

スティック PC

DOS パラのスティック PC DG-STK3 に

Ubuntu(Lubuntu) 15.10 をインストールして簡単な性能評価 .

ペリフェラルは

- ・ キーボード SKB-SL04U
- ・ GW-USValue-Ez

スペック

CPU

model name : Intel(R) Atom(TM) CPU Z3735F @ 1.33GHz
cache size : 1024 KB

メモリ

MemTotal: 1984700 kB

UnixBench

ちなみに消費電力を CHARGER Doctor で測定してみたところ

およそ 5.11V , 0.4A といったところ .

動作中の /sys/devices/system/cpu/cpu?/cpufreq/metadata をみると

1.83GHz 程度まで動作周波数はブーストされるようだ .

・ 1CPU のスコア

Dhrystone 2 using register variables	116700.0	9170188.3	785.8
Double-Precision Whetstone	55.0	1523.0	276.9
Execl Throughput	43.0	386.6	89.9
File Copy 1024 bufsize 2000 maxblocks	3960.0	292651.0	739.0
File Copy 256 bufsize 500 maxblocks	1655.0	80626.1	487.2
File Copy 4096 bufsize 8000 maxblocks	5800.0	764097.7	1317.4
Pipe Throughput	12440.0	667144.9	536.3
Pipe-based Context Switching	4000.0	45081.8	112.7
Process Creation	126.0	2442.8	193.9
Shell Scripts (1 concurrent)	42.4	1966.6	463.8
Shell Scripts (8 concurrent)	6.0	976.3	1627.1
System Call Overhead	15000.0	1356916.2	904.6
System Benchmarks Index Score			=====
			452.8

・ 4CPU 4 パラのスコア

System Benchmarks Index Values	BASELINE	RESULT	INDEX
Dhrystone 2 using register variables	116700.0	31704217.1	2716.7
Double-Precision Whetstone	55.0	5259.2	956.2
Execl Throughput	43.0	4491.1	1044.5
File Copy 1024 bufsize 2000 maxblocks	3960.0	351134.8	886.7
File Copy 256 bufsize 500 maxblocks	1655.0	98187.6	593.3
File Copy 4096 bufsize 8000 maxblocks	5800.0	943438.8	1626.6
Pipe Throughput	12440.0	2307278.9	1854.7
Pipe-based Context Switching	4000.0	232072.0	580.2
Process Creation	126.0	9268.7	735.6
Shell Scripts (1 concurrent)	42.4	8161.8	1924.9

Shell Scripts (8 concurrent)	6.0	1130.9	1884.9
System Call Overhead	15000.0	3401815.2	2267.9
		=====	
System Benchmarks Index Score			1254.0

Stream

サイズ大き目にコンパイル

```
gcc -O -mmodel=large -DSTREAM_ARRAY_SIZE=50000000 stream.c -o stream.50M.omp
gcc -O -fopenmp -mmodel=large -DSTREAM_ARRAY_SIZE=50000000 stream.c -o stream.50M.omp
```

こうすると

```
Array size = 500000000 (elements), Offset = 0 (elements)
Memory per array = 381.5 MiB (= 0.4 GiB).
```

結果は、

CHARGER Doctor をみていると 5.15v, 0.6-0.7A 程度 .

```
• -----
Function  Best Rate MB/s  Avg time  Min time  Max time
Copy:      4626.3   0.173088  0.172924  0.173731
Scale:     4201.0   0.190740  0.190433  0.191493
Add:       4940.6   0.243161  0.242886  0.243526
Triad:     4272.0   0.281131  0.280902  0.281788
```

OpenMP でもやってみた .

• OMP_NUM_THREAD=1

```
-----
Function  Best Rate MB/s  Avg time  Min time  Max time
Copy:      4628.0   0.173025  0.172860  0.173542
Scale:     4196.8   0.190844  0.190620  0.191282
Add:       4913.7   0.244317  0.244217  0.244396
Triad:     4264.5   0.281699  0.281390  0.282705
-----
```

• OMP_NUM_THREAD=2

```
-----
Function  Best Rate MB/s  Avg time  Min time  Max time
Copy:      4695.6   0.170626  0.170373  0.171155
Scale:     4638.9   0.172611  0.172454  0.172765
Add:       5524.5   0.217634  0.217215  0.218297
Triad:     5573.2   0.215780  0.215316  0.216255
-----
```

• OMP_NUM_THREAD=4

Function	Best Rate MB/s	Avg time	Min time	Max time
Copy:	4385.3	0.182835	0.182429	0.183289
Scale:	4326.7	0.185081	0.184900	0.185355
Add:	5106.2	0.235379	0.235009	0.235670
Triad:	5103.0	0.235516	0.235154	0.235855

Octane 2.0

Firefox 43.0.4

Richards 1769
 Delatblue 4661
 Crypt 7231
 Raytrace 12002
 EarleyBoyer 8605
 Regexp 798
 Splay 3639
 SplyaLatency 4054
 NavierStokes 13585
 pdf.js 2120
 Mandreel 5116
 MandreelLatency 5204
 GB Emulator 13589
 CodeLoad 3650
 B0x2DWeb 5355
 zlib 23039
 Typescript 6016