

2011 China TOP100 List of High Performance Computer

Zhang YunQuan Sun Jiachang Yuan Guoxing Zhang Linbo

The Specialty Association of Mathematical & Scientific Software, CSIA

Evaluation Center of High Performance Computer, National 863 Plan

High Performance Computing Technique Committee, CCF

(<http://www.samss.org.cn>)

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Contact: Dr. Yunquan Zhang. zyq@mail.rdcps.ac.cn / samss@mail.rdcps.ac.cn.

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Rank	Vendor	System	Installation Location	Installation Year	Application area	Num of Cores	Linpack (Gflops)	Linpack Source	Peak(Gflops)	Efficiency
1	NUDT	TianHe OneA/7168x2 Intel Hexa Core Xeon X5670 2.93GHz + 7168 Nvidia Tesla M2050@1.15GHz+2048 Hex Core FT-1000@1GHz/80Gbps	National Supercomputer Center in Tianjin	2010	Scientific Computing /Industry	202752	2566000	Q	4701000	0.546
2	NPCETR	SunwayBlueLight /8575x16 Core SW1600@975MHz/QDR Infiniband	National Supercomputer Center in Jinan	2011	Scientific Computing /Industry	137200	795900	Q	1070160	0.744
3	NUDT	TianHe OneA-HN/2048x2 Intel Hexa Core Xeon X5670 2.93GHz + 2048 Nvidia Tesla M2050@1.15GHz/80Gbps	National Supercomputer Center in Changsha	2011	Scientific Computing /Education	53248	771700	Q	1343200	0.575
4	SUGON	SUGON NEBULA/ TC3600 Blade/2560x(2 Intel Hexa Core X5650 + Nvidia Tesla C2050 GPU)/QDR Infiniband	National Supercomputer Center in Shenzhen	2011	Scientific Computing /Industry	52416	749200	C	1296320.26	0.578
5	IBM	xSeries x3650M3/Intel Xeon X56xx 2.53 GHz/Giga-E	Network Company	2011	Internet Service	113040	636985	T12	1143965	0.557
6	IPE,CAS	Mole-8.5 Cluster/320x2 Intel QC Xeon E5520 2.26 Ghz + 320x6 Nvidia Tesla C2050/QDR Infiniband	Institute of Process Engineering, Chinese Academy of Sciences	2010	Scientific Computing	33120	496500	U	1138440	0.436

7	SUGON	SUGON NEBULA/Sugon TC3600 Blade/3040 x 2 Intel Hexa Core X5650/QDR Infiniband	National Supercomputer Center in Shenzhen	2011	Scientific Computing /Industry	36480	342300	C	389168.64	0.88
8	IBM	xSeries x3650M3/Intel Xeon X56xx 2.93 GHz/Giga-E	Telecom Company	2011	Industry	36336	204754.4	T4	425856	0.481
9	IBM	xSeries x3650M2 Cluster/Intel Xeon QC E55xx 2.53 GHz/Giga-E	Network Company	2011	Internet Service	34688	196228	T4	351044	0.559
10	SUGON	Magic Cube/SUGON 5000A/1920x4 AMD QC Barcelona 1.9GHz/DDR Infiniband/WCCS+Linux	Shanghai Supercomputer Center	2008	Scientific Computing /Industry	30720	180600	C	233472	0.774
11	IBM	xSeries x3650M3/Intel Xeon X56xx 2.53 GHz/Giga-E	Network Company	2011	Internet Service	29800	168375	T3	302385	0.557
12	IBM	xSeries x3630M3/Intel Xeon X5620 2.4GHz/Giga-E	Network Company	2011	Internet Service	41436	159114.24	C	397785.6	0.4
13	IBM	xSeries x3650M3/Intel Xeon X56xx 2.93 GHz/Giga-E	Engineering Company	2011	Industry	27576	155391.6	T3	323190	0.481
14	NPCETRC	Sunway4000H/1190x2 Six Core Intel Xeon X5675/QDR Infiniband	Beijing	2011	Scientific Computing	14280	145600	C	167362	0.87
15	IBM	BladeCenter HS22 Cluster/Intel Xeon QC E5xxx 2.53GHz/Giga-E	Network Company	2011	Internet Service	24864	140655.6	T3	251623.8	0.559

