

Benchmark Results

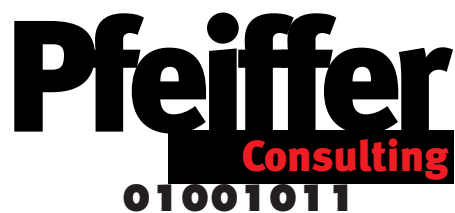
The 2002 Power Mac G4 Benchmark Report

Performance and productivity comparison
of the August 2002 line of dual processor Power Mac G4
with the 1999 500MHz Power Mac G4.

Client: Apple Computer

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	The 2002 Power Mac G4 Creative Workflow Benchmark	

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About the Benchmark Project

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1 Benchmark Overview

- This benchmark project analyzes the performance and productivity of the 867MHz, 1.0GHz and 1.25GHz dual processor Power Mac G4 introduced in August 2002, as compared to the 500MHz Power Mac G4 introduced in September 1999.
- The performance benchmarks were defined to document system performance, network/server performance (using Gigabit Ethernet and an Apple Xserve server), as well as application performance.
- Productivity measures were conducted using a complete design assignment, executed with Adobe InDesign 2.0 and Adobe Photoshop 7.0.
- Specific benchmarks were conducted to measure the impact of multiple processors on productivity.
- Benchmarks were conducted on standard hardware configurations.
- All systems were completely re-installed prior to testing.

2 Hardware and Configuration: Details

2.1 Computers tested:

- 500MHz Power Macintosh G4
- Dual 867 MHz Power Macintosh G4
- Dual 1GHz Power Macintosh G4
- Dual 1.2GHz Power Macintosh G4

(please see "System Profiles" for complete technical data of benchmarked systems)


2.2 Hardware configuration

- Standard hardware configurations were used.
- Each system was equipped with 1 GB of memory in order not to disadvantage the older system in performance comparisons.

2.3 System software

All benchmarks were performed on a standard, unmodified installation of Mac OS X v10.2.

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3 About the Performance Benchmarks

The performance benchmarks were conceived to measure pure performance increase in system operations as well as in some of the more power-hungry applications which are used in the design and publishing workflow, namely Adobe Photoshop, Adobe InDesign and Adobe Illustrator.

3.1 General remarks - System Setup

- All tests were performed using the standard system installation and configuration.
- All systems were completely re-initialized prior to tests, using the default values for installation.
- All hard drives were re-formatted using a single partition.
- All software was installed from scratch, using default settings.
- No peripherals were connected to the systems during performance benchmarks


3.2 Benchmark Basics

- All application software was used in its most recent commercially available release: Adobe Photoshop 7.0, Adobe InDesign 2.0.1, Adobe Illustrator 10.
- All performance benchmarks were conducted in an identical fashion, and were executed several times to insure stabilized, reliable results. In Photoshop 7.0, The Undo buffer was purged after every individual benchmark.

3.3 Application settings

- All applications were installed specifically for the benchmark project, and used in their standard configurations.
- Adobe Photoshop configuration was modified as follows: for performance benchmarks, usage of available RAM was set to 80% in Photoshop Preferences. For Productivity benchmarks involving several applications, this setting was changed to 50% of available RAM.

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4 Performance Benchmarks: Details

4.1 Performance Benchmarks: System Operations

The following operations were benchmarked:

- System startup
- Application launch (initial launch and re-launch)
- File copy (local): single file, 50MB
- File copy (local): single file, 100MB
- File copy (local): single file, 200MB
- File copy (local): Folder 100MB, 4000 files and subfolders
- File open (Adobe Photoshop)
- File save (Adobe Photoshop)

4.2 Performance Benchmarks: Illustrator

Illustrator Benchmarks consisted in five common operation, ranging from rotation of a complex drawing to vector effects filters, as well as as creating a complex dropshadow.

Functions tested:

- Warp filter (default values)
- Roughen filter (default values)
- Zig-Zag filter (default values)
- Rotate complex drawing (17° CW)
- Drop Shadow (default values)

4.3 Performance Benchmarks: Photoshop

Photoshop benchmarks consisted of a variety of common operations, drawing on different aspects of computer performance. All tests were performed on files of 3 different sizes: 50MB, 100MB and 200MB. After each test, the Undo buffer was purged.

Functions tested:

- Gaussian Blur (radius 40 pixels)
- RGB-CMYK Conversion
- Unsharp Masking (50%, 10 pixels)
- Lighting Effects (default values)
- Resample Image (150%)


4.4 Performance Benchmarks: InDesign

InDesign Benchmarks consisted of five common tasks such as importing images and large text documents, and exporting PDF files.

Functions tested:

- Import image
- Autoflow text (600 page document)
- Export PDF (Acrobat 5)
- Switch to high-resolution display (file containing multiple complex Photoshop images)
- Package complex design project

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5 Network/Server Performance Benchmarks

The aim of the network/server performance benchmarks was to document performance increase of new Power Mac G4 models using Gigabit Ethernet, over older models, which use 10/100Base T Ethernet. All machines were connected to an Apple Xserve server via a Gigabit hub. The benchmarks measured performance in both directions, copying files from the workstation to the server, and from the server to the workstation. The time to open and save large Photoshop files was also measured.

Operations tested

File Copy (Workstation -> Server)

- File copy: single file, 50MB
- File copy: single file, 100MB
- File copy: single file, 200MB
- File copy: Folder 100MB, 4000 files and subfolders

File Copy (Server -> Workstation)

- 50 MB (Single File)
- 100 MB (Single File)
- 200 MB (Single File)
- 100 MB (Folder Copy)
- File copy: Folder 100MB, 4000 files and subfolders

Application read/write operation (Photoshop)

- Open 200MB file from the server
- Save 200MB file to the server

6 Multiprocessing Productivity Benchmark


The multiprocessing productivity benchmark was designed to measure if the presence of multiple processors had an impact on performance and productivity.

The benchmark consisted in performing two computing intensive tasks in parallel and to measure the time necessary to complete both actions.

Operations tested

- Task 1: Adobe Photoshop 7.0- Radial blur filter (50MB file)
- Task 2: Adobe InDesign 2.0 - Export complex design to PDF

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7 Creative Workflow Productivity Benchmarks

7.1 Overview

This creative workflow benchmark was defined as a **complete publishing/design assignment**, an elaborate double page spread for a magazine. Every aspect of this assignment, from the creation of the initial page layout to the final design, was covered.

Operations covered included: collecting elements for the project from a server and an external harddrive, creating the basic layout in InDesign, importing images, placing and formatting text, switching to Photoshop to adapt an image by adding a gradient effect, saving the file as a multi layered Photoshop document, importing and placing revised files, exporting the file as a PDF document and finally, backing up the folder of project data to the server.

7.2 About the execution of the productivity benchmark

No scripting was used in the execution of the benchmark: the main aim of this productivity benchmark is to show real-world productivity increase, and has therefore to take in account actually performing all the operations necessary for the completion of the project.

Every phase of the benchmark was therefore defined as **several sets of clearly defined, repeatable steps**. These steps were then executed in a strictly identical way. Each set of steps was executed three times; only the fastest result was preserved.

The overall test results are calculated from **cumulating the measures obtained for each individual set of step**.

7.3 Phases of the productivity benchmark

- Phase 1: Preparing the project
- Phase 2: Preparing the layout
- Phase 3: Import text and pictures
- Phase 4: Picture work
- Phase 5: Finalizing the project

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Results: Performance Benchmarks

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System Performance Benchmarks: Complete Results

Phase 1: Basic Tests

	G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
System Startup	56,6	67,11	50,43	44,69
Launch Illustrator	19,31	11,82	12,63	10,7
Re-launch Illustrator	9,55	6,63	5,96	4,85
Launch Photoshop	18,39	10,32	11,27	7,43
Re-launch Photoshop	12,66	7,94	6,9	5,5
Launch InDesign	12,69	7,72	7,19	5,97
Re-launch InDesign	5,41	3,99	2,97	2,56
Combined launch all 3	49,52	36,32	43,62	24,93

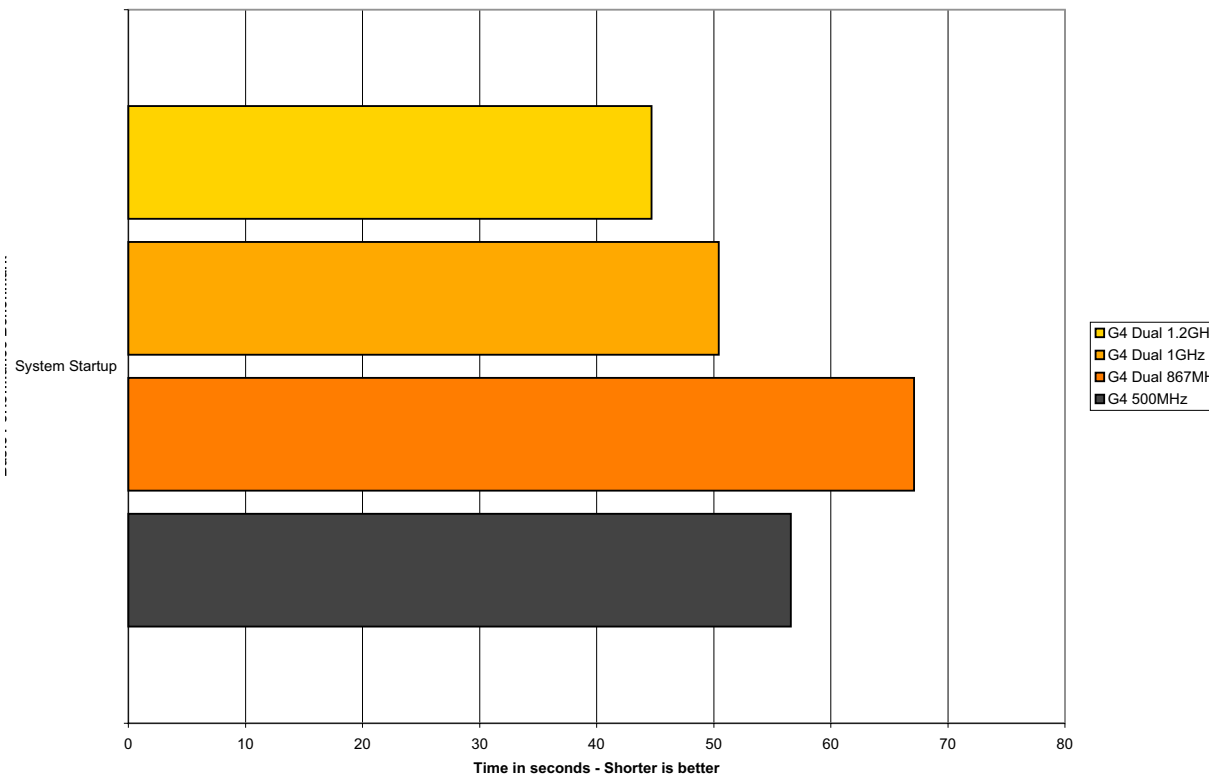
File Copy (Local)

	G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
50MB (Single File)	5,74	3,37	3,34	3,2
100MB (Single File)	10,8	6,2	6,15	5,88
200MB (Single File)	20,56	11,66	11,55	11,19
100MB (Folder Copy)	87,13	21,83	19,54	19,09

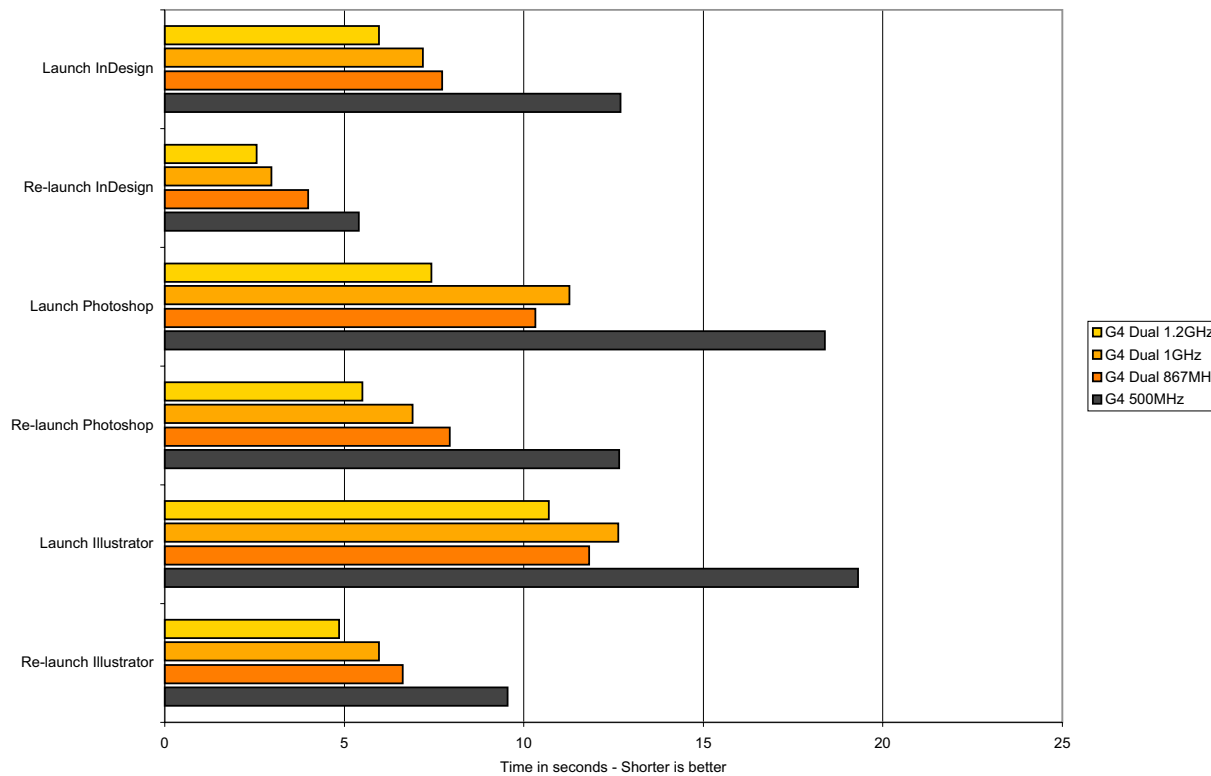
File Open/Save (Photoshop)

