

**"R180-F2A" Qualification Vender List - Others Ver:1.0**

| CPU    |            |  |
|--------|------------|--|
| Vendor | Model Name | SPEC   |
| Intel  | E5-2603v3  | 1.60 GHz 85W 6Cores 15MB LGA 2011-3 R-2 QGSK   |
| Intel  | E5-2609 v3 | 1.9 GHz 85W 6Cores 15MB LGA 2011-3 M-1 QGPN    |
| Intel  | E5-2620 v3 | 2.40 GHz 85W 6Cores 15MB LGA 2011-3 R-2 QGSH   |
| Intel  | E5-2622 v3 | 2.40 GHz 85W 8Cores 20MB LGA 2011-3 R-2 QFRE   |
| Intel  | E5-2623 v3 | 3.00 GHz 105W 4Cores 10MB LGA 2011-3 R-2 QGSS  |
| Intel  | E5-2630 v3 | 2.40 GHz 85W 8Cores 20MB LGA 2011-3 R-2 QGZX   |
| Intel  | E5-2630Lv3 | 1.80 GHz 55W 8Cores 20MB LGA 2011-3 R-2 QGST   |
| Intel  | E5-2637 v3 | 3.5 GHz 135W 4Cores 15MB LGA 2011-3 R-2 QGSP   |
| Intel  | E5-2640 v3 | 2.60 GHz 90W 8Cores 20MB LGA 2011-3 R-2 QGSF   |
| Intel  | E5-2643 v3 | 3.40 GHz 135W 6Cores 20MB LGA 2011-3 R-2 QGSR  |
| Intel  | E5-2650 v3 | 2.3 GHz 105W 10Cores 25MB LGA 2011-3 M-1 QGPL  |
| Intel  | E5-2650LV3 | 1.80 GHz 65W 12Cores 30 MB LGA 2011-3 M-1 QGPB |
| Intel  | E5-2652 v3 | 2.3 GHz 105W 10Cores 25MB LGA 2011-3 M-1 QGP3  |
| Intel  | E5-2660 v3 | 2.6 GHz 105W 10Cores 25MB LGA 2011-3 M-1 QGP1  |
| Intel  | E5-2670 v3 | 2.3 GHz 120W 12Cores 30MB LGA 2011-3 M-1 QGP2  |
| Intel  | E5-2680 V3 | 2.50 GHz 120W 12Cores 30MB LGA 2011-3 M-1 QGNZ |
| Intel  | E5-2683 v3 | 2.0 GHz 120W 14Cores 35 MB LGA 2011-3 C-1 QGN5 |
| Intel  | E5-2685 v3 | 2.6 GHz 120W 12Cores 30MB LGA 2011-3 M-1 QGPK  |
| Intel  | E5-2690 v3 | 2.6 GHz 135W 12Cores 30MB LGA 2011-3 M-1 QGNY  |
| Intel  | E5-2697 v3 | 2.6 GHz 145W 14Cores 35 MB LGA 2011-3 C-1 QGN3 |
| Intel  | E5-2695 v3 | 2.3 GHz 120W 14Cores 35 MB LGA 2011-3 C-1 QGN4 |
| Intel  | E5-2698 v3 | 2.3 GHz 135W 16Cores 40MB LGA 2011-3 C-1 QGN2  |
| Intel  | E5-2699 v3 | 2.3 GHz 145W 18Cores 45MB LGA 2011-3 C-1 QGN1  |

**CPU Broadwell-EP (LGA2011-3)**

| Vendor | Model Name | SPEC   |
|--------|------------|--|
| Intel  | E5-2699v4  | 2.2 GHz 145W 22Core 55MB LGA 2011-3 B-0 QK7J |
| Intel  | E5-2698v4  | 2.2 GHz 135W 20Core 50MB LGA 2011-3 B-0 QK7M |
| Intel  | E5-2697v4  | 2.3 GHz 145W 18Core 45MB LGA 2011-3 B-0 QK7L |
| Intel  | E5-2697Av4 | 2.6 GHz 145W 16Core 40MB LGA 2011-3 B-0 QK7S |
| Intel  | E5-2695v4  | 2.1 GHz 120W 18Core 45MB LGA 2011-3 B-0 QK3E |
| Intel  | E5-2690v4  | 2.6 GHz 135W 14Core 35MB LGA 2011-3 M-0 QK8X |
| Intel  | E5-2683v4  | 2.1 GHz 120W 16Core 40MB LGA 2011-3 B-0 QK7K |
| Intel  | E5-2680v4  | 2.4 GHz 120W 14Core 35MB LGA 2011-3 B-0 QK92 |
| Intel  | E5-2660v4  | 2.0 GHz 105W 14Core 35MB LGA 2011-3 M-0 QK8Z |
| Intel  | E5-2650v4  | 2.2 GHz 105W 12Core 30MB LGA 2011-3 M-0 QK8Y |
| Intel  | E5-2650Lv4 | 1.7 GHz 65W 14Core 35MB LGA 2011-3 M-0 QK93  |
| Intel  | E5-2648Lv4 | 1.8 GHz 75W 14Core 35MB LGA 2011-3 M-0 QK9C  |
| Intel  | E5-2643v4  | 3.4 GHz 135W 6Core 20MB LGA 2011-3 R-0 QKEZ  |
| Intel  | E5-2640v4  | 2.4 GHz 90W 10Core 25MB LGA 2011-3 R-0 QKEU  |
| Intel  | E5-2637v4  | 3.5 GHz 135W 4Core 15MB LGA 2011-3 R-0 QKEY  |
| Intel  | E5-2630v4  | 2.2 GHz 85W 10Core 25MB LGA 2011-3 R-0 QKET  |
| Intel  | E5-2630Lv4 | 1.8 GHz 55W 10Core 25MB LGA 2011-3 R-0 QKEX  |
| Intel  | E5-2628Lv4 | 1.9 GHz 75W 12Core 30MB LGA 2011-3 M-0 QK9B  |
