                                          | Intel C256                                                                          |
| Socket                       | Intel LGA 1200                                                           | Intel LGA 1200                                                                      | Intel LGA 1200                                                                      |
| Processor                    | Intel Xeon E-2300 (Rocket Lake)                                          | Intel Xeon E-2300 (Rocket Lake)                                                     | Intel Xeon E-2300 (Rocket Lake)                                                     |
| Main Memory                  | 4 DIMMs<br>128 GB DDR4 3200 ECC Unbuffered                               | 4 DIMMs<br>128 GB DDR4 3200 ECC Unbuffered                                          | 4 DIMMs<br>128 GB DDR4 3200 ECC Unbuffered                                          |
| LAN Onboard                  | 2 x 1 GBit/s LAN (RJ-45)                                                 | 2 x 1 GBit/s LAN (RJ-45)                                                            | 4 x 1 GBit/s LAN (RJ-45)                                                            |
| LAN chipset                  | Intel I210-AT                                                            | Intel i210                                                                          | Intel i210                                                                          |
| LAN Onboard (dedicated IPMI) | 1x Management LAN                                                        | 1 Management LAN                                                                    | 1x Management LAN                                                                   |
| Onboard graphic              | 1x VGA ASPEED AST2600 BMC                                                | 1x VGA ASPEED AST2600 BMC                                                           | 1x VGA ASPEED AST2600 BMC                                                           |
| Additional card (optional)   | PNY NVIDIA Quadro T1000 (4GB)                                            | PNY NVIDIA Quadro T1000 (4GB)                                                       | PNY NVIDIA Quadro T1000 (4GB)                                                       |
| Onboard Input/Output         | USB (no PS2 ports!)<br>1x TPM Header                                     | USB (no PS2 ports!)<br>1x TPM Header                                                | USB (no PS2 ports!)<br>1x TPM Header                                                |
| USB ports                    | 2x USB (rear) 2 x USB 3.2 Gen2<br><br>1x USB on board (type A) (USB 3.0) | 4x USB (rear) 2x USB 2.0, 2x USB 3.2 Gen1<br><br>1x USB on board (type A) (USB 3.2) | 4x USB (rear) 2x USB 2.0, 2x USB 3.2 Gen1<br><br>1x USB on board (type A) (USB 3.2) |

## Extension-slots for additional cards

|                                |                                        |                                           |                                           |
|--------------------------------|----------------------------------------|-------------------------------------------|-------------------------------------------|
| PCI slots (mainboard)          | 1x PCIe 4.0 x16<br>1x PCIe 4.0 x8      | 1x PCIe 3.0 x4 (in x8)<br>1x PCIe 4.0 x16 | 1x PCIe 3.0 x4 (in x8)<br>1x PCIe 4.0 x16 |
| Available slots in the chassis | 2x Low profile/Half Length/Full Length | 3x Low profile/Half Length/Full Length    | 3x Low profile/Half Length/Full Length    |
| Possible Riser cards           | 1x PCI-E (x8) Riserkarte               | 1x PCI-E (x8) Riserkarte                  | 1x PCI-E (x8) Riserkarte                  |

Onboard ports

|                 |                                                                |                                                  |                                                                 |
|-----------------|----------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------|
| SATA-3 (6 Gb/s) | 6x SATA-3 (6 Gbit/s) Intel 252 RAID 0, 1, 10, 5, Software-Raid | 8x SATA-3 (6 Gbit/s) Intel C256 RAID 0, 1, 10, 5 | 8x SATA-3 (6 Gbit/s) Intel C256 RAID 0, 1, 10, 5, Software-Raid |
| M.2             | 1 x M.2 PCIe 3.0 x4                                            | 1 x M.2 PCIe 3.0 x4                              | 1 x M.2 PCIe 3.0 x4                                             |
| M.2 form factor | 2242, 2260, 2280                                               | 2280, 22110                                      | 2280, 22110                                                     |

Drives / storage capacity

|                          |                                                               |
|--------------------------|---------------------------------------------------------------|
| Drive slots (total)      | 8x 3.5" / 2.5" (Hot-swap)<br>2x 2.5" (Internal, non-hot-swap) |
| Backplane                | SATA / SAS-3 (12 Gb/s)                                        |
| Max. capacity HDD (SAS)  | 176 TB                                                        |
| Max. capacity HDD (SATA) | 176 TB                                                        |
| Max. capacity SSD (SATA) | 61.44 TB                                                      |
| Max. capacity SSD (SATA) | 61.44 TB                                                      |

Server management

|                     |                                 |
|---------------------|---------------------------------|
| Management software | ASUS Control Center (Classic)   |
| Remote management   | Integrated IPMI (dedicated NIC) |

## Chassis

|                               |                                             |
|-------------------------------|---------------------------------------------|
| Unit                          | 2U                                          |
| Dimensions                    | 89 mm (H), 437 mm (W), 647 mm (D),          |
| drives (in scope of delivery) | not contained, optional available           |
| Drives (optional)             | 1x Slim CD/DVD/DVD-R<br>External USB-drives |
| Fan (center)                  | 3x 80x80x38mm Hot-swap (7000rpm, 53.5dBA)   |
| Silent blowerkit option       | no                                          |

## Power supply

|                   |                                        |
|-------------------|----------------------------------------|
| Power supply unit | 1x 600 Watt Netzteil (80plus Platinum) |
| energy efficiency | 92.48%                                 |
| PMBus support     | Yes, Ver.1.2                           |

## Rack Assembly

|                                                   |                                  |
|---------------------------------------------------|----------------------------------|
| Assembly rails                                    | contained in the scope of supply |
| rail length                                       | 675-880 mm                       |
| Total length server front to end of assembly rail | 820 mm                           |
| Max. extraction length                            | 670 mm                           |
| Recommended maneuvering space                     | 75 mm (minimum)                  |

## environment-requirements

|                                 |                                                                                                                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended ambient temperature | 20 - 22 degree                                                                                                                                                                                                                            |
| Recommended humidity            | max. 40%                                                                                                                                                                                                                                  |
| Recommended deployment location | To ensure the optimal cooling of the system, we recommend running the server in an air conditioned server room and as part of a rack installation. The server is not ideal for use in an office environment due to its high noise levels. |