

| <b>"MX11-PC0" Qualification Vender List Ver:2.0</b>  |             |        |          |       |            |            |                          |                     |      |              |  |
|--|-------------|--------|----------|-------|------------|------------|--------------------------|---------------------|------|--------------|--|
| <b>Intel CPU</b>   |             |        |          |       |            |            |                          |                     |      |              |  |
| Product Name   | Code Name   | Q-Spec | Stepping | Cache | system Bus | # of Cores | Processor Base Frequency | Max Turbo Frequency | TDP  | Memorn Tnpes | Processor Graphics   |
| <b>Intel® Xeon® Processor E3-1200v6 series</b>   |             |        |          |       |            |            |                          |                     |      |              |  |
| Intel® Xeon® Processor E3-1220v6   | Kabylake-S  | QKHR   | B0       | 6MB   | 8 GT/s     | 4          | 3.0 GHz                  | 3.5 GHz             | 72W  | DDR4-2400    | None   |
| Intel® Xeon® Processor E3-1225v6   | Kabylake-S  | QKHN   | B0       | 6MB   | 8 GT/s     | 4          | 3.3 GHz                  | 3.7 GHz             | 73W  | DDR4-2400    | Intel® HD Graphics P630<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1230v6   | Kabylake-S  | QKHV   | B0       | 6MB   | 8 GT/s     | 4          | 3.5 GHz                  | 3.9 GHz             | 72W  | DDR4-2400    | None   |
| Intel® Xeon® Processor E3-1240v6   | Kabylake-S  | QKHU   | B0       | 6MB   | 8 GT/s     | 4          | 3.7GHz                   | 4.1 GHz             | 72W  | DDR4-2400    | None   |
| Intel® Xeon® Processor E3-1245v6   | Kabylake-S  | QKHQ   | B0       | 6MB   | 8 GT/s     | 4          | 3.7GHz                   | 4.1 GHz             | 73W  | DDR4-2400    | Intel® HD Graphics P630<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1270v6   | Kabylake-S  | QKHT   | B0       | 6MB   | 8 GT/s     | 4          | 3.8 GHz                  | 4.2 GHz             | 72W  | DDR4-2400    | None   |
| Intel® Xeon® Processor E3-1275v6   | Kabylake-S  | QKHP   | B0       | 6MB   | 8 GT/s     | 4          | 3.8 GHz                  | 4.2 GHz             | 73W  | DDR4-2400    | Intel® HD Graphics P630<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1280v6   | Kabylake-S  | QKHS   | B0       | 6MB   | 8 GT/s     | 4          | 3.9GHz                   | 4.2 GHz             | 72W  | DDR4-2400    | None   |
| <b>7th Generation Intel® Core™ i7/i5 Processors series (UDIMM ECC memory support only)</b>       |             |        |          |       |            |            |                          |                     |      |              |  |
| Intel® Core™ i5-7400 Processor (6M Cache, 3.50 GHz)  | Kabylake-DT | QKZQ   | B0       | 6 MB  | 8 GT/s     | 4          | 3.0 GHz                  | 3.5 GHz             | 65 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i5-7400T Processor (6M Cache, 3.00 GHz)   | Kabylake-DT | QKHH   | B0       | 6 MB  | 8 GT/s     | 4          | 2.4 GHz                  | 3.0 GHz             | 35 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i5-7500 Processor (6M Cache, 3.80 GHz)  | Kabylake-DT | QKHC   | B0       | 6 MB  | 8 GT/s     | 4          | 3.4 GHz                  | 3.8 GHz             | 65 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i5-7500T Processor (6M Cache, 3.30 GHz)   | Kabylake-DT | QKHG   | B0       | 6 MB  | 8 GT/s     | 4          | 2.7 GHz                  | 3.3 GHz             | 35 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i5-7600 Processor (6M Cache, 4.10 GHz)  | Kabylake-DT | QKHB   | B0       | 6 MB  | 8 GT/s     | 4          | 3.5 GHz                  | 4.1 GHz             | 65 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i5-7600T Processor (6M Cache, 3.70 GHz)   | Kabylake-DT | QKHF   | B0       | 6 MB  | 8 GT/s     | 4          | 2.8 GHz                  | 3.7 GHz             | 35 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i5-7600K Processor (6M Cache, 4.20 GHz)   | Kabylake-DT | QKH9   | B0       | 6 MB  | 8 GT/s     | 4          | 3.8 GHz                  | 4.2 GHz             | 91 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i7-7700 Processor (8M Cache, 4.20 GHz)  | Kabylake-DT | QKHA   | B0       | 8 MB  | 8 GT/s     | 4          | 3.6 GHz                  | 4.2 GHz             | 65 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i7-7700T Processor (8M Cache, 3.80 GHz)   | Kabylake-DT | QKHE   | B0       | 8 MB  | 8 GT/s     | 4          | 2.9 GHz                  | 3.8 GHz             | 35 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i7-7700K Processor (8M Cache, 4.50 GHz)   | Kabylake-DT | QKH8   | B0       | 8 MB  | 8 GT/s     | 4          | 4.2 GHz                  | 4.5 GHz             | 91 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| <b>7th Generation Intel® Core™ i3/Pentium/Celeron Processors (UDIMM ECC memory support only)</b> |             |        |          |       |            |            |                          |                     |      |              |  |