| Intel  | E5-2623v4  | 2.6 GHz 85W 4Core 10MB LGA 2011-3 R-0 QKFD   |
| Intel  | E5-2620v4  | 2.1 GHz 85W 8Core 20MB LGA 2011-3 R-0 QKES   |
| Intel  | E5-2618Lv4 | 2.2 GHz 75W 10Core 25MB LGA 2011-3 R-0 QKF9  |
| Intel  | E5-2609v4  | 1.7 GHz 85W 8Core 20MB LGA 2011-3 B-0 QKEW   |
| Intel  | E5-2608Lv4 | 1.6 GHz 50W 8Core 20MB LGA 2011-3 B-0 QKF4   |
| Intel  | E5-2603v4  | 1.7 GHz 85W 6Core 15MB LGA 2011-3 R-0 QKEV   |

**Memory**

| Vendor  | Model Name             | SPEC   |
|---------|------------------------|--|
| SAMSUNG | M393A4K40BB0-CPB       | DDR4-2133, 32GB 2Rx4 PC4-2133P-RA0-10-DC0                    |
| SAMSUNG | M393A2G40DB0-CPB       | DDR4 16G, KR M393A2G40DB0-CPB 1346 2Rx4 PC4-2133P-RA0-10-DC0 |
| SAMSUNG | M393A1G40DB0-CPB       | DDR4 8G, KR M393A1G40DB0-CPB 1346 1Rx4 PC4-2133P-RCO-10-DC0  |
| HYNIX   | HMA41GR7MFR4N-TF TD    | 8GB 1Rx4 PC4-2133P   |
| HYNIX   | HMA42GR7MFR4N-TF TD    | 16GB 2Rx4 PC4-2133P  |
| HYNIX   | HMA81GR7AFR8N-UH TD    | 8GB 1Rx8 PC4-2400 RDIMM                                      |
| SKhynix | HMA82GR7AFR8N-UHTD     | 16GB 2Rx8 PC4-2400 RDIMM                                     |
| SKhynix | HMA82GR7AFR8N-UHT2     | 16GB 2Rx8 PC4-2400 RDIMM                                     |
| SKhynix | HMA84GR7AFR4N-UHTD     | 32GB 2Rx4 PC4-2400 RDIMM                                     |
| SKhynix | HMA84GR7AFR4N-UHT2     | 32GB 2Rx4 PC4-2400 RDIMM                                     |
| CRUCIAL | CT4G4RFS8213.9FA2      | 4GB DDR4-2133 1.2V SRx8 RDIMM                                |
| CRUCIAL | CT8G4RFD8213.18FA1     | 8GB DDR4-2133 1.2v DRx8 RDIMM                                |
| CRUCIAL | CT16G4RFD4213.36FA2    | 16GB DDR4-2133 1.2V DRx4 RDIMM                               |
| CRUCIAL | CT8G4RFS4213ES.18FDA2  | 8GB 1Rx4 PC4-2133 RDIMM                                      |
| CRUCIAL | CT16G4RFS424A.18FA1    | 16GB DDR4-2400 1.2v RDIMM                                    |
| CRUCIAL | CT16G4RFD824A.18FA1    | 16GB DDR4-2400 1.2v RDIMM                                    |
| CRUCIAL | CT32G4RFD424A.36FA1    | 32GB DDR4-2400 1.2v RDIMM                                    |
| CRUCIAL | CT32G4RFD4213.36FA1    | 32GB DDR4-2133 RDIMM 1.2CL1                                  |
| Crucial | CT16G4RFD424A.36FA3    | 16GB DDR4 2400 RDIMM 1.2V CL                                 |
| Crucial | CT8G4RFS424A.18FA3     | 8GB DDR4 2400 RDIMM 1.2V CL1                                 |
| Micron  | MTA18ASF1G72PZ-2G3A3IG | 8GB 1Rx4 PC4-2400T-RCB-10                                    |
| Micron  | MTA36ASF2G72PZ-2G3A3II | 16GB 2Rx4 PC4-2400T-RBB-10                                   |
| ADATA   | AD4R2133Y8G15-BHYM     | 8Gx18 R-DIMM 2133  |

|                               |                              |  |
|-------------------------------|------------------------------|--|
| Apacer                        | 75.CA3G0.G000B               | 8GB ECC REG PC4-17000 CL15   |
| SAMSUNG                       | M393A2K43BB1-CRC0Q           | 16GB 2Rx8 PC4-2400T-RE1-11-DC0   |
| INNODISK                      | M4R0-AGS1BCSJ                | 16GB DDR4 2400 REG DIMM  |
| INNODISK                      | M4R0-8GSQECRG                | 8GB DDR4 2133 W/REG DIMM   |