	G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
Open 100MB File	23,53	15,23	13,69	11,66
Save 100MB File	6,71	4,5	3,49	3,05
Open 200MB File	32,97	20,42	18,59	16,55
Save 200MB File	12,58	6,63	5,7	5,54

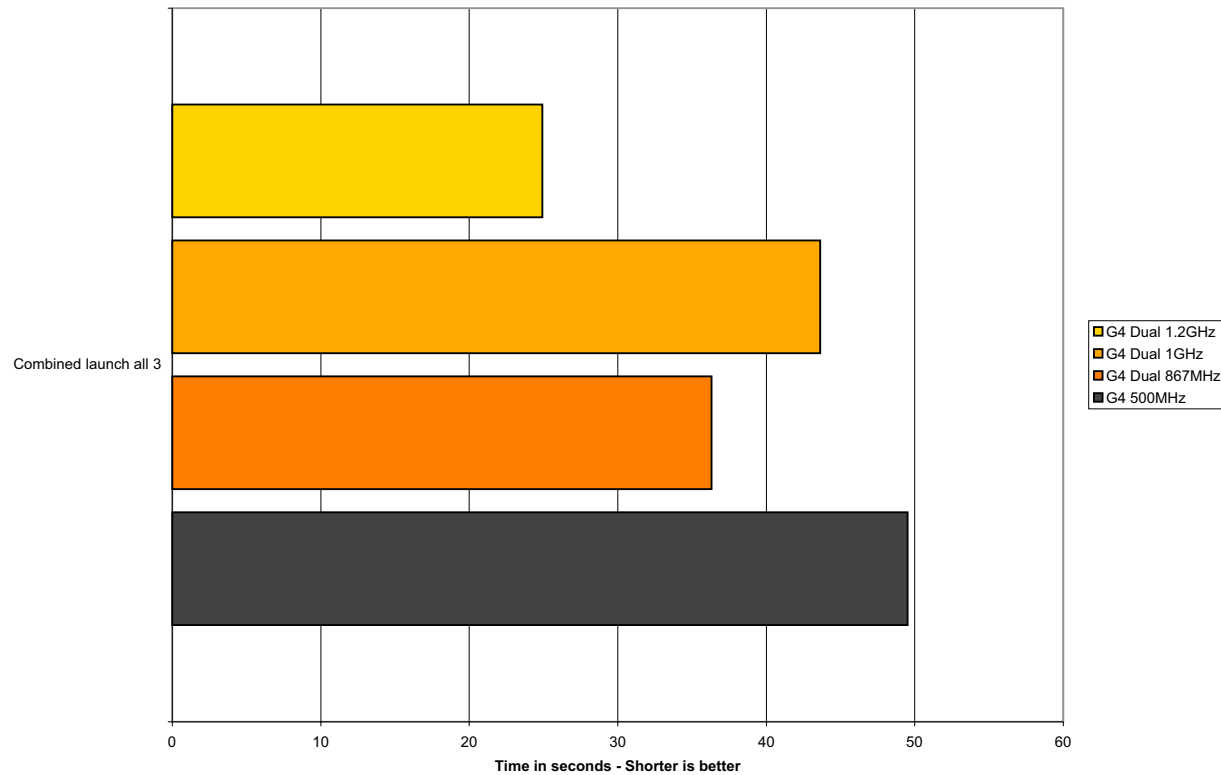
System Performance Benchmarks: Startup



System Performance Benchmark: Application Launch



System Performance Benchmark: Application Launch (Combined)

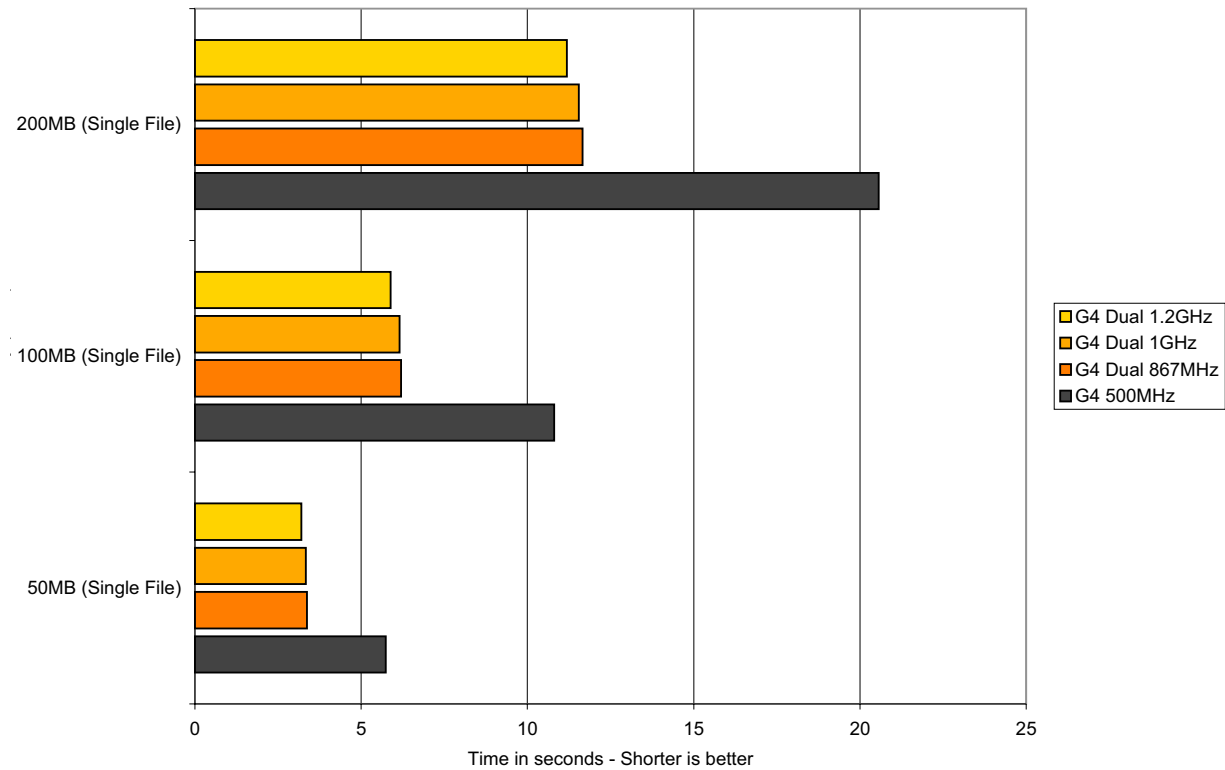


Section: Results: Performance Benchmarks

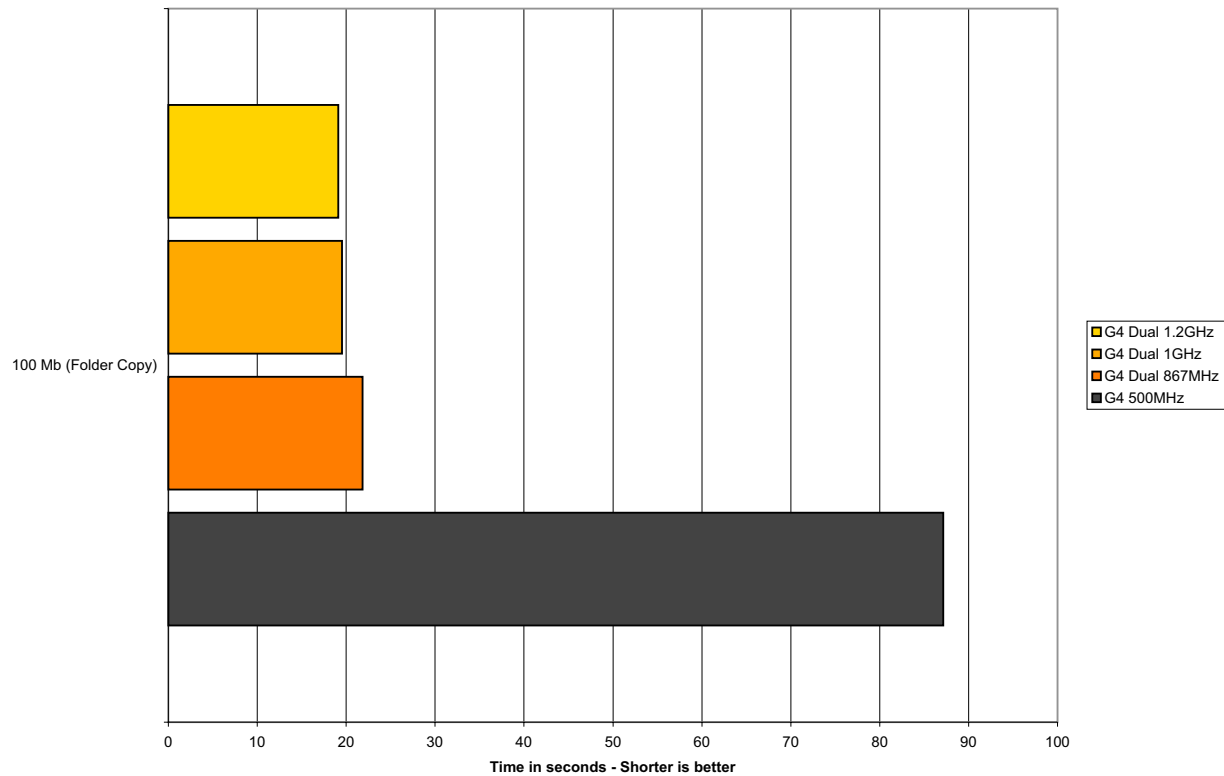
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Modified: **September 10, 2002**

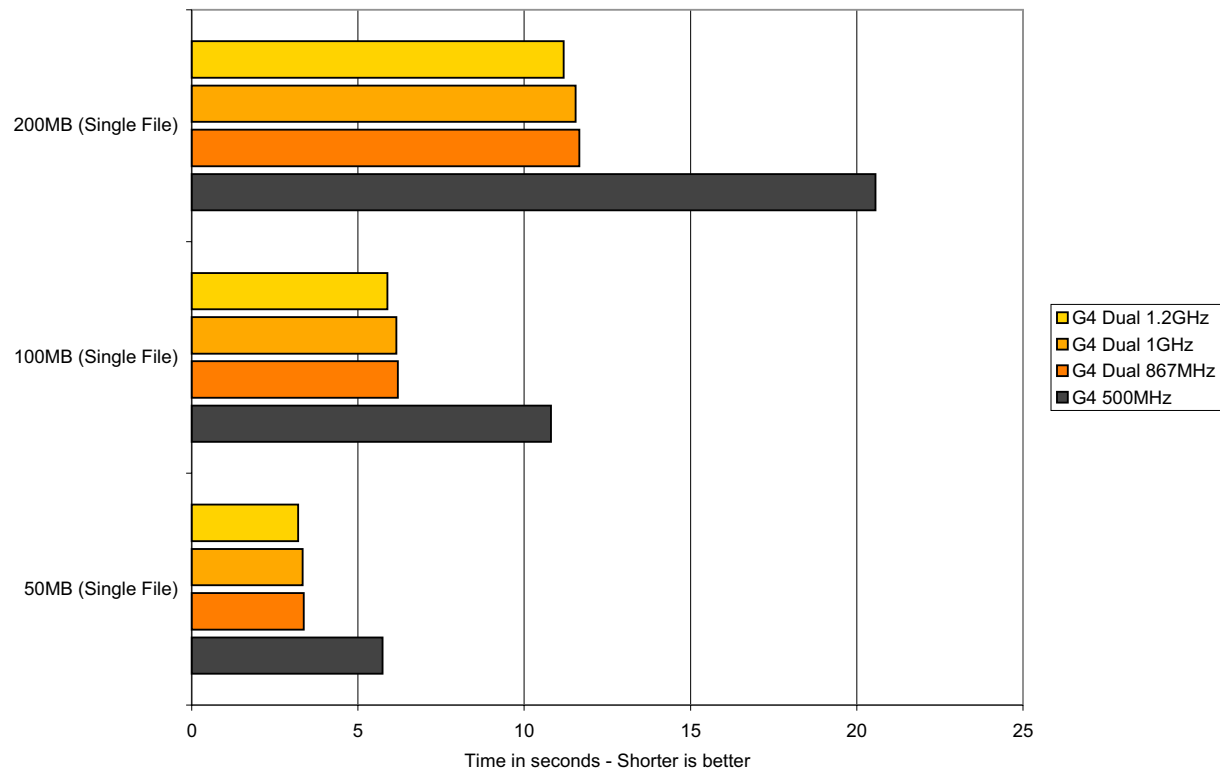
System Performance Benchmark: File Copy (Local)