| Intel® Core™ i3-7300 Processor (4M Cache, 4.00 GHz)  | Kabylake-DT | QL35   | S0       | 4 MB  | 8 GT/s     | 2          | 4.0 GHz                  | None                | 51 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i3-7300T Processor (4M Cache, 3.50 GHz)   | Kabylake-DT | QL3M   | S0       | 4 MB  | 8 GT/s     | 2          | 3.5 GHz                  | None                | 35 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i3-7320 Processor (4M Cache, 4.10 GHz)  | Kabylake-DT | QL34   | S0       | 4 MB  | 8 GT/s     | 2          | 4.1 GHz                  | None                | 51 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i3-7100 Processor (3M Cache, 3.90 GHz)  | Kabylake-DT | QL38   | S0       | 3 MB  | 8 GT/s     | 2          | 3.9 GHz                  | None                | 51 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Core™ i3-7100T Processor (3M Cache, 3.40 GHz)   | Kabylake-DT | QL3P   | S0       | 3 MB  | 8 GT/s     | 2          | 3.4 GHz                  | None                | 35 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Pentium® Processor G4620 (3M Cache, 3.70 GHz)   | Kabylake-DT | QL3A   | S0       | 3 MB  | 8 GT/s     | 2          | 3.7 GHz                  | None                | 51 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Pentium® Processor G4600 (3M Cache, 3.60 GHz)   | Kabylake-DT | QL3B   | S0       | 3 MB  | 8 GT/s     | 2          | 3.6 GHz                  | None                | 51 W | DDR4-2400    | Intel® HD Graphics 630<br>(Graphic function can not be used )  |

|   |             |       |    |      |        |   |         |         |      |           |  |
|---|-------------|-------|----|------|--------|---|---------|---------|------|-----------|--|
| Intel® Pentium® Processor G4600T (3M Cache, 3.00 GHz)                                     | KabyLake-DT | QL3R  | S0 | 3 MB | 8 GT/s | 2 | 3.0 GHz | None    | 35 W | DDR4-2400 | Intel® HD Graphics 630<br>(Graphic function can not be used )  |
| Intel® Pentium® Processor G4560 (3M Cache, 3.50 GHz)                                      | KabyLake-DT | QKZZ  | B0 | 3 MB | 8 GT/s | 2 | 3.5 GHz | None    | 54 W | DDR4-2400 | Intel® HD Graphics 610<br>(Graphic function can not be used )  |
| Intel® Pentium® Processor G4560T (3M Cache, 2.90 GHz)                                     | SKYLAKE-DT  | QL3T  | S0 | 3 MB | 8 GT/s | 2 | 2.9 GHz | None    | 35 W | DDR4-2400 | Intel® HD Graphics 610<br>(Graphic function can not be used )  |
| Intel® Celeron® Processor G3930 (2M Cache, 2.90 GHz)                                      | SKYLAKE-DT  | QL3H  | S0 | 2 MB | 8 GT/s | 2 | 2.9 GHz | None    | 51W  | DDR4-2133 | Intel® HD Graphics 610<br>(Graphic function can not be used )  |
| Intel® Celeron® Processor G3930T (2M Cache, 2.70 GHz)                                     | SKYLAKE-DT  | QL3V  | S0 | 2 MB | 8 GT/s | 2 | 2.7 GHz | None    | 35 W | DDR4-2133 | Intel® HD Graphics 610<br>(Graphic function can not be used )  |
| Intel® Celeron® Processor G3950 (2M Cache, 3.00 GHz)                                      | SKYLAKE-DT  | QL3G  | S0 | 2 MB | 8 GT/s | 2 | 3.0 GHz | None    | 51 W | DDR4-2133 | Intel® HD Graphics 610<br>(Graphic function can not be used )  |
| Intel® Xeon® Processor E3-1200v5 series   |             |       |    |      |        |   |         |         |      |           |  |
| Intel® Xeon® Processor E3-1220v5  | SKnLAKE-S   | Q JFX | R0 | 8MB  | 8 GT/s | 4 | 3.0 GHz | 3.5 GHz | 80W  | DDR4-2133 | None   |
| Intel® Xeon® Processor E3-1225v5  | SKnLAKE-S   | SR2CS | R0 | 8MB  | 8 GT/s | 4 | 3.3 GHz | 3.7 GHz | 80W  | DDR4-2133 | Intel® HD Graphics P530<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1230v5  | SKnLAKE-S   | Q J79 | R0 | 8MB  | 8 GT/s | 4 | 3.4 GHz | 3.8 GHz | 80W  | DDR4-2133 | None   |
| Intel® Xeon® Processor E3-1235Lv5   | SKnLAKE-S   | SR2CV | R0 | 8MB  | 8 GT/s | 4 | 2.0 GHz | 3.0 GHz | 25W  | DDR4-2133 | Intel® HD Graphics P530<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1240Lv5   | SKnLAKE-S   | Q JHG | R0 | 8MB  | 8 GT/s | 4 | 2.1 GHz | 3.2 GHz | 25W  | DDR4-2133 | None   |
| Intel® Xeon® Processor E3-1240v5  | SKnLAKE-S   | Q J78 | R0 | 8MB  | 8 GT/s | 4 | 3.5 GHz | 3.9 GHz | 80W  | DDR4-2133 | None   |
| Intel® Xeon® Processor E3-1245v5  | SKnLAKE-S   | SR2CU | R0 | 8MB  | 8 GT/s | 4 | 3.5 GHz | 3.9 GHz | 80W  | DDR4-2133 | Intel® HD Graphics P530<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1260Lv5   | SKnLAKE-S   | Q JGT | R0 | 8MB  | 8 GT/s | 4 | 2.9 GHz | 3.9 GHz | 45W  | DDR4-2133 | None   |