| INNODISK                      | M4R0-AGSQGCRG                | 16GB DDR4 2133 W/REG DIMM  |
| Transcend                     | TS2GHR72V1Z                  | 16G 2Rx4 DDR4 2133 REG   |
| Kingston                      | KVR21R15S4/8                 | 8GB 1Rx4 PC4-2133P-RC0-10 1.2V   |
| Kingston                      | KVR21R15D4/16                | 16GB 2RX4 PC4-2133   |
| Kingston                      | KVR21R15D8/8                 | 8GB 2133MHZ DDR4 ECC Reg CL15 DIMM Dr X8                                 |
| Kingston                      | KVR24R17D4/16                | 16GB 2Rx4 2400 ECC Reg CL17 DIMM   |
| Kingston                      | KVR24R17S4/16MA              | 16GB 1Rx4 2400 ECC Reg CL17 DIMM   |
| Kingston                      | KVR24R17D4/32MA              | 32GB 2Rx4 2400 ECC Reg CL17 DIMM   |
| Micron                        | MTA9ASF51272PZ-2G1A2HG       | 4GB 1RX8 PC4-2133P-RDP-10  |
| Micron                        | MTA18ASF1G72PZ-2G1           | 8GB 1Rx4 PC4-2133N-RCP-05 RDIMM  |
| Micron                        | MTA18ASF1G72PZ-2G1A1         | 8GB PC4-17000 DDR4-2133MHz ECC Registered CL15 288-Pin DIMM 1.2V Dual Ra |
| Micron                        | MTA36ASF2G72PZ-2G1A2IG       | 16GB DDR4-2133 1.2V DRx4 RDIMM   |
| TeamGroup                     | T4D4R10H62158                | 8GB DDR4-2133  |
| TeamGroup                     | T4D6R10S62000                | 8GB DDR4-2133  |
| TeamGroup                     | T4E1R10S62000                | 16GB DDR4-2133   |
| HYNIX                         | HMA84GR7MFR4N-TFTD           | 32GB 2Rx4 PC4-2133P-RB0-10   |
| Skhynix                       | HMA42GR7MFR4N-TF             | 16GB 2RX4 PC4-2133   |
| Acpl                          | CMA6-3GA01CAR01MEO           | 8GB DDR4-2133 REG DIMM   |
| INNODISK                      | M4R0-AGS3ECSJ                | 16GB DDR4 2400 W/REGDIMM   |
| Smsung                        | M393A2K40BB1-CRC             | 16GB DDR4 2400 W/REGDIMM   |
| V-Color                       | TR16G18C15-093E              | 16G 1Gx8 2Rx8 PC4-17000 16GB ECC REG 1.2v                                |
| innodisk                      | M4R0-BGS3GCSJ                | 32GB DDR4 2400 REGDIMM   |
| SAMSUNG                       | M393A4K40BB1-CRC0Q           | 32GB 2RX4 PC4-2400T-RA1-11DC0  |
| Crucial                       | CT16G4RFD824A.18FB1          | 16GB DDR4 2400 RDIMM 1.2V CL17   |
| Micron                        | MTA18ASF2G72P                | 16GB DDR4 2400T REB 10   |
| Crucial                       | CT32G4RFD424A.36FB1          | 32GB DDR4 2400 RDIMM 1.2V CL1  |
| Micron                        | MTA36ASF4G72PZ-2G3B1MG       | 32GB DDR4 2Rx4 PC4-2400T RBB-10  |
| INNODISK                      | M4R0-8GSQECSJ                | 8GB DDR4 2400 REG DIMM   |
| SAMSUNG                       | M39A1G40EB1-CRC              | 8GB 1Rx4 PC4-2400T-RC1-11-MC0  |
| Cruclal                       | CT16G4RFD424A.36FB1          | 16GB DDR4-2400RDIMM 1.2V CL1   |
| Micron                        | MT36ASF2G72PZ-2G3B1RK        | 16GB 2Rx4 PC4-2400T-RBB-10   |
| Cruclal                       | CT16G4RFS424A.18FB1          | 16GB DDR4-2400 RDIMM 1.2V CL1  |
| Micron                        | MTA18ASF2G72PZ-2G3B1LG       | 16GB 1RX4 PC4-2400T-RCB-10   |