System Performance Benchmark: Folder Copy (Local)



System Performance Benchmark: Open/Save File (Photoshop)



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Results: Application Performance Benchmarks

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Adobe Illustrator Performance Benchmarks

Effects:Warp (Default Value)
Effects:Roughen (Default values)
Effects:Zig-Zag (Default Values)

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
67,72	45,25	39,45	31,56
19,26	13,2	11,24	9,33
36,77	24,84	21,82	17,62
G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
123,75	83,29	72,51	58,51

Total

Open file
Save file as
Rotate 17%

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
13,91	8,11	7,84	6,29
31,2	21,81	18,94	15,4
8,98	6,41	5,65	4,79
G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
54,09	36,33	32,43	26,48

Total

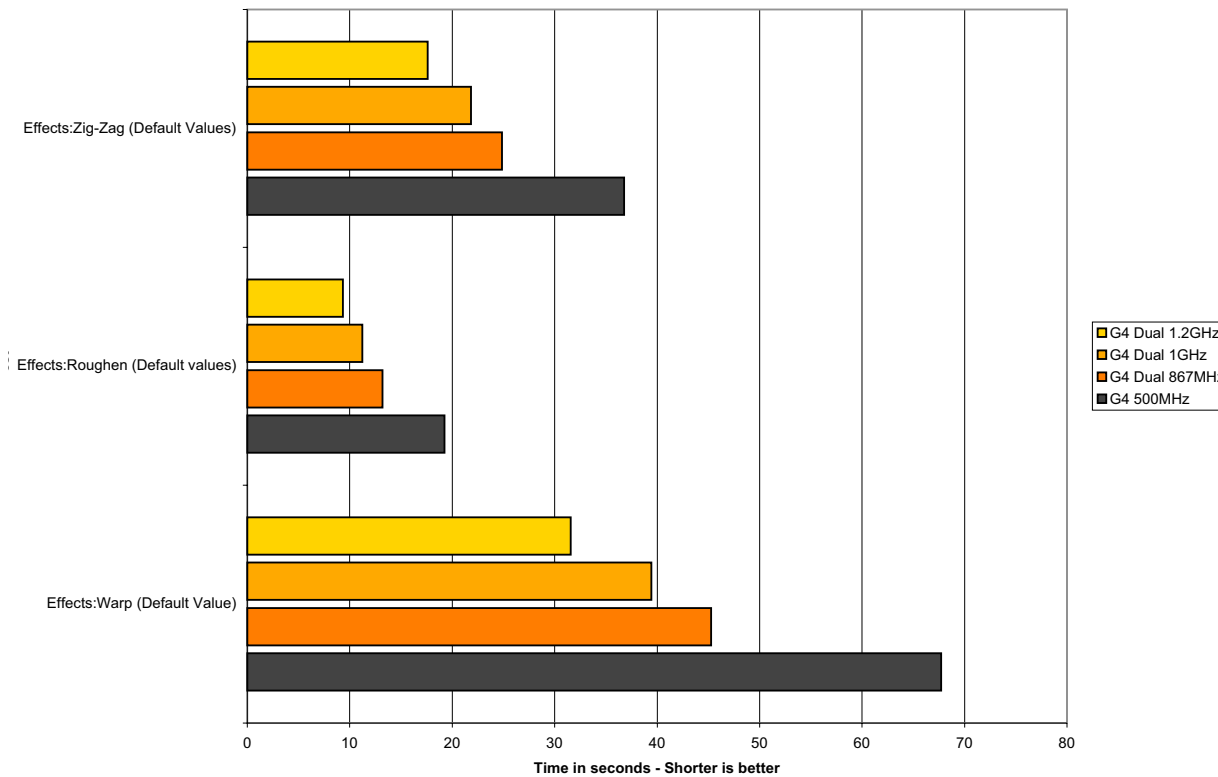
Effects:Stylize:Drop Shadow (Default Values)

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
67,74	42,34	36,01	28,9

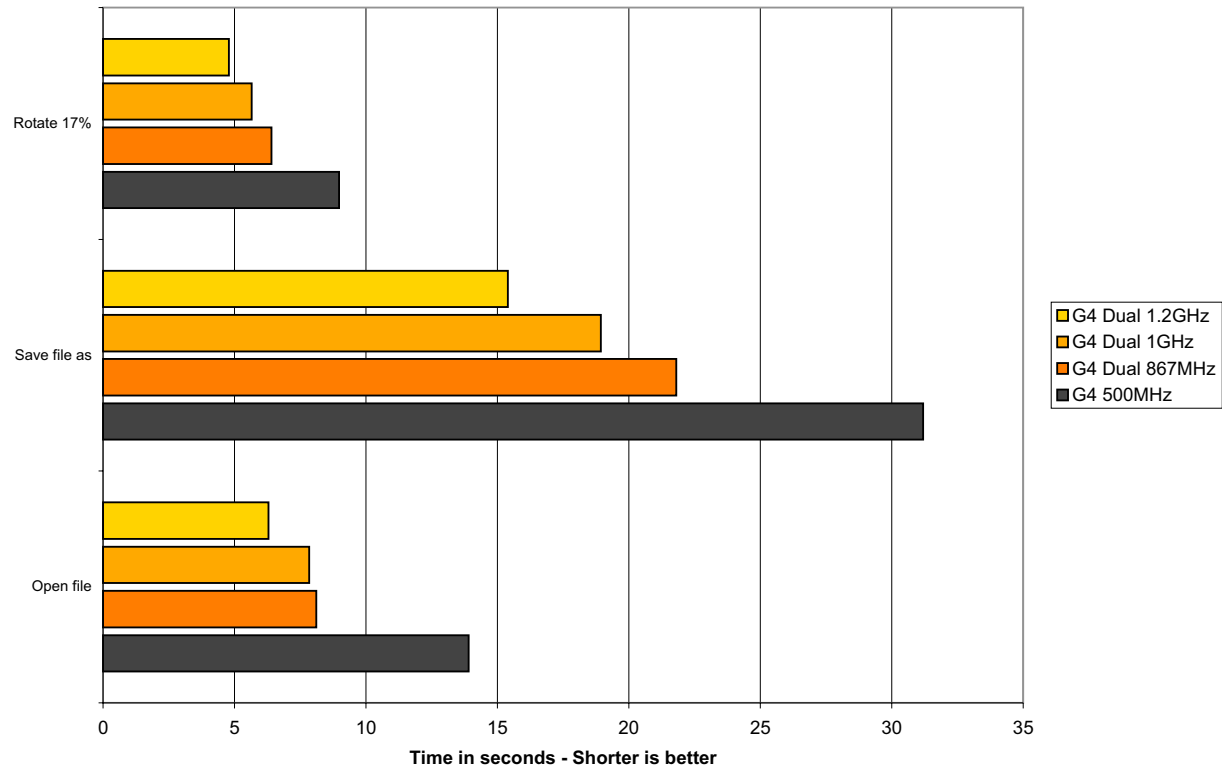
Total

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
245,58	161,96	140,95	113,89

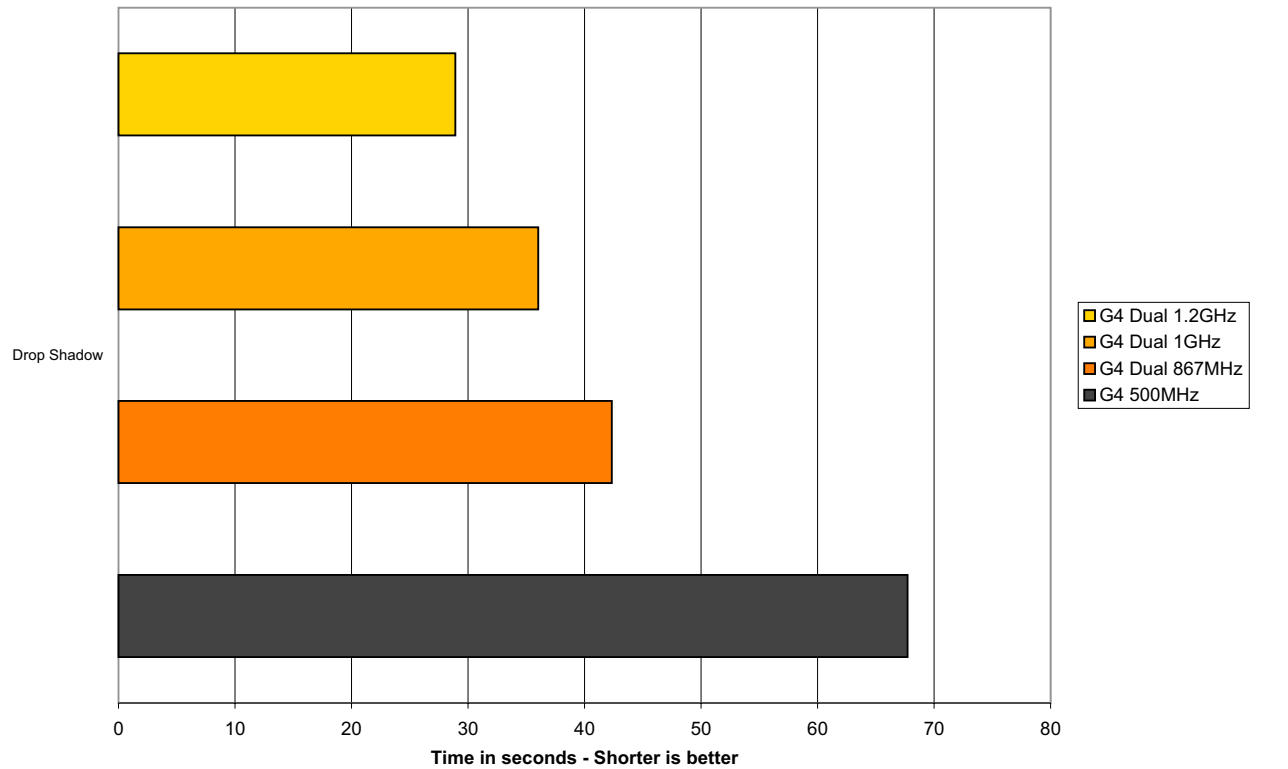
Adobe Illustrator Performance Benchmark (1-3)



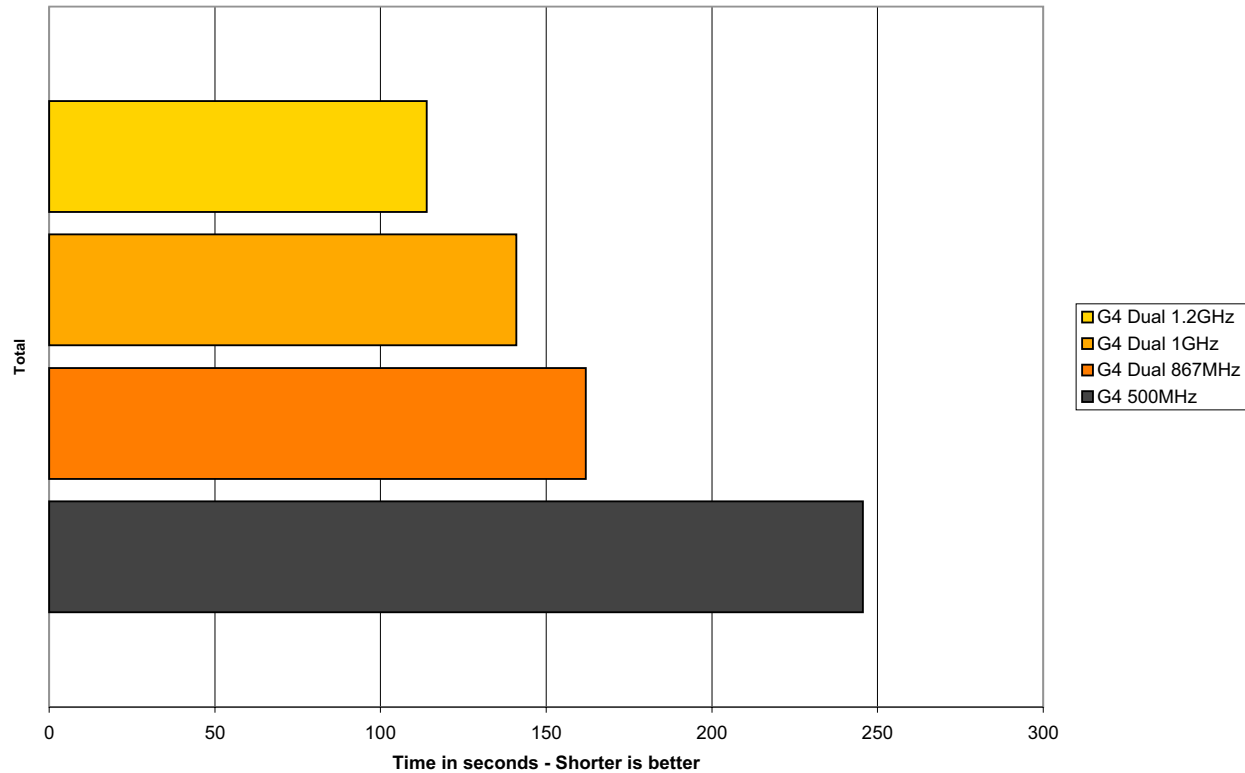
Adobe Illustrator Performance Benchmark (4-6)