16	IBM	BladeCenter HS22 Cluster/Intel Xeon QC GT 2.53 GHz/Giga-E	Network Company	2009	Industry/Gaming	21504	124120	T4	217640	0.57
17	IBM	xSeries x3650M2 Cluster/Intel Xeon QC E55xx 2.53 Ghz/Giga-E	Engineering Company	2010	Industry	21888	123820.4	T3	217620.6	0.569
18	IBM	BladeCenter HS22 Cluster/Intel Xeon QC GT 2.53 GHz/Giga-E	Network Company	2009	Industry/Gaming	21504	123818.1	T3	217620	0.569
19	IBM	xSeries x3650M2 Cluster/Intel Xeon QC E55xx 2.53 Ghz/Giga-E	Service Provider	2010	Industry	21456	121376.4	T3	217134.6	0.559
20	Lenovo	DeepCom 7000/1240x2 Intel Xeon QC E5450 3.0GHz/140x4 Intel Xeon QC X7350 2.93GHz Infiniband 4xDDR	Supercomputing Center of Chinese Academy of Sciences	2008	Scientific Computing	12160	102800	C	145293	0.708
21	IBM	BladeCenter HS22 Cluster/Intel Xeon QC GT 2.66GHz/Giga-E	Engineering Company	2011	Industry	18048	102097.4	T2	192463.8	0.53
22	SUGON	SUGON 5000/2640*Intel Xeon 5650 6core 2.66GHz/Giga-E	Governmentt(Beijing)	2011	Government	15840	95140	C2	168981.12	0.563
23	IBM	xSeries x3550M3/Intel Xeon X56xx 2.53GHz/Giga-E	Service Provider	2011	Industry	16416	92504	T2	166130	0.557
24	Inspur	Tiansuo-10000/768x2 Six Core Intel Xeon X5670	Tsinghua University	2011	Meteorology	9216	92420	C	107300	0.861

		2.93GHz/QDR Infiniband								
25	NPCETRC	Sunway 4000A/700x2 Six Core Intel Xeon X5675/QDR Infiniband	National Supercomputer Center in Jinan	2011	Scientific Computing /Industry	8400	90850	C	102816	0.884
26	SUGON	SUGON 5000/4096*Xeon 5620 4core 2.4GHz/Giga-E	Network Company(Beijing)	2011	Internet Application	16384	89300	C2	157286	0.568
27	IBM	BladeCenter HS22 Cluster/Intel Xeon QC GT 2.53 GHz/Giga-E	Telecom Company	2010	Industry	15504	87706	T2	156900.4	0.559
28	SUGON	SUGON 5000/4096*AMD Opteron 2379 4core 2.4GHz/Giga-E	Governmentt(Shanghai)	2011	Government	16384	87380	C2	157286.4	0.556
29	SUGON	SUGON 5000/2000*AMD Opteron 6136 8core 2.4GHz/Giga-E	Governmentt(Beijing)	2011	Government	16000	87100	C2	153600	0.567
30	SUGON	SUGON 5000/4400*Xeon 5520 4core 2.26GHz/Giga-E	Network Company	2011	Internet Application	17600	86620	C2	159104	0.544
31	SUGON	SUGON 5000/4400*Xeon 5606 4core 2.13GHz/Giga-E	Network Company	2011	Internet Application	17600	84980	C2	149952	0.567
32	IBM	BladeCenter HS22 Cluster /Intel Xeon QC GT 2.66GHz/Giga-E	Engineering Company	2011	Industry	14208	80374.6	T2	151514.2	0.53