| Cruclal                       | CT8G4RFS424A.18FB1           | 8GB DDR4-2400 RDIMM 1.2V CL17  |
| Micron                        | MTA18ASF1G72PZ-2G3B1QG       | 8GB 1RX4 PC4-2400T-RCB-10  |
| Viking                        | VP9MR2G7228JB                | 16GB DDR4 2400 REG DIMM  |
| Viking                        | VP9MR4G7224JBJSB             | 32GB 2Rx4 PC4-2400T REG  |
| Crucial                       | CT8G4RFS824A-2G3B1           | 8GB DDR4-2400 RDIMM 1.2V CL17  |
| Micron                        | MTA9ASF1G72PZ-2G3B1MG        | 8GB DDR4-2400 RDIMM 1.2V CL17  |
| V-color                       | TR416G24S417                 | 16GB R-DIMM DDR4-2400 2Gx4 1Rx4  |
| V-color                       | TR432G24D417                 | 32GB R-DIMM DDR4-2400 2Gx4 2Rx4  |
| INNODISK                      | M4R0-8GSSBCSJ                | 8GB DDR4 2400 REG DIMM   |
| Crucial                       | CT32G4RFD424A-2G3B1          | 32GB DDR4-2400 RDIMM 1.2V CL17   |
| Crucial                       | CT32G4RFD424A.36FB1          | 32GB DDR4-2400 RDIMM 1.2V CL17   |
| Micron                        | MTA36ASF4G72PZ-2G3B1MG       | 32GB DDR4-2400 RDIMM 1.2V CL17   |
| Crucial                       | CT16G4RFD8266-2G6H1.001      | 16G DDR4- 2666 RDIMM 1.2V CL19   |
| Micron                        | MTA18ASF2G72PZ-2G6H1QG       | 16G 2RX8 PC4-2666V-RE2-11  |
| Crucial                       | CT32G4RFD4266-2G6H1.001      | 32G DDR4- 2666 RDIMM 1.2V CL19   |
| Micron                        | MTA36ASF4G72PZ-2G6H1QG       | 32G 2RX4 PC4-2666V-RB2-11  |
| MBG-JBM                       | J4AGR1G8PGXC                 | 16GB 2Rx8 PC4-2400 RDIMM   |
| MBG-JBM                       | J4BGRH2G4PGXC                | 32GB 2Rx4 PC4-2400 RDIMM   |
| <b>DDR4 Memory ECC LRDIMM</b> |                              |  |
| Samsung                       | M386A8K40BM1-CRC4Q M         | 64GB 4DRx4 PC4-2400T LRDIMM 1.2v CL 17                                   |
| CRUCIAL                       | CT32G4LFQ4213.36DA1          | 32GB DDR4 2133 ECC REG 1.2V Quad Rank LRDIMM                             |
| Micron                        | MTA72ASS4G72LZ-2G1A11G       | 32GB DDR4 2133 ECC REG 1.2V Quad Rank LRDIMM                             |
| Kingston                      | KVR21L15Q4/32                | 32GB 2133MHZ DDR4 ECC CL15 Lrdimm QR X4 W/TS                             |
| SAMSUNG                       | M386A4G40DM0-CPB 1411 LRDIMM | DDR4-2133, 32GB 4DRx4 PC4-2133P-LD0-10-DC0                               |
| Crucial                       | CT32G4LFD424A-2G3B1          | DDR4 2400 LRDIMM 1.2V CL17 32GB 2RX4 CL 17                               |
| Micron                        | MTA36ASF4G72LZ-2G3B1MI       | DDR4 2400 LRDIMM 1.2V CL17 32GB 2RX4 CL 17                               |
| <b>Hard Drive SATA</b>        |                              |  |
| Vendor                        | Model Name                   | SPEC   |
| Seagate                       | ST9250610NS                  | 2.5" 250G SATAIII Constellation.2 64MB Cache 7200RPM (F/W:SN02)          |
| <b>Hard Drive SSD</b>         |                              |  |
| Vendor                        | Model Name                   | SPEC   |