| Intel® Xeon® Processor E3-1270v5  | SKnLAKE-S   | Q J7A | R0 | 8MB  | 8 GT/s | 4 | 3.6 GHz | 4.0 GHz | 80W  | DDR4-2133 | None   |
| Intel® Xeon® Processor E3-1275v5  | SKnLAKE-S   | SR2CT | R0 | 8MB  | 8 GT/s | 4 | 3.6 GHz | 4.0 GHz | 80W  | DDR4-2133 | Intel® HD Graphics P530<br>(Graphic function can not be used ) |
| Intel® Xeon® Processor E3-1280v5  | SKnLAKE-S   | Q JHF | R0 | 8MB  | 8 GT/s | 4 | 3.7 GHz | 4.0 GHz | 80W  | DDR4-2133 | None   |
| 6th Generation Intel® Core™ i7/i5 Processors series (UDIMM ECC memory support only)       |             |       |    |      |        |   |         |         |      |           |  |
| Intel® Core™ i5-6400 Processor (6M Cache, 3.30 GHz)                                       | SKyLAKE-DT  | QJEH  | R0 | 6 MB | 8 GT/s | 4 | 2.7 GHz | 3.3 GHz | 65 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i5-6400T Processor (6M Cache, 2.80 GHz)                                      | SKyLAKE-DT  | QJE7  | R0 | 6 MB | 8 GT/s | 4 | 2.2 GHz | 2.8 GHz | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i5-6500 Processor (6M Cache, 3.60 GHz)                                       | SKyLAKE-DT  | QJEF  | R0 | 6 MB | 8 GT/s | 4 | 3.2 GHz | 3.6 GHz | 65 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i5-6500T Processor (6M Cache, 3.10 GHz)                                      | SKyLAKE-DT  | QJEJ  | R0 | 6 MB | 8 GT/s | 4 | 2.5 GHz | 3.1 GHz | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i5-6600 Processor (6M Cache, 3.90 GHz)                                       | SKyLAKE-DT  | QJEE  | R0 | 6 MB | 8 GT/s | 4 | 3.3 GHz | 3.9 GHz | 65 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i5-6600T Processor (6M Cache, 3.50 GHz)                                      | SKyLAKE-DT  | QJEK  | R0 | 6 MB | 8 GT/s | 4 | 2.7 GHz | 3.5 GHz | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i5-6600K Processor (6M Cache, 3.90 GHz)                                      | SKyLAKE-DT  | QJEC  | R0 | 6 MB | 8 GT/s | 4 | 3.5 GHz | 3.9 GHz | 91 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i7-6700 Processor (8M Cache, 4.00 GHz)                                       | SKyLAKE-DT  | QJE9  | R0 | 8 MB | 8 GT/s | 4 | 3.4 GHz | 4.0 GHz | 65 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i7-6700T Processor (8M Cache, 3.60 GHz)                                      | SKyLAKE-DT  | QJEB  | R0 | 8 MB | 8 GT/s | 4 | 2.8 GHz | 3.6 GHz | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| Intel® Core™ i7-6700K Processor (8M Cache, 4.20 GHz)                                      | SKyLAKE-DT  | QJE6  | R0 | 8 MB | 8 GT/s | 4 | 4.0 GHz | 4.2 GHz | 91 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |
| 6th Generation Intel® Core™ i3/Pentium/Celeron Processors (UDIMM ECC memory support only) |             |       |    |      |        |   |         |         |      |           |  |
| Intel® Core™ i3-6300 Processor (4M Cache, 3.80 GHz)                                       | SKYLAKE-DT  | QJZ9  | S0 | 4 MB | 8 GT/s | 2 | 3.8 GHz | None    | 51 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used )  |

|   |            |      |    |      |        |   |         |      |      |           |   |
|---|------------|------|----|------|--------|---|---------|------|------|-----------|---|
| Intel® Core™ i3-6300T Processor (4M Cache, 3.30 GHz)  | SKYLAKE-DT | QJZC | S0 | 4 MB | 8 GT/s | 2 | 3.3 GHz | None | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Core™ i3-6320 Processor (4M Cache, 3.90 GHz)   | SKYLAKE-DT | QJZ8 | S0 | 4 MB | 8 GT/s | 2 | 3.9 GHz | None | 51 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Core™ i3-6100 Processor (3M Cache, 3.70 GHz)   | SKYLAKE-DT | QJZG | S0 | 3 MB | 8 GT/s | 2 | 3.7 GHz | None | 51 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Core™ i3-6100T Processor (3M Cache, 3.20 GHz)  | SKYLAKE-DT | QJZE | S0 | 3 MB | 8 GT/s | 2 | 3.2 GHz | None | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Pentium® Processor G4520 (3M Cache, 3.60 GHz)  | SKYLAKE-DT | QJZM | S0 | 3 MB | 8 GT/s | 2 | 3.6 GHz | None | 51 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Pentium® Processor G4500T (3M Cache, 3.00 GHz) | SKYLAKE-DT | QK1A | S0 | 3 MB | 8 GT/s | 2 | 3 GHz   | None | 35 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Pentium® Processor G4500 (3M Cache, 3.50 GHz)  | SKYLAKE-DT | QJZJ | S0 | 3 MB | 8 GT/s | 2 | 3.5 GHz | None | 51 W | DDR4-2133 | Intel® HD Graphics 530<br>(Graphic function can not be used ) |
| Intel® Pentium® Processor G4400 (3M Cache, 3.30 GHz)  | SKYLAKE-DT | QJZK | S0 | 3 MB | 8 GT/s | 2 | 3.3 GHz | None | 54 W | DDR4-2133 | Intel® HD Graphics 510<br>(Graphic function can not be used ) |
| Intel® Pentium® Processor G4400T (3M Cache, 2.90 GHz) | SKYLAKE-DT | QJZQ | S0 | 3 MB | 8 GT/s | 2 | 2.9 GHz | None | 35 W | DDR4-2133 | Intel® HD Graphics 510<br>(Graphic function can not be used ) |