33	SUGON	SUGON NEBULA/TC3600 Blade/220x(2 Intel Hexa Core X5650 + 1 NVidia Tesla C2050)/ QDR Infiniband	Chengdu Sunpercomputer Center(Phase II)	2010	Scientific Computing /Industry	5720	76350.38	C	141389.60	0.54
34	IBM	xSeries x3650M2 Cluster/ Intel Xeon QC E55xx 2.53 Ghz/Giga-E	Service Provider	2010	Industry/Gaming	12800	73880	T2	129540	0.57
35	IBM	BladeCenter HS22 Cluster/Intel Xeon QC E5XXX 2.53 GHz/Giga-E	Network Company	2011	Internet Service	12324	69720	T	124720	0.559
36	IBM	xSeries x3650M3/Intel Xeon X56xx 2.53 GHz/Giga-E	Network Company	2011	Internet Service	11604	65390	T	117430	0.557
37	SUGON	SUGON 5000/TC3600 Blade/1024*Intel Xeon 6Core X5650 2.66GHz/ QDR Infiniband	Fudan University	2011	Scientific Computing /Industry	6144	57840	C	65544.19	0.882
38	HP	Cluster Platform 4000 BL685c G7/AMD Opteron 12 Core 2.1GHz/Giga-E	Network Company	2011	Internet Service	11292	56410	T	108400	0.52
39	SUGON	Biological System/Sugon TC3600 Blade/Intel Hexa Core X5650 + NVidia Tesla C2050 GPU/QDR Infiniband	Institute of Computing Technology Chinese Academy of Sciences	2010	Bioinformatics	4160	55527.25	C	102828.8	0.54
40	SUGON	SUGON NEBULA/TC3600 Blade/320*Intel Xeon X5650	Wuxi City Cloud Computing Center	2011	Industry/Cloud	4160	55527.25	C	102828.8	0.54

		+160* Nvidia Tesla C2050 GPU/QDR Infiniband			Computing					
41	SUGON	SUGON 5000/TC3600 Blade/960*AMD Opteron 6132 8core 2.2GHz/Infiniband	New Energy Research Institute of China Electric Power Research Institute	2011	Scientific Computing /Power	7680	53090	C	67584	0.786
42	SUGON	SUGON 5000/1250*AMD Opteron 6136 8core 2.4GHz/Giga-E	Governmentt(Beijing)	2011	Government	10000	52030	C	96000	0.542
43	HP	Cluster Platform 3000 BL460c G7/Intel Xeon E5620 2.4GHz/Giga-E	Network Company	2011	Internet Service	11292	51420	T	98990	0.519
44	Inspur	TS10000/850x2 Intel Xeon Hexa Core X5650/Giga-E	Governmentt(Guangzhou)	2011	Government	10200	51340	C	108528	0.473
45	IBM	xSeries x3650M2 Cluster/Intel Xeon QC E55xx 2.53 Ghz/Giga-E	Engineering Company	2010	Industry	8960	51203.3	T	90675.2	0.565
46	SUGON	SUGON 5000/1200*Xeon 5675 6core 3.06GHz/Giga-E	Governmentt	2011	Government	7200	49510	C	88329.6	0.561
47	HP	Cluster Platform 3000 BL460c G6/Intel Xeon E5530 2.4GHz/Giga-E	Telecom Company	2010	Industry	9520	47890	T	91390	0.524
48	HP	Cluster Platform 3000 BL460c G7/Intel Xeon X5650 2.66GHz/Giga-E	Network Company	2011	Internet Service	8556	47870	T	91040	0.526