| Seagate                       | XF1212-1A0512                | SATAIII 2.5" SSD 480GB (FW:PROLU617)                                     |
| ADATA                         | ASR1010SS-480GM              | 2.5"SATA 6Gb/s SSD SR1010SS  |
| Seagate                       | ST9250610NS                  | 2.5" 250G SATAIII Constellation.2 64MB Cache 7200RPM (F/W:SN02)          |
| ADATA                         | ASX1000LS7-240GM             | 2.5" SATA 6Gb/s  |
| <b>PCIe SSD</b>               |                              |  |
| Vendor                        | Model Name                   | SPEC   |
| Toshiba                       | PX04PMC320                   | 3.2TB Enterprise SSD (NVMe)  |

| <b>SATA DOM</b>       |                                     |   |
|-----------------------|-------------------------------------|---|
| Vendor                | Model Name                          | SPEC  |
| INNODISK              | DESSL-64GD72SCADNA                  | DESSL-64GD72SCADNA 64GB   |
| INNODISK              | DESSC-64GM41BC1SCB                  | SH TYPE C 3ME4 64GB SATA III  |
| INNODISK              | DESSL-64GM41BC1SCB                  | 3ME4 DESSL-64GM41BC1SCB 64GB SL                                     |
| INNODISK              | DESSL-64GM41BCADCB                  | 3ME4 DESSL-64GM41BCADCB 64GB ML                                     |
| <b>SCSI Card</b>      |                                     |   |
| Vendor                | Model Name                          | SPEC  |
| Adaptec               | 29320LPE                            | Ultra320, PCI-E   |
| <b>RAID Card</b>      |                                     |   |
| Vendor                | Model Name                          | SPEC  |
| Adaptec               | ASR-6805T                           | 512MB SAS 2.0 6Gb/s PCIe Gen2 RAID                                  |
| Gigabyte              | GC-MSLZ2                            | LSI 2008, 8 internal ports SAS 6G HBA card                          |
| Gigabyte              | RA200-8                             | LSI SAS2308 SAS I/O Controller PCI-E Gen 3 x8                       |
| Gigabyte              | RA201-A                             | LSI SAS2208 SAS Controller PCI-E Gen 3 x8                           |
| Gigabyte              | CRA3338                             | LSI SAS3008 SAS 12G   |
| LSI                   | MegaRAID SAS 9240-8i(LSI 2008)      | PCI-E x8, 6Gb/s, SAS, 8-port IOP based                              |
| LSI                   | MegaRAID SAS 9260-8i(LSI 2008)      | PCI-E x8, 6Gb/s, SAS, 8-port IOP based                              |
| <b>LAN Card</b>       |                                     |   |
| Vendor                | Model Name                          | SPEC  |
| Intel                 | QLE7342                             | Intel TrueScale Fabric Host Adapter QLE7342 40GbpsInfiniBand        |
| QLOGIC                | QLE2562                             | QLE2562-HP 8Gbp/s PCI-e Dual Port Fibre Channel HBA                 |
| Mellanox              | CB194A InfiniBand Card              | Mellanox Dual-Port InfiniBand Host Channel Adapter CB194A           |
| Solarflare            | SFN6122F                            | Solarflare SFN6122F Dual Port 10GbE SFP+ Server Adapter             |