| Intel® Celeron® Processor G3900 (2M Cache, 2.80 GHz)  | SKYLAKE-DT | QJZU | S0 | 2 MB | 8 GT/s | 2 | 2.8 GHz | None | 51W  | DDR4-2133 | Intel® HD Graphics 510<br>(Graphic function can not be used ) |
| Intel® Celeron® Processor G3900T (2M Cache, 2.60 GHz) | SKYLAKE-DT | QJZS | S0 | 2 MB | 8 GT/s | 2 | 2.6 GHz | None | 35 W | DDR4-2133 | Intel® HD Graphics 510<br>(Graphic function can not be used ) |
| Intel® Celeron® Processor G3920 (2M Cache, 2.90 GHz)  | SKYLAKE-DT | QJZW | S0 | 2 MB | 8 GT/s | 2 | 2.8 GHz | None | 51 W | DDR4-2133 | Intel® HD Graphics 510<br>(Graphic function can not be used ) |

**Memory**

| Product Name       | Memorn Tnpe | Module Supplier | Size | Chip Brand | Rank | Voltage | Data Transfer Rate | Error Correction | CAS Latenc n | Pins    | Note |
|--------------------|-------------|-----------------|------|------------|------|---------|--------------------|------------------|--------------|---------|------|
| <b>ECC UDIMM</b>   |             |                 |      |            |      |         |                    |                  |              |         |      |
| M4C0-8GSSMCRG      | DDR4        | INNODISK        | 8GB  | Samsung    |      | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| M4C0-4GSSLCRG      | DDR4        | INNODISK        | 4GB  | Samsung    |      | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| TS512MLH72V1H      | DDR4        | Transcend       | 4GB  | Samsung    | 1R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| TS1GLH72V1H        | DDR4        | Transcend       | 8GB  | Samsung    | 2Rx8 | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| PED42133C158GVS    | DDR4        | Panram          | 8GB  | SKhnnix    |      | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| PED42133C154GVS    | DDR4        | Panram          | 4GB  | SKhnnix    |      | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| CMA6-3GA01DAR01MEO | DDR4        | acpi            | 8GB  |            |      | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| M391A1G43DB0-CPB   | DDR4        | Samsung         | 8GB  | Samsung    | 2R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| M391A2K43BB1-CPB   | DDR4        | Samsung         | 16GB | Samsung    | 2R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| T4D4C10S61163      | DDR4        | TeamGroup       | 8GB  | Samsung    | 1R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| 78.B1GM4.AF00B     | DDR4        | Apacer          | 4GB  | SKhnnix    |      | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| CT8G4WFD8213.18FA1 | DDR4        | Crucial         | 8GB  | Micron     | 2R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| CT4G4WFS8213.9FA1  | DDR4        | Crucial         | 4GB  | Micron     | 1R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |
| T4D4C10S61163      | DDR4        | TeamGroup       | 8GB  | Samsung    | 1R   | 1.2v    | 2133MHz            | ECC Unbuffer     | 15           | 288-pin |      |

|                        |      |          |      |         |      |      |         |              |    |         |  |
|------------------------|------|----------|------|---------|------|------|---------|--------------|----|---------|--|
| CMA6-3GA01DAR01MEO     | DDR4 | acpi     | 8GB  |         |      | 1.2v | 2133MHz | ECC Unbuffer | 15 | 288-pin |  |
| KVR21E15D8/8HA         | DDR4 | Kingston | 8GB  | SKhnnix | 2R   | 1.2v | 2133MHz | ECC Unbuffer | 15 | 288-pin |  |
| CT8G4WFD824A.18FB1     | DDR4 | Crucial  | 8GB  | Micron  | 2RX8 | 1.2v | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| MTA18ASF1G72AZ-2G3B1ZK | DDR4 | Micron   | 8GB  | Micron  | 2RX8 | 1.2v | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| KVR21N15D8/8           | DDR4 | Kingston | 8GB  |         |      | 1.2V | 2133MHz | ECC Unbuffer | 15 | 288-pin |  |
| HMA81GU7AFR8N-UHT0     | DDR4 | SKhynix  | 8GB  |         | 1Rx8 | 1.2V | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| AD4U2400316G17-B       | DDR4 | ADATA    | 16GB |         |      | 1.2v | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| HMA82GU7AFR8N-UHT0     | DDR4 | SK Hynix | 16GB | SKhynix | 2Rx8 | 1.2v | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| KVR24E17S8/8MA         | DDR4 | Kingston | 8GB  |         | 1Rx8 | 1.2v | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| KVR24E17D8/16MA        | DDR4 | Kingston | 16GB |         | 2Rx8 | 1.2v | 2400MHz | ECC Unbuffer | 17 | 288-pin |  |
| M4C0-AGS1MCSJ          | DDR4 | Innodisk | 16GB |         | 2Rx8 | 1.2v | 2400MHz | ECC Unbuffer |    | 288-pin |  |

**Seagate HDD**

| Product Name                        | Tnpe | Vendor  | Form Factor | Format | Capacitn | Interface Speed | Series                  | Cache | RPM   | Enchrption | FW   |
|-------------------------------------|------|---------|-------------|--------|----------|-----------------|-------------------------|-------|-------|------------|------|