Adobe Illustrator Performance Benchmark (7)



Adobe Illustrator Performance Benchmark - Cumulated Times

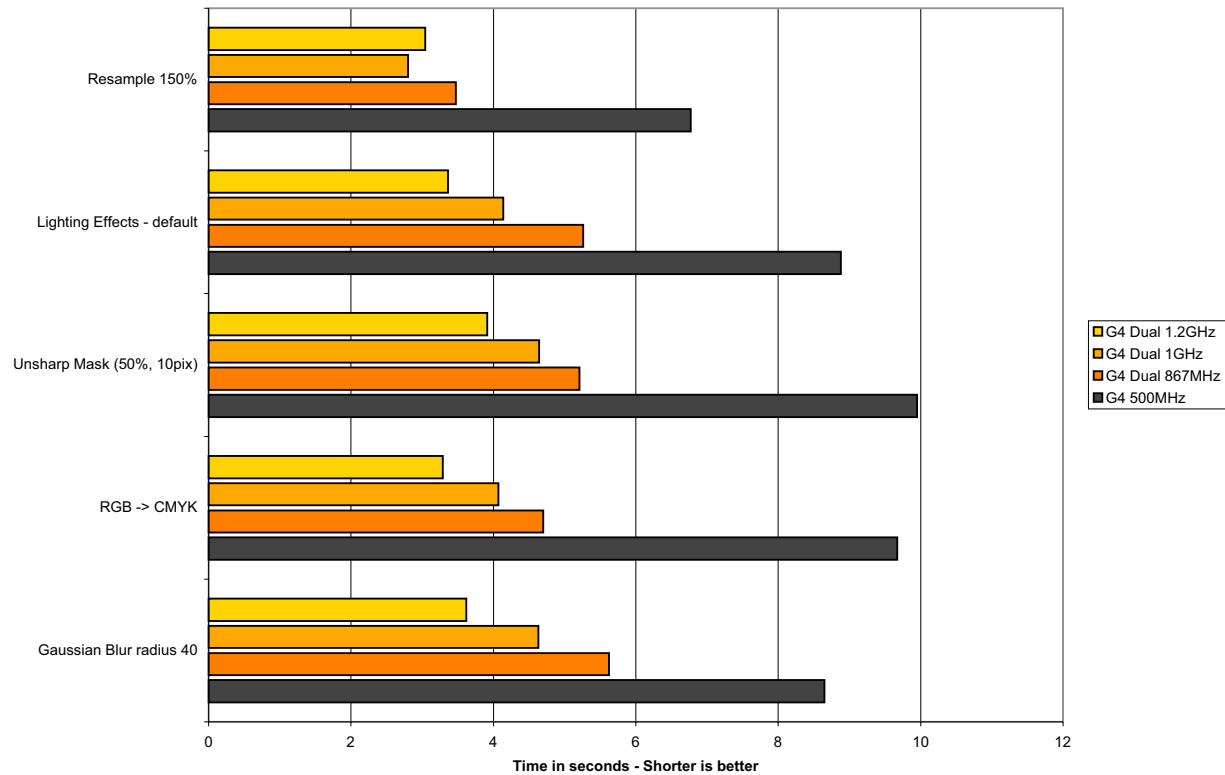


Adobe Photoshop Performance Benchmarks - 50MB File

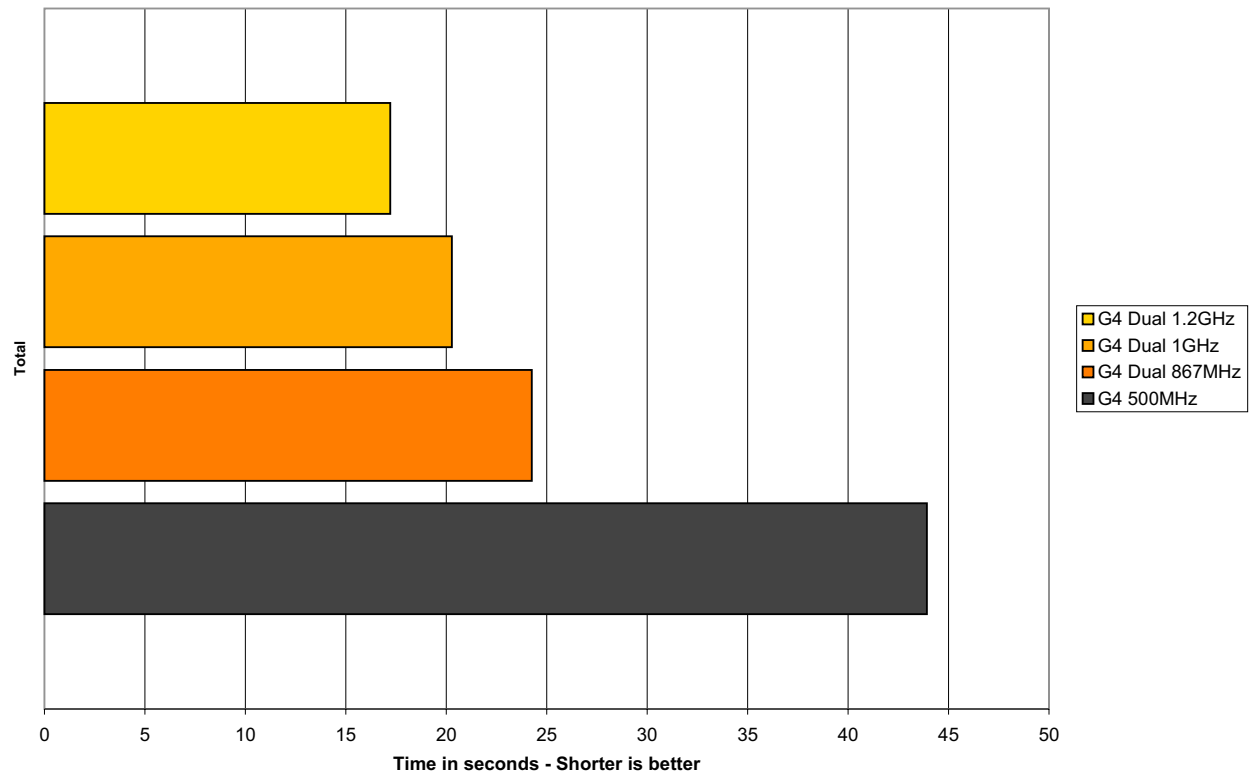
Gaussian Blur radius 40
RGB -> CMYK
Unsharp Mask (50%, 10pix)
Lighting Effects - default
Resample 150%
Total

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
8.65	5.62	4.63	3.62
9.67	4.7	4.07	3.29
9.95	5.21	4.64	3.91
8.88	5.26	4.14	3.36
6.77	3.47	2.8	3.04
43.92	24.26	20.28	17.22

Adobe Photoshop Performance Benchmarks - 50MB File, Detail



Adobe Photoshop Performance Benchmarks - 50MB File, Cumulated Times

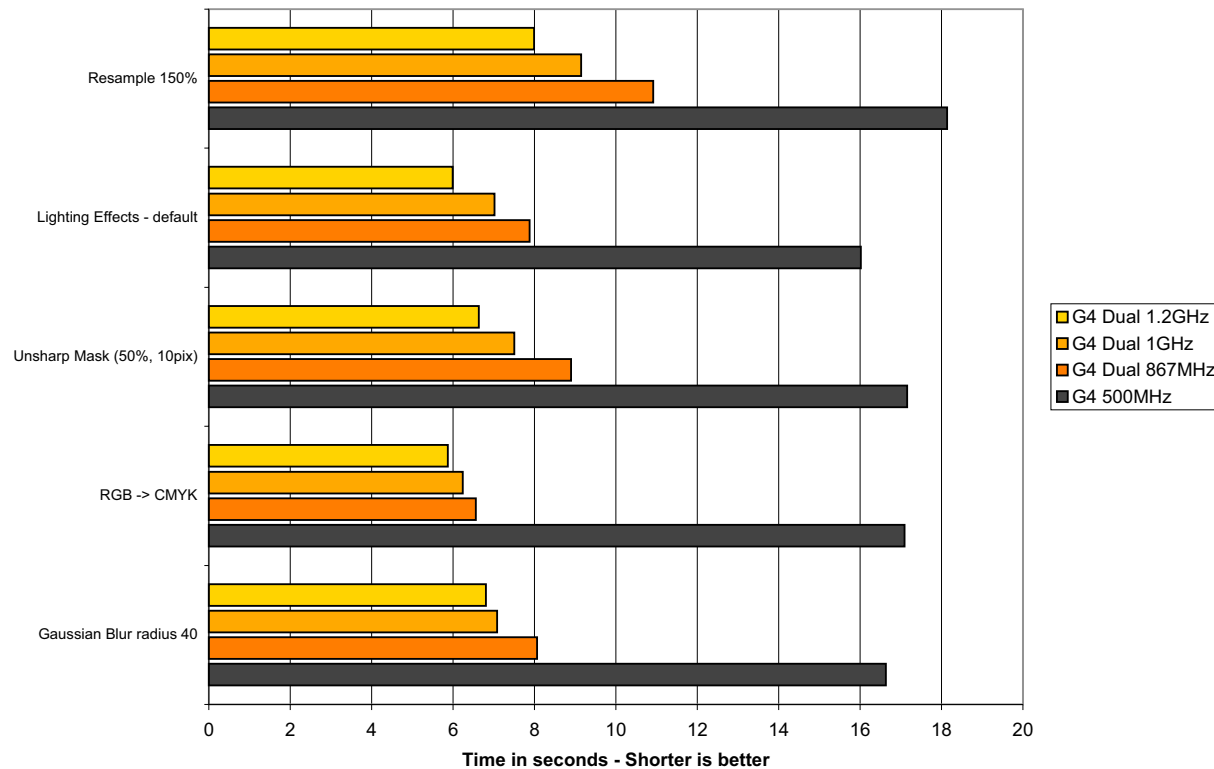


Adobe Photoshop Performance Benchmarks - 100MB File

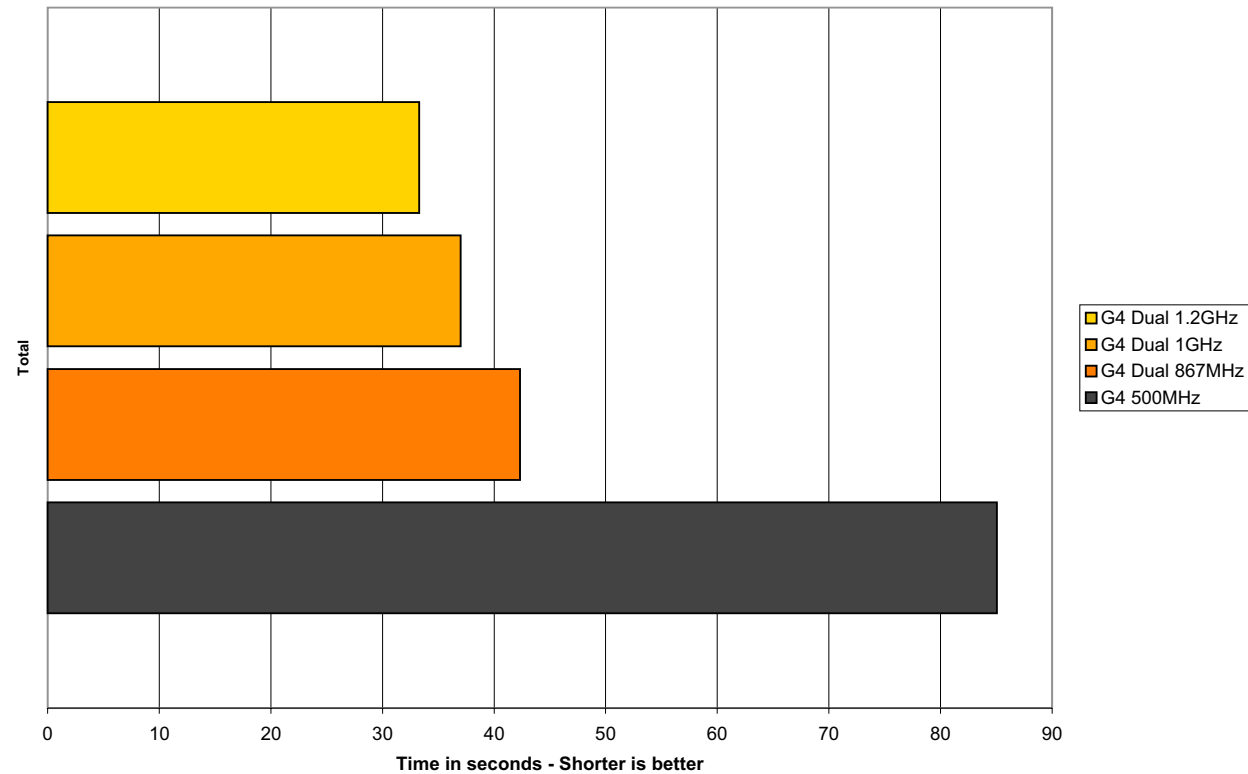
Gaussian Blur radius 40
RGB -> CMYK
Unsharp Mask (50%, 10pix)
Lighting Effects - default
Resample 150%
Total

