



# Tech Info Library

## Centris: Performance Questions (5/93)

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TOPIC -----

Is there any known or measured performance difference in using Excel or other math intensive applications on a Macintosh IIfx and on a Centris 610? Is there any compatibility issues with the Centris 610, since it does not have a floating point unit (FPU)?

Can you provide me with some sort of a benchmark or comparison chart that compares the Macintosh IIfx, Macintosh Centris 610 & 650, and Quadra 700 & 800? The product introduction materials only show overall system performance.

DISCUSSION -----

Product Marketing sent me with the following information. The testing for these comparisons was done as "application-level benchmarks":

- Centris 610 is up to 2 times faster than a Macintosh IIfx/IIfx
- Centris 650 is up to 3 times faster than a Macintosh IIfx/IIfx
- Centris 650 is 30% faster than a Centris 610
- Quadra 800 is 25% faster than a Centris 650

When asked specifically about the possibility of upgrading the 68LC040 (no FPU) to a 68RC040 (includes FPU), they responded that, "This is neither endorsed nor recommended by Apple, and will not be an Apple offering." They speculate that some enterprising third party might offer such an upgrade kit in the future, but they do not know of one now.

Since it has no FPU, the Centris 610 would require applications that are not dependent on the presence of an FPU for compatibility reasons.

While performance could be expected to be slow on the Centris 610 for a very math intensive application it is expected that the Centris 610 would still be somewhat faster than the Macintosh IIfx.

If your customer wants specifics about performance, Speedometer is a public domain tool which provides performance comparisons. On America OnLine is an article that gives a detailed comparison of a number of CPUs

including the Centris 610/650 and Quadra 700/800/950. That comparison table is included here in the hope that it will answer your customer's need.

----- Article from America OnLine -----

Here are Speedometer 3.11 numbers for some new machines. Also included are performance numbers for the Macintosh IIVx, Quadra 700 & 950 for comparison purposes. The Apple 1 gigabyte hard disk was used for all machines. The LC III had an FPU installed, the Centris 650 had a 68040, not a 68LC040 (that is, it had a hardware FPU), and the Centris 610 used a 68LC040 (in other words, no FPU). An Apple 14-inch color display was used on all machines. The disk cache was set to 256K on all machines.

Test	LC III	IIVx	C610	C650	Q700	Q800	Q950
CPU	6.89	7.03	13.01	16.32	16.17	21.62	21.62
Graf	7.91	8.31	17.08	21.26	20.19	27.38	25.62
Disk	3.40	2.93	4.94	4.99	5.14	5.09	5.24
Math	23.87	23.52	24.58	95.95	95.87	128.07	127.97
P.R.	8.20	8.24	13.77	23.50	23.14	30.69	30.18
KWhet	47.51	46.70	31.73	195.69	155.08	256.85	205.48
Dhry	5.85	5.72	15.71	19.74	19.74	26.32	26.32
Towers	5.83	5.29	15.22	18.91	18.91	26.00	24.96
QuickSrt	6.52	7.15	14.31	17.76	17.76	23.41	23.41
Bub. Srt	7.71	8.18	14.46	18.00	18.00	24.55	24.55
Queens	7.90	7.39	14.77	19.08	19.08	24.10	25.44
Puzzle	8.95	10.27	17.91	22.46	22.84	30.11	30.11
Permute	6.92	5.13	16.38	20.25	20.63	27.85	27.17
FFT	25.86	24.82	21.35	123.59	123.59	163.07	165.37
F.P. Mtrx	25.54	25.24	22.68	124.75	122.40	170.71	166.33
Int Mtrx	7.36	8.73	19.25	23.53	24.20	32.58	31.37
Sieve	8.61	8.06	16.69	20.54	19.07	27.09	25.26
Bench Ave.	13.71	13.56	18.37	52.03	48.44	69.39	64.65
FPU FFT	1.95	2.00	N/A	5.60	5.60	7.64	7.64
FPU KWhet	2.10	2.69	N/A	11.31	11.02	15.36	14.83
FPU Matrix	2.12	2.73	N/A	11.50	10.73	14.64	13.42
FPU Ave.	2.06	2.47	N/A	9.47	9.12	12.54	11.96
Color Graphics							
Mono	2.03	2.14	4.16	5.08	4.83	6.46	6.08
2 Bit	2.17	2.24	4.43	5.42	5.17	6.91	6.53
4 Bit	2.31	2.28	4.58	5.60	5.26	7.16	6.69
8 Bit	2.33	2.17	4.64	5.72	5.36	7.33	6.79
Color Ave.	2.21	2.21	4.45	5.45	5.15	6.97	6.52

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