49	HP	Cluster Platform 4000 BL685c G7/AMD Opteron 12 Core 2.1GHz/Giga-E	Network Company	2011	Internet Service	10800	47300	T	90720	0.521
50	SUGON	SUGON NEBULA /TC3600 Blade/260*Intel Xeon X5650 + 130*Nvidia Tesla C2050/QDR Infiniband	HPC Laboratory, SUGON	2011	Scientific Computing	3380	46960	C	83592.08	0.562
51	SUGON	SUGON 5000/2200*Xeon 5620 4core 2.4GHz/Giga-E	Network Company	2011	Internet Applicatio n	8800	46710	C	84480	0.553
52	SUGON	SUGON 5000/2400*Xeon 5606 4core 2.13GHz/ Giga-E	Television Station	2011	Industry/V ideo Computing	9600	46380	C	81792	0.567
53	IBM	BladeCenter HS22 Cluster/Intel Xeon E5620 2.4GHz / Giga-E	Semiconductor Company	2011	Industry/S emiconduc tor	9600	46080	S	92160	0.5
54	Inspur	TS10000/850x2 Intel Xeon Hexa Core E5645/Giga-E	Governmentt(Beijin g)	2011	Governme nt	10200	45120	C	97920	0.461
55	SUGON	SUGON 5000/1200*Intel Xeon 5650 6core/Giga-E	Governmentt(Guan gzhou)	2011	Governme nt	7200	43900	C	76809.6	0.572
56	SUGON	SUGON 5000/2048*AMD Opteron 2379 4core 2.4GHz/Giga-E	Governmentt(Beijin g)	2011	Governme nt	8192	43690	C	78643.2	0.556
57	SUGON	SUGON 5000/2048*AMD Opteron 2379 4core 2.4GHz/Giga-E	Governmentt(Xinjia ng)	2011	Governme nt	8192	43690	C	78643.2	0.556

58	SUGON	SUGON 5000/2000*Intel Xeon 5620 4core/Giga-E	Governmentt(Guangzhou)	2011	Government	8000	43610	C	76800	0.568
59	HP	Cluster Platform 4000 BL685c G7/AMD Opteron 8 Core 2.4GHz/Giga-E	Network Company	2011	Internet Service	8560	43210	T	82180	0.526
60	SUGON	SUGON GHPC1000/108*Intel Xeon 6 Core X5650 2.66GHz+216*Nvidia Tesla C2050 GPU/QDR Infiniband	Sun Yat-sen University	2011	Scientific Computing /Industry	3672	42730	C	118152.86	0.362
61	HP	Cluster Platform 3000 BL460c G6/Intel Xeon E5540 2.53 GHz/Giga-E	China Telecom	2010	TeleComm	7848	41880	C	79420	0.527
62	SUGON	SUGON 5000/2048*Xeon 5606 4core 2.13GHz/Giga-E	Governmentt	2011	Government	8192	40080	C	69795.84	0.574
63	SUGON	SUGON NEBULA/TC3600 Blade/710xIntel Hexa Core X5650 + 78x NVidia Tesla C2050/QDR Infiniband	Beijing Computing Center(Phase II)	2010	Scientific Computing /Industry	3660	38527.44	C	79112.4	0.487
64	IBM	xSeries x3630M3 Cluster/Intel Xeon QC E5606 2.13Ghz/Giga-E	Service Provider	2011	Industry/Gaming	7912	38356.43	S	67410.24	0.569
65	IBM	BladeCenter HS22 Cluster/Intel Xeon QC GT 2.53 GHz/Giga-E	Network Company	2010	Industry	6120	35330	T	61930	0.57
66	HP	Cluster Platform 3000	Telecom Company	2009	TeleComm	8296	34936.6	C	65750	0.531