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
16.63	8.06	7.08	6.81
17.09	6.56	6.24	5.87
17.16	8.9	7.5	6.63
16.02	7.88	7.02	5.99
18.14	10.92	9.15	7.99
85.04	42.32	36.99	33.29

Adobe Photoshop Performance Benchmarks - 100MB File, Detail



Adobe Photoshop Performance Benchmarks - 100MB File, Cumulated Times

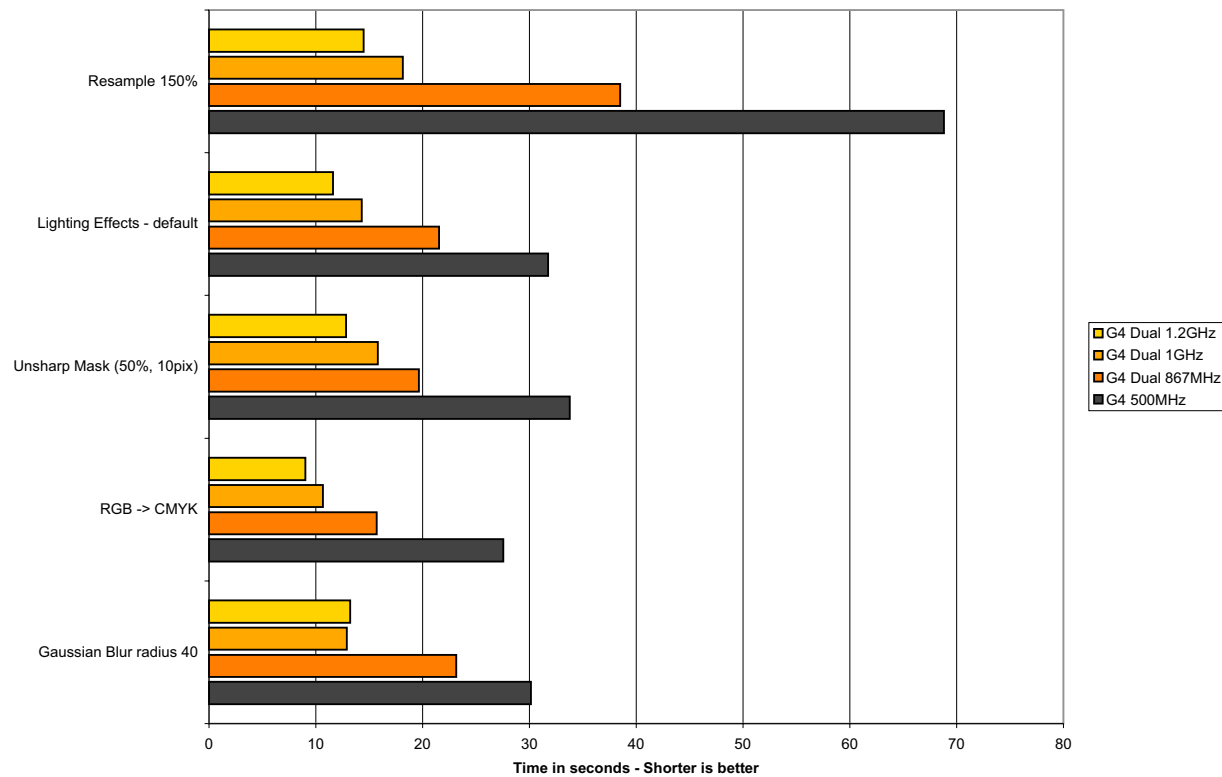


Results: Adobe Photoshop Performance Benchmarks - 200MB File

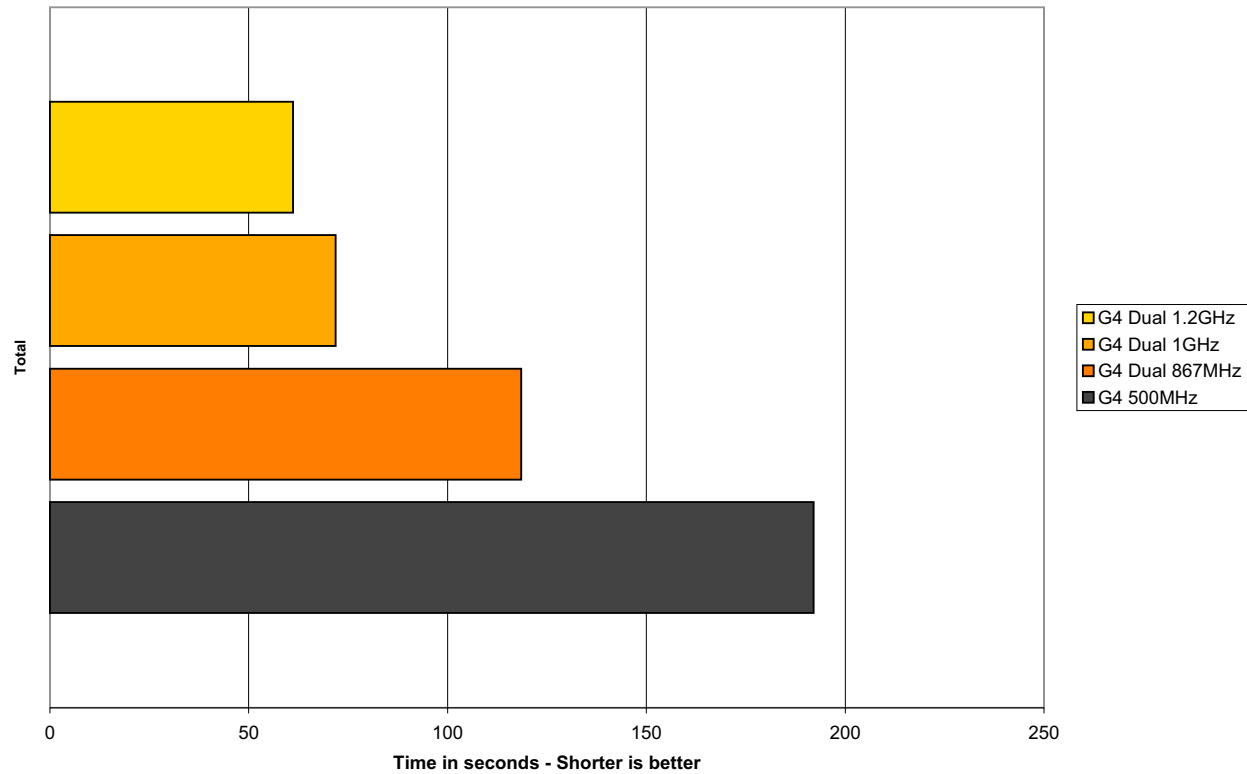
Gaussian Blur radius 40
 RGB -> CMYK
 Unsharp Mask (50%, 10pix)
 Lighting Effects - default
 Resample 150%
 Total

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
30.15	23.13	12.91	13.23
27.54	15.69	10.68	9.01
33.78	19.65	15.82	12.84
31.75	21.54	14.31	11.61
68.81	38.5	18.13	14.48
192.03	118.51	71.85	61.17

Adobe Photoshop Performance Benchmarks - 200MB File, Detail



Adobe Photoshop Performance Benchmarks - 200MB File, Cumulated Times

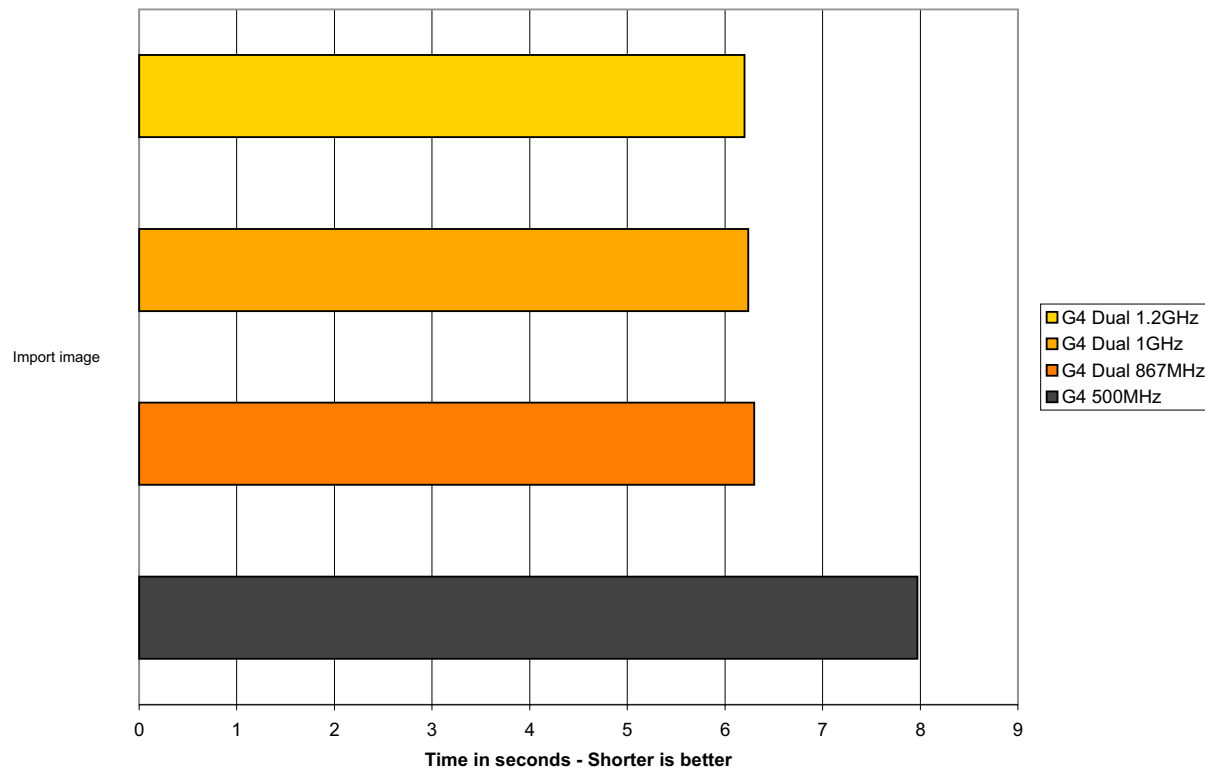


Adobe InDesign Performance Benchmarks

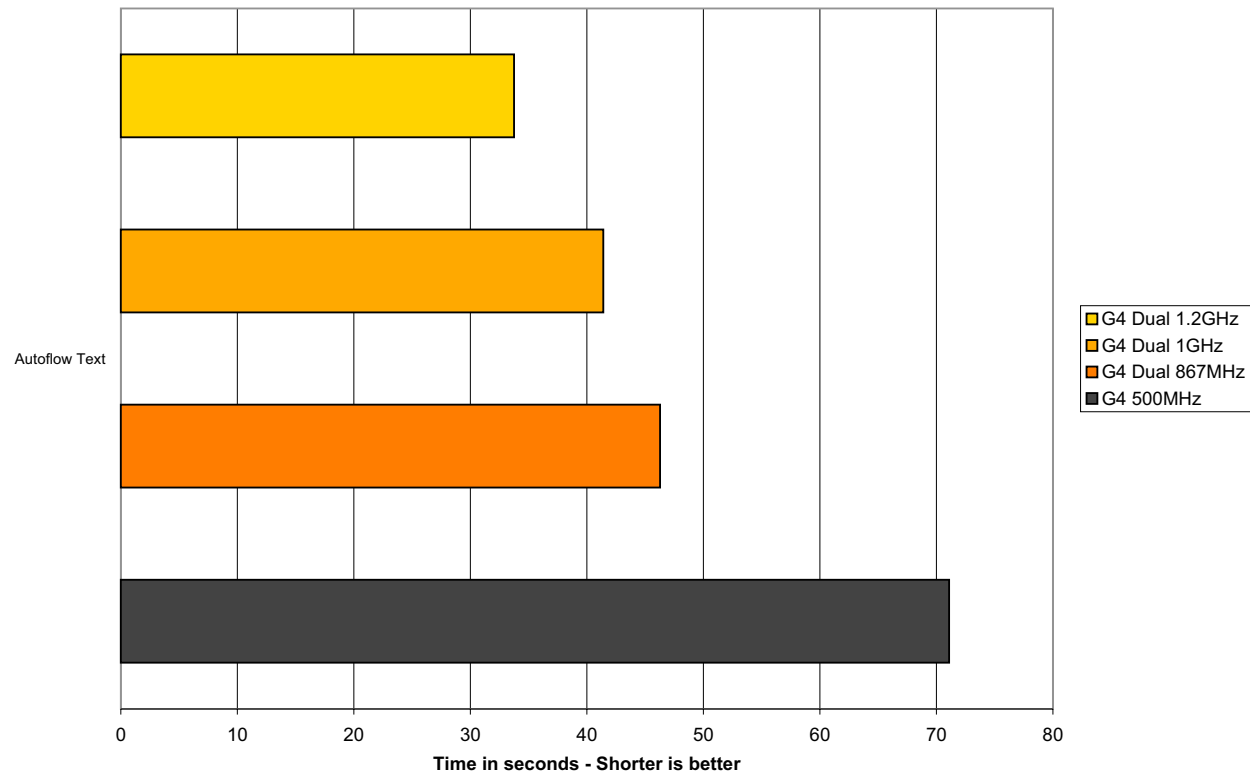
Import Image
Autoflow text
Export PDF
Switch to High-Res display
Package Project