| Solarflare            | SFN7322F                            | Solarflare Flareon Ultra SFN7322F Dual Port 10GbE SFP+              |
| Intel                 | PRO/1000PT Dual Port Server Adapter | PCI-E x4 LAN Adapter  |
| Intel                 | Intel X540 T2 82599 10G             | Fibre Channel to PCIe 2.0a Gen2 (x8) 10GB dual port                 |
| Intel                 | Intel i350-T2                       | Dual-port Gigabit Ethernet server adapters                          |
| Intel                 | X520-DA2 Ethernet Server Adapter    | PCI-E x8 LAN Adapter  |
| Gigabyte              | GC-MNXE21 REV:1.0                   | (Infiniband card/CX-3 MT275*/FDR 4x2port/PCIE Gen3 x8)              |
| Gigabyte              | GC-MLBZ1 REV2.0                     | BroadCom 10G LAN adapter Specification with BCM57811S PCI-e FF card |
| GIGABYTE              | GC-MLIZ                             | MEZZ Intel x540 10G LAN Card BASE-T LAN ports                       |
| Gigabyte              | GC-MLIZS                            | MEZZ x8 intel 82559 double port 10G SFP+ LAN ports                  |
| Intel                 | INTEL CT2 desktop adapter           | Intel CT2 LAN GIGABIT CT2 DESKTOP ADAPTER E1G31CTG1P20              |
| Emulex                | OCE14102-NX                         | 10GBIT/S Ethernet Adapter 2port Direct                              |
| Emulex                | OCE14101-NX                         | 10GBIT/S Ethernet Adapter 1port Direct                              |
| Gigabyte              | CLN4831                             | Single SFP+ , INTEL 82599EN   |
| Gigabyte              | CLN4832                             | Dual SFP+ , INTEL 82599ES   |
| GIGABYTE              | CLN4751                             | 40G CLN4751 v1.0 ( XL710 LAN PCIe)                                  |
| GIGABYTE              | CLN4752                             | 40G CLN4752 v1.0 ( XL710 LAN PCIe)                                  |
| Gigabyte              | CLN4312                             | Intel® I350-AM2 1Gb/s 2-port LAN Card                               |
| Gigabyte              | CLN4314                             | Intel® I350-AM4 1Gb/s 4-port LAN Card                               |
| Gigabyte              | CLN4522                             | Intel® X540-BT2 10Gb/s 2-port LAN Card                              |
| Gigabyte              | CLN4222                             | Intel® X550-AT2,PCIE 10G Base-T LAN Dual port                       |
| Gigabyte              | CLN4121                             | Intel® X550-AT,PCIE 10G Base-T single                               |
| <b>USB 3.0 Device</b> |                                     |   |
| Vendor                | Model Name                          | SPEC  |
| Seagate               | Seagate GoFlex STAA500305           | 500GB USB 3.0 HDD   |
| Toshiba               | Toshiba                             | 500GB USB 3.0 HDD   |
| Verico Evolution      | Verico Evolution Lite S 16GB        | USB 3.0 Flash   |
| ADATA                 | ADATA SUPERIOR S102 PRO 16GB        | USB 3.0 Flash   |
| CyberSLIM             | CyberSLIM S1-DS3 TURBO              | USB 3.0 Device  |