		BL480c/Intel Xeon 5405 2Ghz/GigE								
67	Inspur	TS10000/300x2 Intel Xeon Hexa Core X5650 2.66GHz/QDR Infiniband	Jilin University	2010	Scientific Computing /Education	3800	34080	C	40094	0.85
68	IBM	BladeCenter HS22 Cluster/Intel Xeon QC E5540 2.53Ghz/Gig-E	RIM(BlackBerry)	2011	Industry/S emiconduc tor	5752	33121.63	S	58210.24	0.569
69	HP	Cluster Platform 3000 DL160/Intel Xeon Hexa Core E5650 2.66G/Giga-E+DDR Infiniband	BGP	2010	Energy/Ge ophysics	4500	32079	C	47880	0.67
70	IBM	IBM BladeCenter HS22 Cluster/400x2 Intel Xeon 5550 2.66GHz/Infiniband	Nanjing University	2009	Scientific Computing /Education	3200	31310	C	34048	0.92
71	SUGON	SUGON 5000/420x2 Intel Quad Core 3.0GHz/DDR Infiniband	State Key Lab of Computational Physics	2009	Scientific Computing	3360	31048.8	C	40320	0.77
72	HP	Cluster Platform 3000 BL460c G1/Intel Xeon L5420 2.5 GHz/Gig-E	Logistic Service	2009	Industry	5840	31029.1	C	58400	0.531
73	SUGON	SUGON 5000/720*AMD Opteron 6core 2.1GHz/Infiniband	Meteorological Bureau of Shenzhen Municipality	2011	Meteorolo gy	4320	30050	C	36288	0.828
74	NPCETR	Sunway4000A/128 X5670 + 168 X5570/QDR Infiniband	Beijing	2011	Meteorolo gy	2880	30040	C	33754	0.89

75	IBM	xSeries x3630M3 Cluster/Intel Xeon QC E5620 2.4Ghz/Gig-E	Network Company(Guangzhou)	2011	Internet Application	5424	29628.06	S	52070.4	0.569
76	IBM	xSeries x3650M2 Cluster/Intel Xeon QC E55xx 2.53 Ghz/Gig-E	Telecom Company	2010	Industry	5104	29460	T	51650	0.57
77	Inspur	TS10000/400x4 Intel E7540/Giga-E	Beijing	2011	Government	9600	29180	C	76800	0.38
78	IBM	BladeCenter HS22 Cluster/Intel Xeon Six Core X5650 2.66 GHz/Infiniband	China Petroleum	2011	Energy	3072	29090.61	U	32686	0.89
79	IBM	BladeCenter HS22 Cluster/Intel Xeon QC X55xx 2.66 GHz/Giga-E	Engineering Company	2010	Industry	5040	29090	T	51000	0.57
80	SUGON	SUGON 5000/720*AMD Opteron 8core 2.2GHz/Giga-E	Industry(Electricity)	2011	Industry/Power	5760	28780	C	50688	0.568
81	IBM	BladeCenter HS22 Cluster/Intel Xeon Six Core X5650 2.66 GHz/Infiniband	Southwest University	2011	Scientific Computing /Education	3072	28636.07	U	32175.36	0.89
82	IBM	BladeCenter HS22 Cluster/Intel Xeon QC GT 2.53 GHz/Giga-E	Network Company	2009	Industry/Gaming	4928	28450	T	49870	0.57
83	IBM	BladeCenter HS22 Cluster/Intel Xeon QC E5620 2.4Ghz/Gig-E	Network Company(Beijing)	2011	Internet Application	5192	28360.78	S	49834.2	0.569

84	HP	Cluster Platform 3000 BL460c/Intel Xeon E54xx 2.33 GHz/Giga-E	Telecom Company	2008	TeleComm	5584	27678	C	52042.9	0.532
85	Inspur	Tiansuo-10000/261x2 Six Core Intel Xeon X5670/QDR Infiniband	Ocean University of China	2011	Scientific Computing /Education	3132	27650	C	33320	0.83
86	Inspur	TS10000/400x4 Intel E7540/Giga-E	Beijing	2011	Governme nt	9600	27140	C	71424	0.38
87	IBM	xSeries x35500M3 Cluster/Intel Xeon Six-Core E5645 2.4Ghz/Gig-E	Network Company(Shanghai)	2011	Internet Applicatio n	4800	26219.52	S	46080	0.569
88	SUGON	SUGON GHPC1000/70*Intel Xeon 4core 5620 2.4GHz+140*Nvida Tesla C2050 GPU/Giga-E	LandOcean Energy Services Co., Ltd.	2011	Energy/Ge ophysics	2240	26180	C	74788	0.35
89	NPCETR	Sunway 4000A/144 X5670 + 128 E5540/QDR Infiniband	Beijing	2011	Meteorolo gy	2752	25410	C	30615	0.83
90	SUGON	SUGON 5000/128*Xeon 5450 4core 3.0GHz+128*Xeon 5540 4core 2.66GHz+296*Xeon 5675 6core 3.06GHz/Infiniband	East China Normal University	2011	Scientific Computing /Education	2800	25330	C	33329.92	0.76
91	SUGON	SUGON 5000/AMD Opteron Quad Cores 2.4 GHz/Giga-E	Governmentt	2010	Governme nt	4928	25272.83	C	47308.80	0.534
92	IBM	IBM Cluster BladeCenter	Governmentt	2010	Governme	5920	25000	C	50440	0.496