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
7,97	6,3	6,24	6,2
71,1	46,27	41,42	33,75
243,59	138,46	115,46	97,31
40,21	21,72	19,24	17,17
39,86	25,42	21,46	20,49

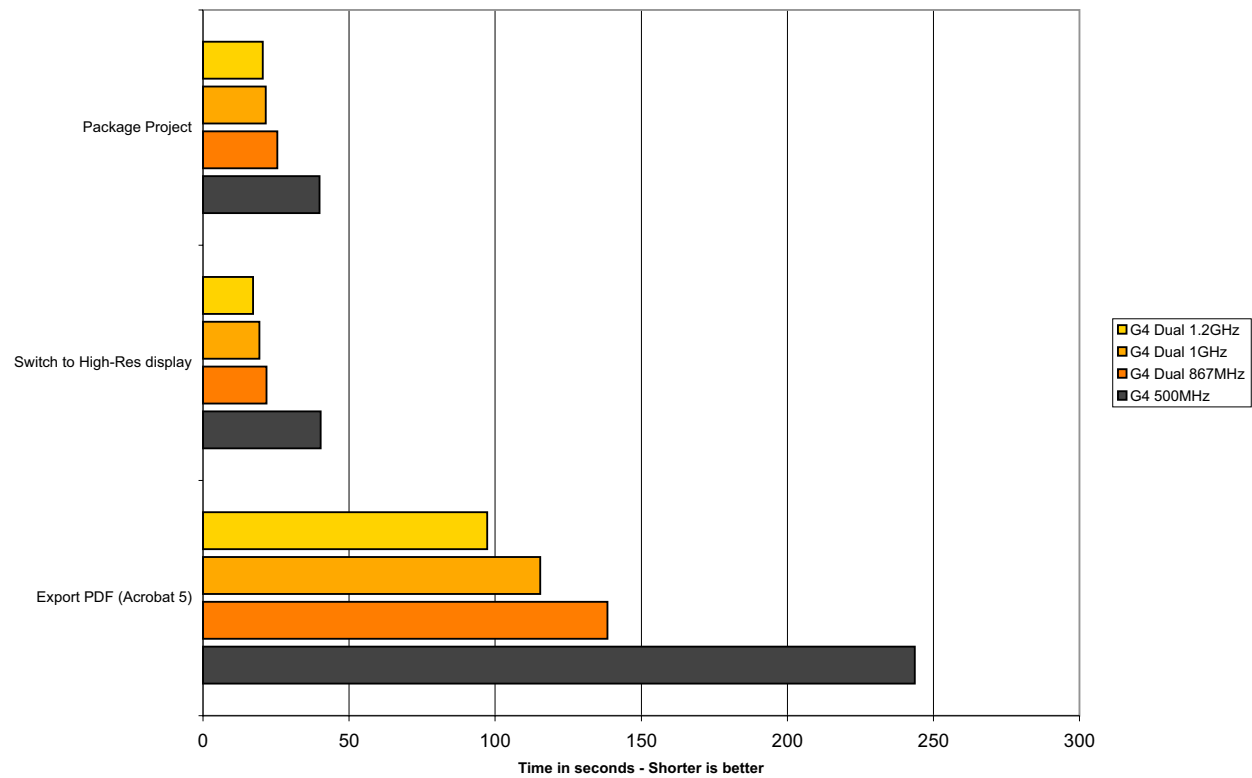
Adobe InDesign Performance Benchmark (1)



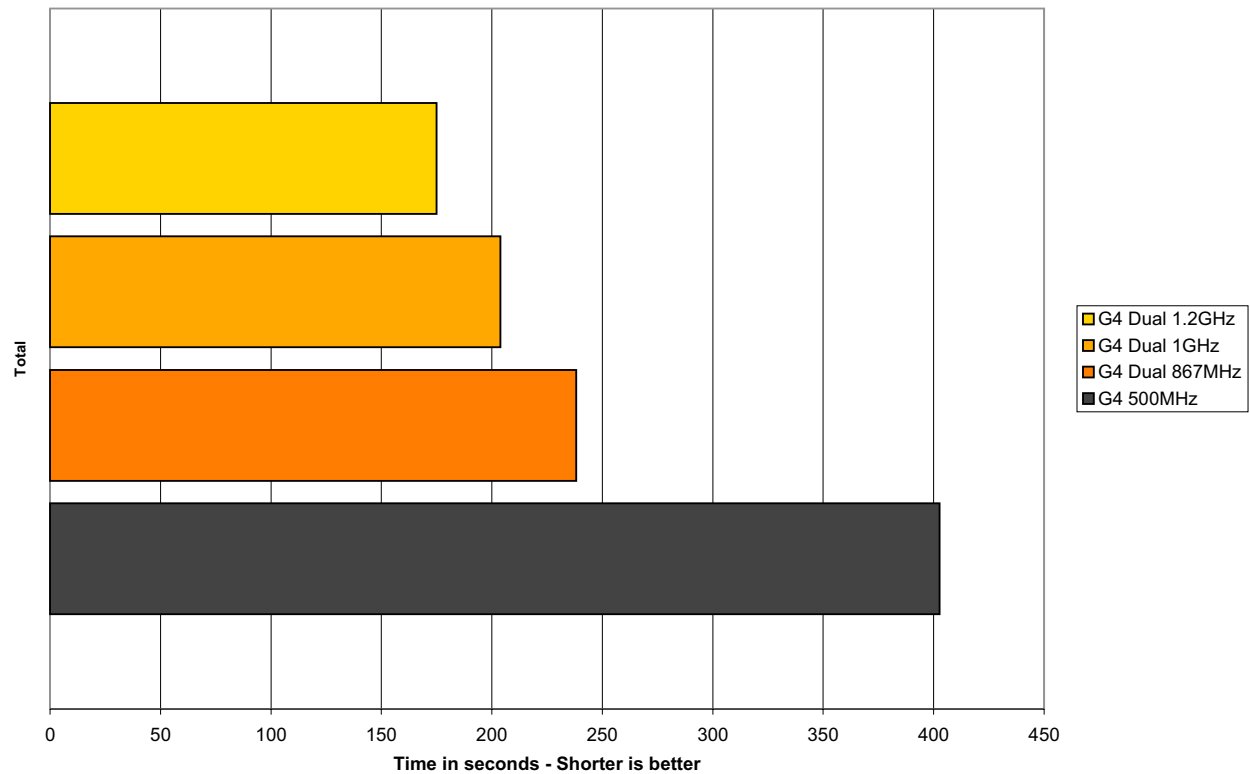
Adobe InDesign Performance Benchmark (Autoflow Text)



Adobe InDesign Performance Benchmark (3-5)



Adobe InDesign Performance Benchmark - Cumulated Times



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Results: Network/Server Performance Benchmark

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Network/Server Performance Benchmark

File Copy (Workstation -> Server)

50MB (Single File)
100MB (Single File)
200MB (Single File)

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
5,81	1,71	1,82	1,81
9,88	2,81	2,7	2,73
19,83	4,84	4,94	4,99

100MB (Folder Copy)

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
215,33	155,5	156,3	141,36

File Copy (Server -> Workstation)

50MB (Single File)
100MB (Single File)
200MB (Single File)

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
5,91	1,56	1,58	1,59
11,02	2,63	2,65	2,69
30,35	10,39	5,35	4,81

100MB (Folder Copy)

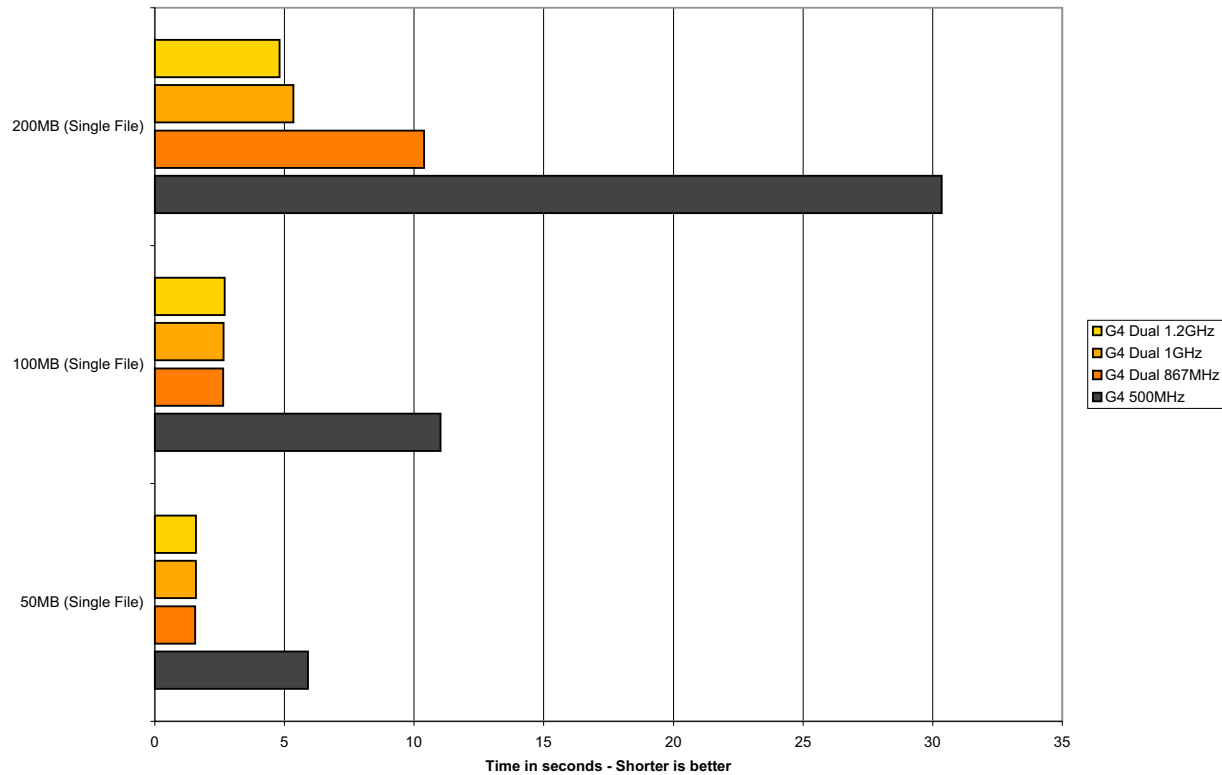
G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
101,74	59,44	50,14	48,89

File Open/Save (Photoshop)

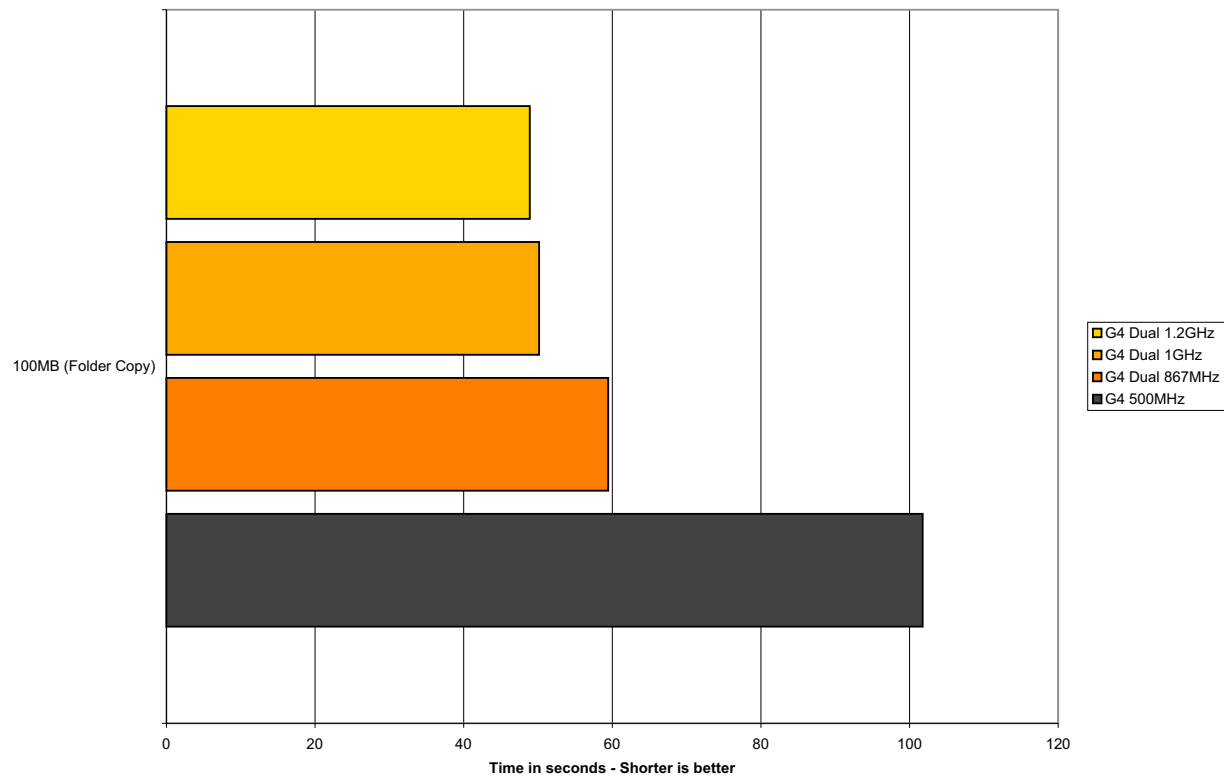
Open 100MB File
Save 100MB File
Open 200MB File
Save 200MB File