| Seagate Enterprise Capacitn 2.5 HDD |      |         |             |        |          |                 |                         |       |       |            |      |
| ST1800MM0018                        | SAS  | Seagate | 2.5"        | 512E   | 1.8TB    | 12Gb/s          | Performance             | 129MB | 10000 | N/A        | E004 |
| ST9250610NS                         | SATA | Seagate | 2.5"        | N/A    | 250GB    | 6Gb/s           | Constellation 2         | 64MB  | 7200  | N/A        | SN03 |
| ST2000NX0253                        | SATA | Seagate | 2.5"        | 512E   | 2TB      | 6Gb/s           | Constellation 2         | 128MB | 7200  | N/A        |      |
| ST2000NX0403                        | SATA | Seagate | 2.5"        | 512n   | 2TB      | 6Gb/s           | Enterprise Capacity V.3 | 128MB | 7200  | N/A        |      |
| ST1000NX0423                        | SATA | Seagate | 2.5"        | 512n   | 1TB      | 6Gb/s           | Enterprise Capacity V.3 | 128MB | 7200  | N/A        |      |
| Seagate Enterprise Capacity 3.5 HDD |      |         |             |        |          |                 |                         |       |       |            |      |
| ST8000NM0016                        | SATA | Seagate | 3.5"        | N/A    | 8TB      | 12Gb/s          | Performance             | 256MB | 7200  | N/A        | SNC0 |
| ST8000NM0055                        | SATA | Seagate | 3.5"        | 512E   | 8TB      | 6Bb/s           | ES.3                    | 256MB | 7200  | N/A        |      |
| ST8000NM0045                        | SATA | Seagate | 3.5"        | 4Kn    | 8TB      | 6Gb/s           | Enterprise Capacity V.5 | 256MB | 7200  | N/A        |      |
| ST8000NM0115                        | SATA | Seagate | 3.5"        | 4Kn    | 8TB      | 6Gb/s           | Enterprise Capacity V.5 | 256MB | 7200  | N/A        |      |
| ST8000NM0145                        | SATA | Seagate | 3.5"        | 4Kn    | 8TB      | 6Gb/s           | Enterprise Capacity V.5 | 256MB | 7200  | N/A        |      |
| ST6000NM0125                        | SATA | Seagate | 3.5"        | 4Kn    | 6TB      | 6Gb/s           | Enterprise Capacity V.5 | 256MB | 7200  | N/A        |      |
| ST6000NM0185                        | SATA | Seagate | 3.5"        | 4Kn    | 6TB      | 6Gb/s           | Enterprise Capacity V.5 | 256MB | 7200  | N/A        |      |
| ST6000NM0265                        | SATA | Seagate | 3.5"        | 4Kn    | 6TB      | 6Gb/s           | Enterprise Capacity V.5 | 256MB | 7200  | N/A        |      |
| ST10000NM0146                       | SATA | Seagate | 3.5"        | 4Kn    | 10TB     | 6Gb/s           | Enterprise Capacity V.6 | 256MB | 7200  | N/A        |      |

| ST10000NM0166      | SATA | Seagate | 3.5"        | 4Kn       | 10TB     | 6Gb/s           | Enterprise Capacity V.6 | 256MB | 7200  | N/A        |      |
|--------------------|------|---------|-------------|-----------|----------|-----------------|-------------------------|-------|-------|------------|------|
| ST10000NM0186      | SATA | Seagate | 3.5"        | 4Kn       | 10TB     | 6Gb/s           | Enterprise Capacity V.6 | 256MB | 7200  | N/A        |      |
| <b>Toshiba HDD</b> |      |         |             |           |          |                 |                         |       |       |            |      |
| Product Name       | Tnpe | Vendor  | Form Factor | Format    | Capacitn | Interface Speed | Series                  | Cache | RPM   | Enchrption | FW   |
| MG05ACA800A        | SATA | Toshiba | 3.5"        | 4KN       | 8TB      | 6Gb/s           | Enterprise Capacity     | 128MB | 7200  | N/A        | GX1A |
| MG05ACA800E        | SATA | Toshiba | 3.5"        | 512e      | 8TB      | 6Gb/s           | Enterprise Capacity     | 128MB | 7200  | N/A        | GX1A |
| MG04ACA500E        | SATA | Toshiba | 3.5"        | 512e      | 5TB      | 6Gb/s           | Enterprise Capacity     | 128MB | 7200  | N/A        | FP3B |
| AL13SXB60EE        | SAS  | Toshiba | 2.5"        | N/A       | 600GB    | 12Gb/s          | Performance             | 128MB | 15000 | N/A        | O1O1 |
| MG04ACA600E        | SATA | Toshiba | 3.5"        | 512e      | 6TB      | 6Gb/s           | Enterprise Capacity     | 128MB | 7200  | N/A        | FS2B |
| MG04ACA100N        | SATA | Toshiba | 3.5"        | 512e      | 1TB      | 6Gb/s           | Capacity                | 128MB | 7200  | N/A        | A0   |
| <b>HGST HDD</b>    |      |         |             |           |          |                 |                         |       |       |            |      |
| Product Name       | Tnpe | Vendor  | Form Factor | Format    | Capacitn | Interface Speed | Series                  | Cache | RPM   | Enchrption | FW   |