		HS22/740x2 Intel QC E5506 2.13GHz/Giga-E			nt					
93	IBM	BladeCenter HS21 Cluster/630x2 Intel Xeon E5430 Quad Core 2.66GHz/Giga-E	CNPC Sichuan Petroleum Geophysical Prospecting Company	2008	Energy/Geophysics	5040	24670	C	53625.6	0.46
94	HP	Cluster Platform 3000 BL460c/Intel Xeon E5530 2.4G + Xeon 5550 2.66G/DDR Infiniband	Institute of Atmospheric Physics, Chinese Academy of Sciences	2009	Meteorology	2896	24537	C	28866.56	0.85
95	IBM	xSeries x35500M3 Cluster/Intel Xeon Six-Core E5645 2.4Ghz/Gig-E	Network Company(Beijing)	2011	Internet Application	4392	23990.86	S	42163.2	0.569
96	DELL	PowerEdge M605 Blade/360x2 AMD Hexa Core 2435 2.6GHz/ Giga-E	Beijing Genomics Institute Shenzhen	2010	Bioinformatics	4320	23400	C	44928	0.521
97	HP	Cluster Platform 3000 BL460c/384x2 Intel Xeon E5430 Quad Core 2.66GHz/ Infiniband 20Gb/s	Institute of Engineering Mechanics, China Earthquake Administration(Beijing)	2008	Scientific Computing /Earthquake Engineering	3072	23272	U	32686.08	0.712
98	SUGON	SUGON 5000/420*AMD Opteron 6132 8core	Zhejiang University	2011	Scientific Computing	3360	23270	C	29568	0.787

		2.2GHz/QDR Infiniband			/Education					
99	SUGON	SUGON 5000/360*Intel 6core 2.97GHz/QDR Infiniband	Research Institution(Sichuan)	2011	Scientific Computing	2160	22590	C	25660.8	0.88
100	SUGON	SUGON NEBULA/TC3600 Blade/120*Intel 6Core 5645 + 60*NVIDIA Tesla C2050/QDR Infiniband	Mudanjiang University	2011	Scientific Computing /Render	1560	22160	C	37812	0.586

Note:

- (1) The data source in this list was limited to the mainland of China.:
 - a) Linpack Data Labeled “U”: Commercial Public Data, National Department Certified Data, User Provided Data or Data Measured by SAMSS. For user data, SAMSS is only responsible for its reasonability and user is responsible for its truth; SAMSS will provide more data measured by itself depending on human and financial condition;
 - b) Linpack Data Labeled “S”: scaled down from the same model but larger scale High Performance Computer Linpack Performance of TOP500(<http://www.top500.org>).
 - c) Linpack Data Labeled “T”: Directly quoted from TOP500(<http://www.top500.org>);
 - d) Linpack Data Labeled “C”: Machine Manufacturer Provided Data;
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- (3) From now on, this rank list will be published on first half of November each year;
- (4) You are welcome to provide feedback and bug report, please return your report to Dr .Yunquan Zhang(samss@mail.rdcps.ac.cn or zyq@mail.rdcps.ac.cn).