G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
17,78	8	10,37	6,25
14,08	5,07	4,6	4,09
31,95	13,6	16,3	12,98
26,05	8,8	7,98	9,81

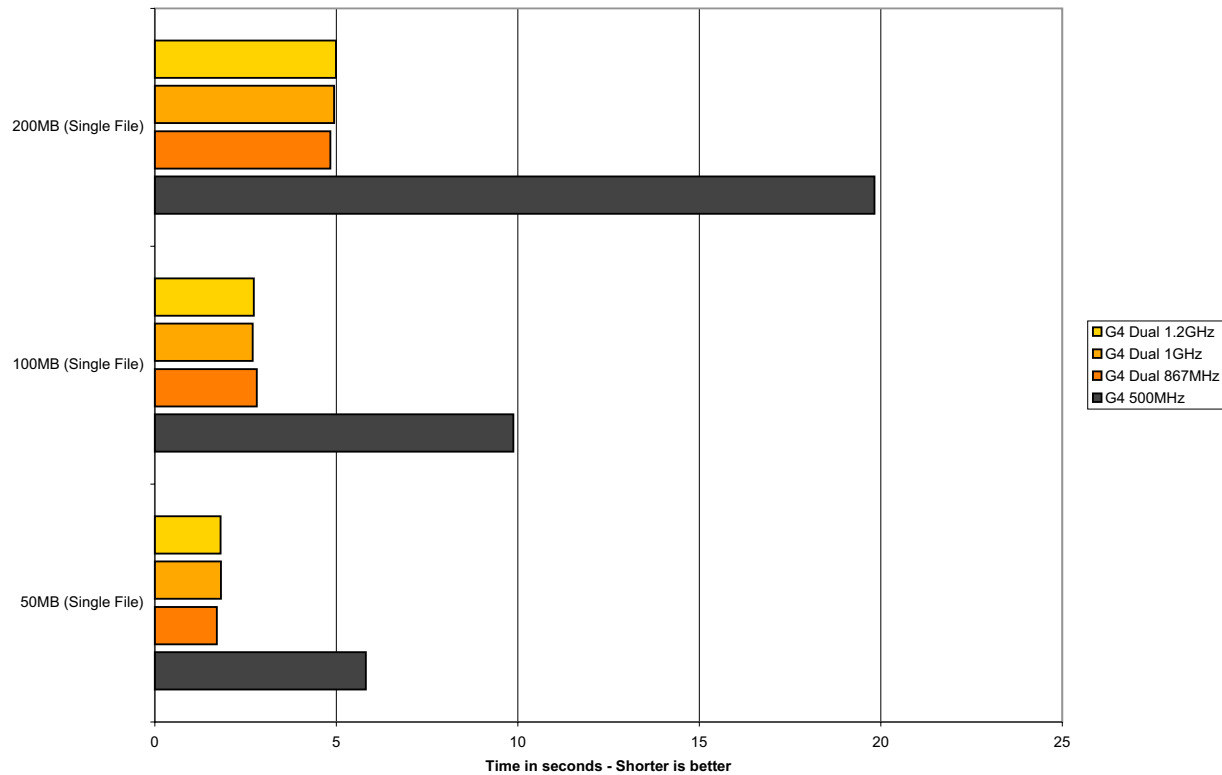
Network/Server Performance Benchmark: File Copy Server -> Workstation



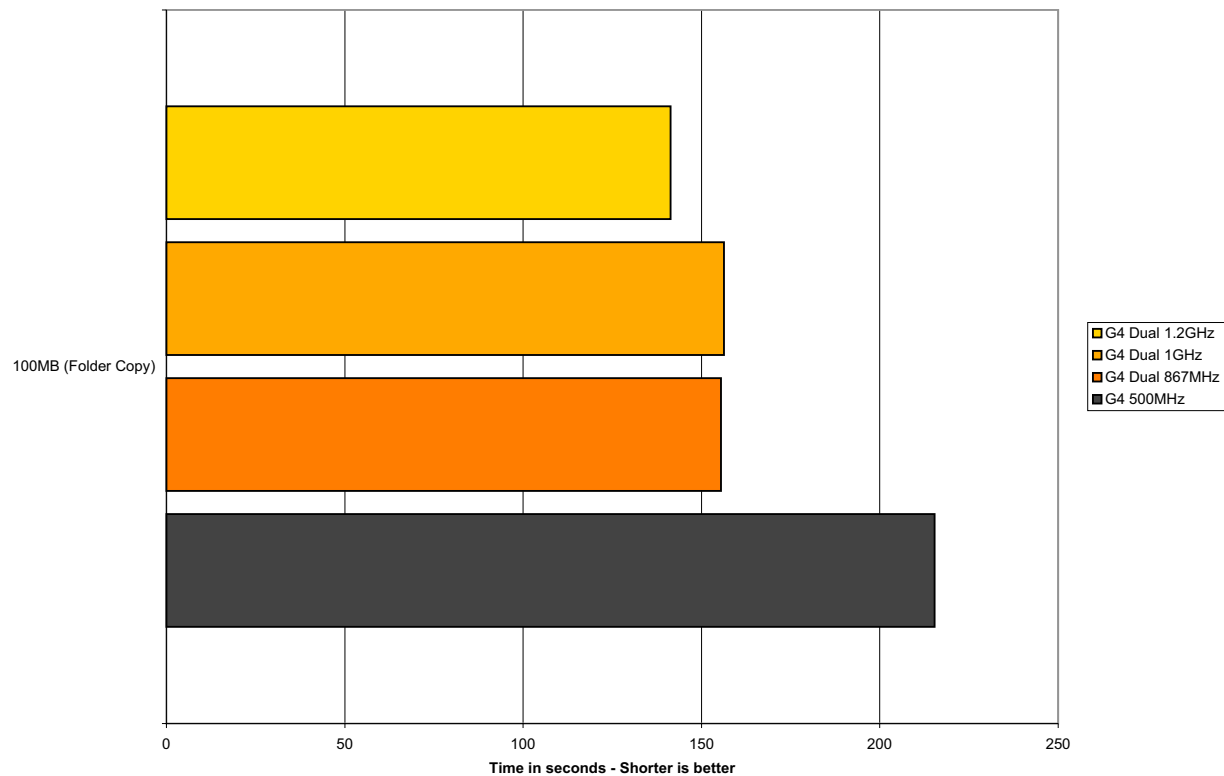
Network/Server Performance Benchmark: Folder Copy Server -> Workstation



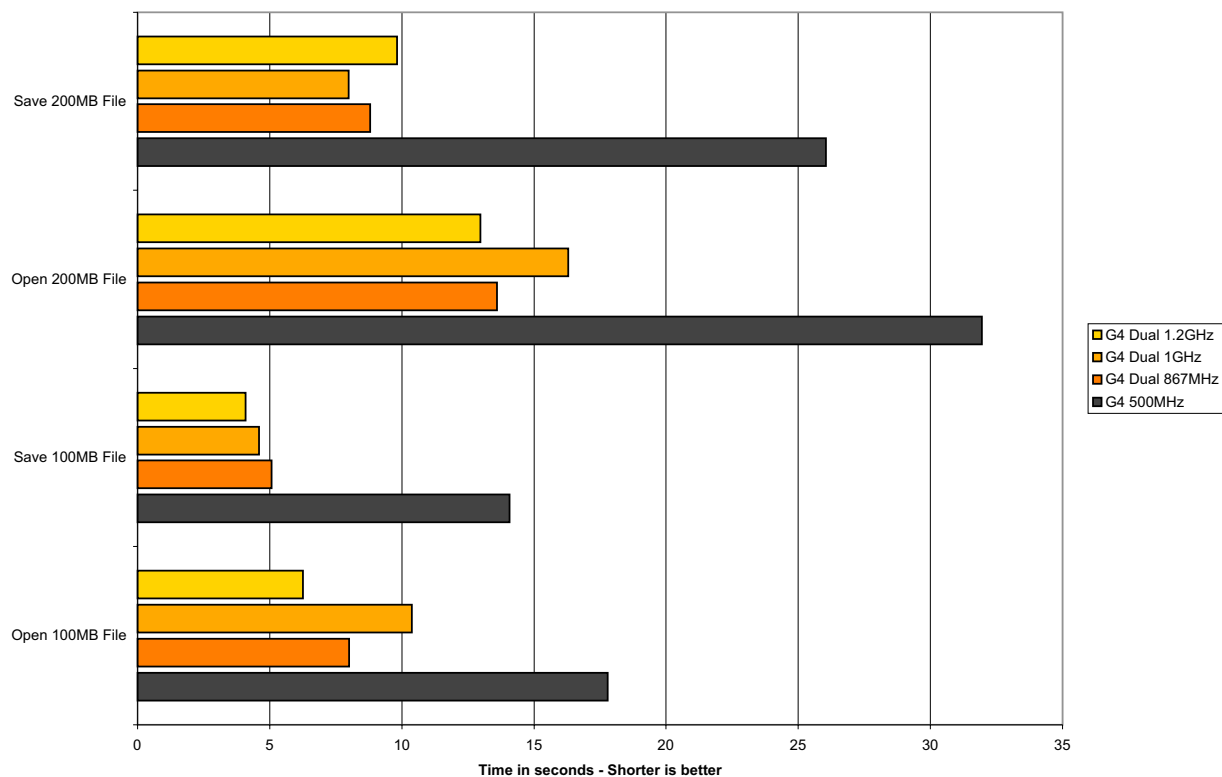
Network/Server Performance Benchmark: File Copy Workstation -> Server



Network/Server Performance Benchmark: Folder Copy Workstation -> Server



Network/Server Performance Benchmark: Open/Save large Photoshop File



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Results: Multiprocessing Productivity Benchmark

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Multiprocessing Productivity Benchmark

Photoshop: Radial Blur Filter
InDesign: Export Design as PDF

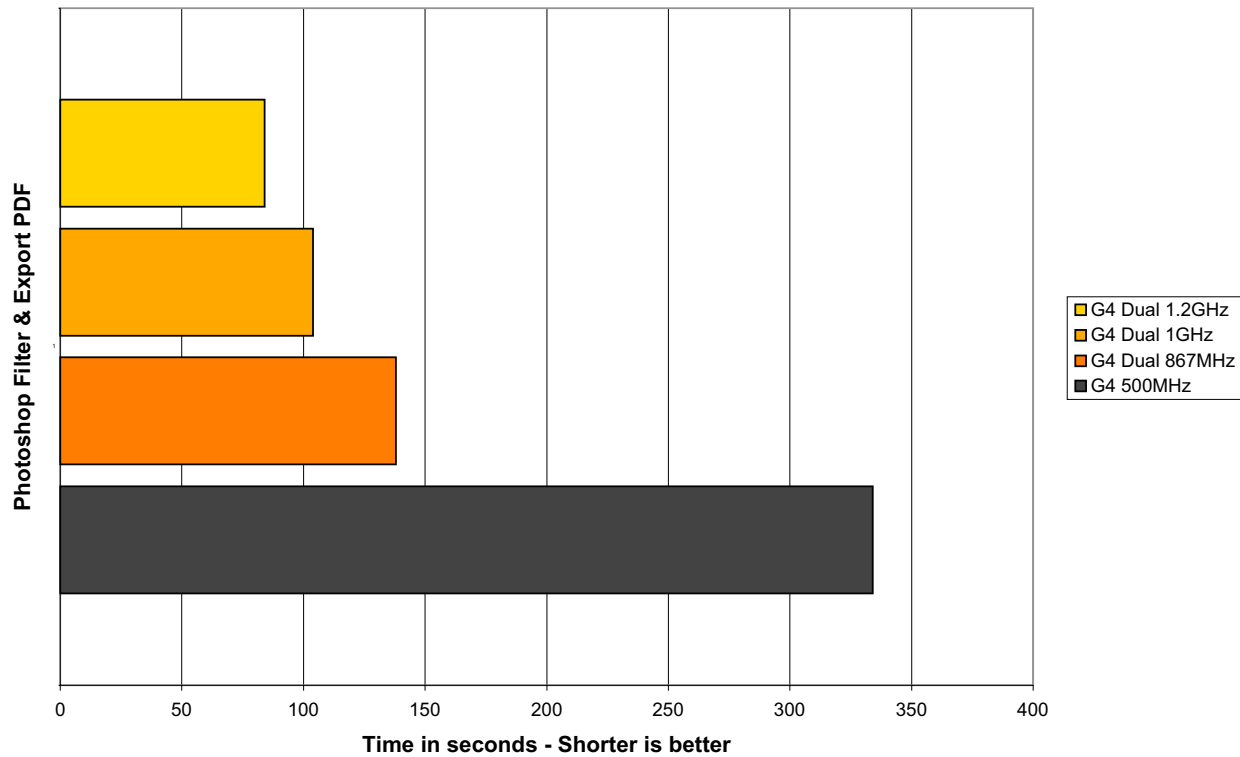
G4 500MHz	G4 Dual 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
334	138	104	84