| HUS726060ALE614    | SATA | HGST    | 3.5"        | 512e      | 6TB      | 6Gb/s           | Ultrastar 7K6000        | 128MB | 7200  | N/A        | 907  |
| HUH728080ALE604    | SATA | HGST    | 3.5"        | 512e      | 8TB      | 6Gb/s           | Ultrastar He8           | 128MB | 7200  | N/A        | 7J0  |
| HUS726060ALE610    | SATA | HGST    | 3.5"        | 512e      | 6TB      | 6Gb/s           | Ultrastar 7K6000        | 128MB | 7200  | N/A        | 517  |
| <b>SSD</b>         |      |         |             |           |          |                 |                         |       |       |            |      |
| Product Name       | Type | Vendor  | Form Factor | Interface | Capacity | Interface Speed | FW                      | Note  |       |            |      |
| Hard drive         |      |         |             |           |          |                 |                         |       |       |            |      |
| XF1212-1A0512      | SSD  | Seagate | SATA        | 2.5"      | 480GB    | -               |                         |       |       |            |      |
| ASX1000LS7-240GM   | SSD  | ADATA   | SATA        | 2.5"      | 240GB    | -               |                         |       |       |            |      |
| ASR1010SS-480GM    | SSD  | ADATA   | SATA        | 2.5"      | 480GB    | -               |                         |       |       |            |      |
| ZA128CM0001        | SSD  | Seagate | SATA        | 2.5"      | 128GB    | -               |                         |       |       |            |      |
| SDLF1CRR-019T-1HA1 | SSD  | SanDisk | SATA        | 2.5"      | 1.92TB   | -               |                         |       |       |            |      |
| SSDPE2ME800G4      | SSD  | Intel   | NVMe        | 2.5"      | 800GB    | -               |                         |       |       |            |      |
| SSDPE2MX012T4ES    | SSD  | Intel   | NVMe        | 2.5"      | 1.2TB    | -               |                         |       |       |            |      |
| SSDPE2MD400G4      | SSD  | Intel   | NVMe        | 2.5"      | 400GB    | -               |                         |       |       |            |      |
| SSDPE2ME800G4      | SSD  | Intel   | NVMe        | 2.5"      | 800GB    | -               |                         |       |       |            |      |
| SSDPE2ME012T4      | SSD  | Intel   | NVMe        | 2.5"      | 1.2TB    | -               |                         |       |       |            |      |
| PX04PMB320         | SSD  | Toshiba | NVMe        | 2.5"      | 3.2TB    | -               |                         |       |       |            |      |
| XC100E55           | SSD  | Techman | NVMe        | 2.5"      | 1600GB   | -               | 1.03                    |       |       |            |      |
| <b>PCIe SSD</b>    |      |         |             |           |          |                 |                         |       |       |            |      |
| Product Name       | Type | Vendor  | Form Factor | Interface | Capacity | Interface Speed | FW                      | Note  |       |            |      |

| Hard drive  |                         |                      |                |                     |                   |                     |                                  |      |      |
|---|-------------------------|----------------------|----------------|---------------------|-------------------|---------------------|----------------------------------|------|------|
| PX04PMC320  | SSD                     | Toshiba              | NVMe           | PCI-E               | 3.2T              | -                   |                                  |      |      |
| SSDPEDMD400G4   | SSD                     | Intel                | NVMe           | PCI-E 3.0           | 400GB             | -                   |                                  |      |      |
| SSDPEDME400G4   | SSD                     | Intel                | NVMe           | PCI-E 3.0           | 400GB             | -                   |                                  |      |      |
| SATA DOM  |                         |                      |                |                     |                   |                     |                                  |      |      |
| Product Name  | Type                    | Vendor               | Capacity       | Flash Type          | Max. Channels     | FW                  | Max. Power Consumption           | Note |      |
| DESSL-64GD72SCADNA  |                         | INNODISK             | 64GB           |                     |                   |                     |                                  |      |      |
| DESSC-64GM41BC1SCA  |                         | INNODISK             | 64GB           | MLC                 |                   |                     |                                  |      |      |
| Graphics Card   |                         |                      |                |                     |                   |                     |                                  |      |      |
| Product Name  | Processor Cores         | Memory Bandwidth     | FW             | OpenGL              | Microsoft DirectX | Graphics Card       | NVIDIA SLI / AMD CrossFire Ready | Note |      |
| NvidiaTesla ( <a href="http://www.nvidia.com/object/tesla-supercomputing-solutions.html">http://www.nvidia.com/object/tesla-supercomputing-solutions.html</a> ) |                         |                      |                |                     |                   |                     |                                  |      |      |
| Tesla M60   | 3072 (1536 per GPU)     | 480 GB/sec (240)     |                | -                   | -                 | 300W                | -                                |      |      |
| Tesla K40   | 2880                    | 288 GB/sec           |                | -                   | -                 | 235W                | -                                |      |      |
| NvidiaGRID ( <a href="http://www.nvidia.com/object/grid-technologn.html">http://www.nvidia.com/object/grid-technologn.html</a> )                                |                         |                      |                |                     |                   |                     |                                  |      |      |
| GRID K2   | 3072                    | -                    |                | -                   | -                 | 225 W               | -                                |      |      |
| GRID Gaming M30   | 1920                    | -                    |                | -                   | -                 | 170 W               | -                                |      |      |
| GRID K1   | 768                     | -                    |                | -                   | -                 | 135 W               | -                                |      |      |
| ATI Graphics for Cloud + Data Centers   |                         |                      |                |                     |                   |                     |                                  |      |      |
| AMD FirePro™ S9150 Server GPU   | -                       | up to 320 GB/s       |                | 4.3                 | 11.1              | 235 W               | -                                |      |      |
| AMD FirePro™ S7150 Server GPU   | -                       | up to 320 GB/s       |                | 4.3                 | 11.1              | 150 W               | -                                |      |      |
| AMD FirePro™ W7100 GPU  | -                       | up to 320 GB/s       |                | 4.3                 | 11.1              | 150 W               | -                                |      |      |
| RAID Cards  |                         |                      |                |                     |                   |                     |                                  |      |      |
| Model   | RAID-on-Chip Controller | Host Bus Type        | Internal Ports | Internal Connectors | External Ports    | External Connectors | Data Transfer Rates              | FW   | Note |
| GIGABYTE Storage Cards  |                         |                      |                |                     |                   |                     |                                  |      |      |
| GC-MSLZ2  | LSI SAS 2008            | PCIe- x8 Gen2 x8 bus | 2              | Mini-SAS for 8x SAS | -                 | -                   | 6Gb/s ports                      |      |      |
| GC-MSLZ4  | LSI SAS 2008            | PCIe- x8 Gen2 x8 bus | 2              | Mini-SAS for 8x SAS | -                 | -                   | 6Gb/s ports                      |      |      |
| RA200-8   | LSI SAS 2308            | PCIe- x8 Gen3 x8 bus | 2              | Mini-SAS for 8x SAS | -                 | -                   | 6Gb/s ports                      |      |      |
| RA201-A   | LSI SAS 2208            | PCIe- x8 Gen3 x8 bus | 2              | Mini-SAS for 8x SAS | -                 | -                   | 6Gb/s ports                      |      |      |

| <a href="#">Adaptec RAID 6805T</a>   | -            | 8-Lane PCIe Gen2         | 8          | 2 Internal, SFF-8087, Top-Mounted         | -                   | -                                   | 6 Gb/s per port      |  |  |
|--------------------------------------|--------------|--------------------------|------------|---|---------------------|-------------------------------------|----------------------|--|--|
| <a href="#">CRA4548</a>              | LSI SAS 3108 | PCIe- x8 Gen3 x8 bus     | 1          | *1 x internal Mini-SAS                    | 1                   | *1 x external Mini-SAS              | 12Gb/s ports         |  |  |
| <a href="#">CRA4448</a>              | LSI SAS 3108 | PCIe- x8 Gen3 x8 bus     | 2          | *2 x internal Mini-SAS                    | -                   | -                                   | 12Gb/s ports         |  |  |
| <a href="#">GC-MSEE4</a>             | Marvell 9230 | PCIe- x4 Gen2 x4 bus     | 4          | SATA III                                  | -                   | -                                   | 6Gb/s ports          |  |  |
| LSI RAID Controller Cards            |              |                          |            |   |                     |                                     |                      |  |  |
| <a href="#">MegaRAID SAS 9260-8i</a> | LSISAS2008   | x8 lane PCI Express® 2.0 | 8          | 2 Mini-SAS SFF8087 (vertical orientation) | -                   | -                                   | Up to 6Gb/s per port |  |  |
| <a href="#">MegaRAID SAS 9240-8i</a> | LSISAS2008   | x8 lane PCI Express® 2.0 | 8          | 2 Mini-SAS SFF8087 (vertical orientation) | -                   | -                                   | Up to 6Gb/s per port |  |  |
| PMC RAID Cards (Adaptec)             |              |                          |            |   |                     |                                     |                      |  |  |
| <a href="#">Adaptec ASR-8885Q</a>    |              | 8-lane PCIe Gen3         | 2          | Two internal mini SAS HD (SFF-8643),      | 2                   | two external mini SAS HD (SFF-8644) | 12 Gb/s per port     |  |  |
| <a href="#">CSA3548</a>              | LSI SAS 3008 | PCIe- x8 Gen3 x8 bus     | -          | -   | 2                   | *2 x external Mini-SAS              | 12Gb/s ports         |  |  |
| LAN Cards                            |              |                          |            |   |                     |                                     |                      |  |  |
| Product Name                         | Connector    | System Interface Type    | # of Ports | System Interface Type                     | Data rate           | Note                                |                      |  |  |
| GIGABYTE LAN Cards                   |              |                          |            |   |                     |                                     |                      |  |  |
| <a href="#">GC-MNXE21</a>            | SFP+         | PCIe x8 Gen3 x8          | Dual       | 10Gb/s per port                           | Mellanox ConnectX-3 |                                     |                      |  |  |
| <a href="#">GC-MLBZ1</a>             | SFP+         | PCIe x8 Gen2 x8          | Dual       | 10Gb/s per port                           | Broadcom BCM57810S  |                                     |                      |  |  |
| <a href="#">CLN4831</a>              | SFP+         | PCIe x8 Gen2 x8          | Single     | 10Gb/s per port                           | INTEL 82599EN       |                                     |                      |  |  |
| <a href="#">CLN4832</a>              | SFP+         | PCIe x8 Gen2 x8          | Dual       | 10Gb/s per port                           | INTEL 82599ES       |                                     |                      |  |  |

|   |       |                     |        |                 |                |
|---|-------|---------------------|--------|-----------------|----------------|
| CLN4751                                     | QSFP+ | PCIe x8 Gen3 x8     | Single | 40Gb/s per port | INTEL XL710    |
| CLN4752                                     | QSFP+ | PCIe x8 Gen3 x8     | Dual   | 40Gb/s per port | INTEL XL710    |
| CLN4522                                     | RJ-45 | PCIe x8 Gen2 x8     | Dual   | 10Gb/s per port | INTEL X540     |
| CLN4312                                     | RJ-45 | PCIe x4 Gen2 x4     | Dual   | 1Gb/s per port  | INTEL i350-AM4 |
| CLN4314                                     | RJ-45 | PCIe x4 Gen2 x4     | Quad   | 1Gb/s per port  | INTEL i350-AM4 |
| CLN4222                                     | RJ-45 | PCIe x4 Gen3 x4     | Dual   | 10Gb/s per port |                |
| CLN4121                                     | RJ-45 | PCIe x4 Gen3 x4     | single | 10Gb/s per port |                |
| Qlogic Fibre Channel Adapters               |       |                     |        |                 |                |
| QLE3442-RJ-CK                               | RJ-45 | PCIe x8 Gen3 x8     | Dual   | 10Gb/s per port |                |
| Intel_GbE                                   |       |                     |        |                 |                |
| Intel® Ethernet Server Adapter I350-T4      | RJ-45 | PCIe v2.1 (5.0GT/s) | Quad   | 1Gb/s per port  |                |
| Intel® PRO/1000 PT Dual Port Server Adapter | RJ-45 | PCIe v1.0a          | Dual   | 1Gb/s per port  |                |