Section: Results: Multiprocessing Productivity Benchmark

For further information contact: reasearch@pfeifferreport.com

Modified: September 10, 2002

Multiprocessing Productivity Benchmark



Pfeiffer Consulting 01001011	Client: Apple Computer	Benchmark Report
	The 2002 Power Mac G4 Creative Workflow Benchmark	

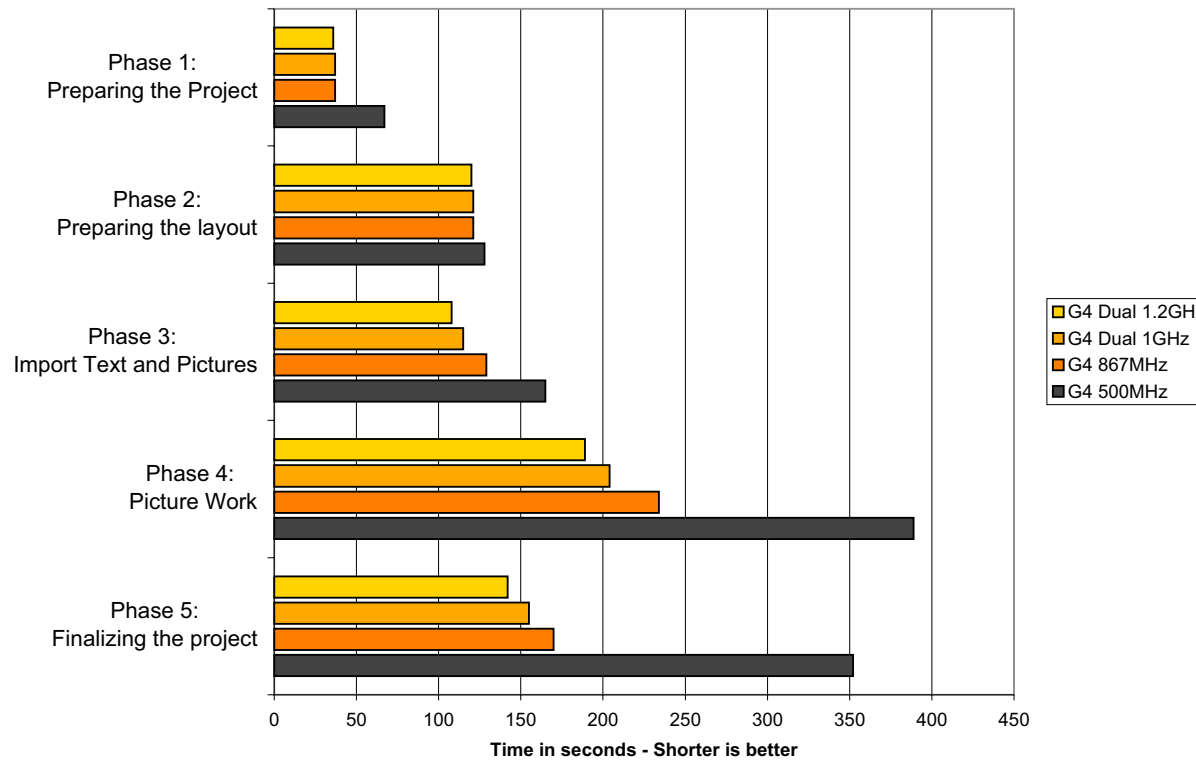
Results: Creative Workflow Productivity Benchmark

Section: Results: Creative Workflow Productivity Benchmark		48
For further information contact: reasearch@pfeifferreport.com	September 10, 2002	

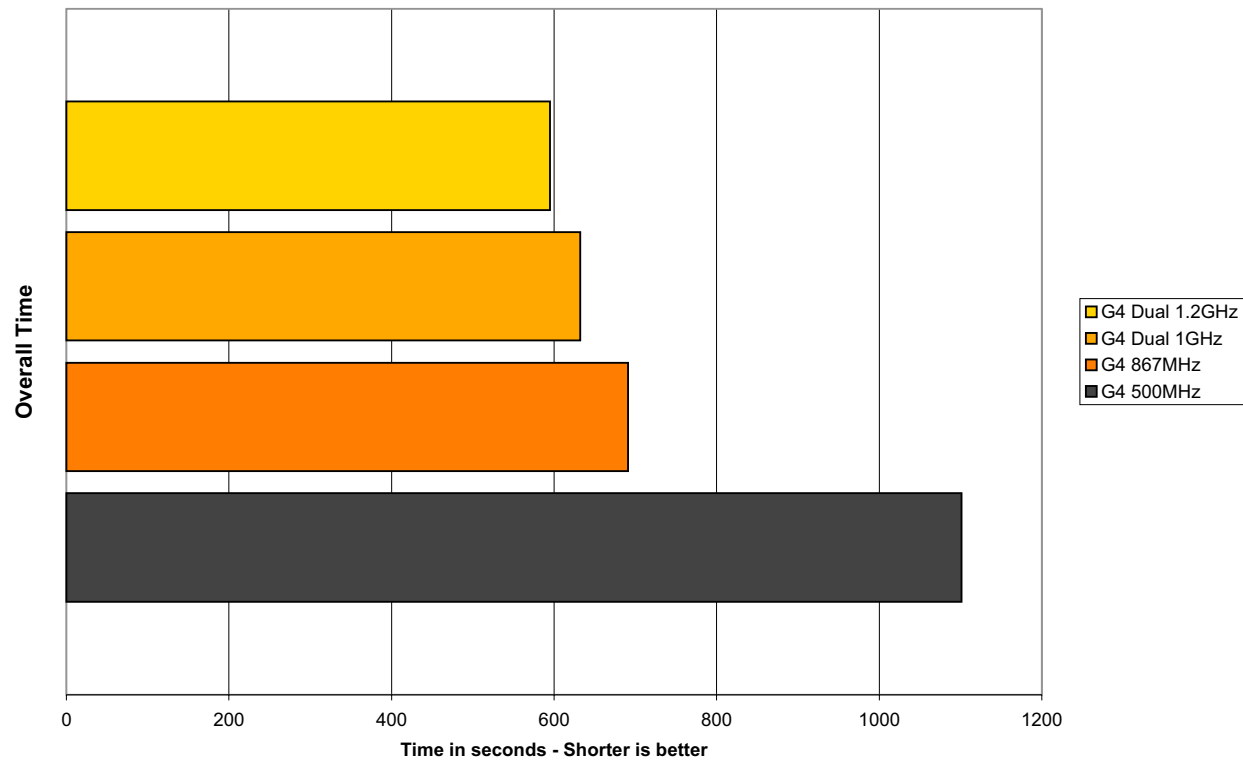
Creative Workflow Productivity Benchmarks: Complete Results

	G4 500MHz	G4 867MHz	G4 Dual 1GHz	G4 Dual 1.2GHz
Phase 1: Preparing the Project	67	37	37	36
Phase 2: Preparing the layout	128	121	121	120
Phase 3: Import Text and Pictures	165	129	115	108
Phase 4: Picture Work	389	234	204	189
Phase 5: Finalizing the project	352	170	155	142
Total	1101	691	632	595

Creative Workflow Productivity Benchmarks: Detail



Creative Workflow Productivity Benchmarks: Overall Time



Pfeiffer Consulting 01001011	Client: Apple Computer	Benchmark Report
	The 2002 Power Mac G4 Creative Workflow Benchmark	

System Profiles

Section: System Profiles		52
For further information contact: reasearch@pfeifferreport.com	September 10, 2002	

1 Apple System Profiler Report - 500MHz Power Mac G4

System Profile

Software Overview:

```
-----+-----
| System version           : Mac OS X v10.2 (6C115)
| Boot volume             : Macintosh HD
| Kernel version          : Darwin Kernel Version 6.0: Sat Jul 27 13:18:52 PDT
2002; root:xnu/xnu-344.obj~1/RELEASE_PPC |
| User name                :
|-----+-----
```

Hardware Overview:

```
-----+-----
| Machine speed           : 500 MHz
| Bus speed               : 100 MHz
| Number of processors    : 1
| L2 cache size          : 1MB
| Machine model           : Power Mac G4 (AGP graphics) (version = 2.8) |
| Boot ROM info          : 2.4f1
| Customer serial number  : -
| Sales order number     :
|-----+-----
```

Memory Overview:

```
LocationTypeSize
DIMM0/J21 empty
DIMM1/J22 empty
DIMM2/J23SDRAM512 MB
DIMM3/J24SDRAM512 MB
```

Devices and Volumes

PCI:

SLOT-A(AGP):

```
-----+-----
| Card Type               : display
| Card Name               : ATY,Rage128s
| Card Model              : ATY,Rage128
| Vendor ID               : 1002
| Device ID               : 5246
| ROM#                    : 113-51809-112
| Revision                : 0
| Card (Video) Memory    : 16 MB
|-----+-----
```

USB Information:

USB Bus 0:

USB Bus 1:

Hub in Apple Extended USB Keyboard:

Product ID	:	4098 (\$1002)
Vendor	:	Mitsumi Electric
Device Speed	:	Full
Power (mA)	:	500

Apple Extended USB Keyboard:

Product ID	:	516 (\$204)
Vendor	:	Mitsumi Electric
Device Speed	:	Full
Power (mA)	:	250

Apple Optical USB Mouse:

Product ID	:	770 (\$302)
Vendor	:	Fujitsu Takamisawa Component
Device Speed	:	Low
Power (mA)	:	100

FireWire Information:

No FireWire devices found.:

Bus:

Hard Drive:

Disk Size	:	19.14 GB (1K = 1024) 21 GB (1K = 1000)
Unit Number	:	0
ATA Device Type	:	ata
Device Serial	:	156925438630
Device Revision	:	A1S.3700
Device Model	:	QUANTUM FIREBALLP KX20.5

Macintosh HD:

Volume Size	:	19.14 GB (1K = 1024) 21 GB (1K = 1000)
Ejectable	:	No
Writable	:	Yes

CD-ROM/DVD-ROM:

```
Unit Number           : 0
ATA Device Type       : atapi
Device Serial         :
Device Revision       : 020S
Product Identification : DVD-ROM GD-3000
Vendor Identification : HITACHI
```

IOMEGA ZIP 100:

```
Unit Number           : 1
ATA Device Type       : atapi
Device Serial         :
Device Revision       : 14.A
Product Identification : ZIP 100
Vendor Identification : IOMEGA
```

2 Apple System Profiler Report - Dual 867MHz Power Mac G4

System Profile

Software Overview:

```
-----+-----+-----+
System version           : Mac OS X v10.2 (6C115)
Boot volume              : Macintosh HD
Kernel version          : Darwin Kernel Version 6.0: Sat Jul 27 13:18:52 PDT
2002; root:xnu/xnu-344.obj~1/RELEASE_PPC
User name                 :
```

Hardware Overview:

```
-----+-----+-----+
Machine speed            : 867 MHz
Bus speed                : 133 MHz
Number of processors     : 2
L2 cache size           : 256K (times 2)
L3 cache size           : 1MB (times 2)
Machine model            : Power Mac G4 (version = 2.1)
Boot ROM info           : 4.4.7b1
Customer serial number  : XB22300E-KXF-ff11
Sales order number      : W0227W/A
-----+-----+-----+
```

Memory Overview:

```
LocationTypeSize
DIMM0/J21 empty
DIMM1/J22DDR SDRAM512 MB
DIMM2/J23DDR SDRAM512 MB
DIMM3/J20 empty
```

Devices and Volumes

PCI:

SLOT-1 (AGP):

```
-----+-----+-----+
Card Type                : NVDA, GeForce4Ti
Card Name                : NVDA, Parent
Card Model               : GeForce4 Ti 4600
Vendor ID                : 10de
Device ID                : 250
ROM#                     : 1105
Revision                 : a2
-----+-----+-----+
```

USB Information:

USB Bus 0:

USB Bus 1:

Hub in Apple Extended USB Keyboard:

```
+-----+
| Product ID           : 4098 ($1002)
| Vendor               : Mitsumi Electric
| Device Speed         : Full
| Power (mA)           : 500
+-----+
```

Apple Extended USB Keyboard:

```
+-----+
| Product ID           : 516 ($204)
| Vendor               : Mitsumi Electric
| Device Speed         : Full
| Power (mA)           : 250
+-----+
```

Apple USB Mouse:

```
+-----+
| Product ID           : 769 ($301)
| Vendor               : Mitsumi
| Device Speed         : Low
| Power (mA)           : 100
+-----+
```

FireWire Information:

No FireWire devices found.:

Bus:

CD-RW/DVD-ROM:

```
+-----+
| Disc Burning         : Fully supported.
| Unit Number          : 0
| ATA Device Type      : atapi
| Device Serial        :
| Device Revision      : 2A0W
| Product Identification : CD-RW CW-8572
| Vendor Identification : MATSHITA
+-----+
```

Hard Drive:

```
+-----+
| Disk Size           : 57.26 GB (1K = 1024) 62 GB (1K = 1000) |
| Unit Number        : 0 |
| ATA Device Type    : ata |
| Device Serial      : VNC303A3GEGUWA |
| Device Revision    : VA3BA52A |
| Device Model       : IBM-IC35L060AVVA07-0 |
+-----+
```

Macintosh HD:

```
+-----+
| Volume Size        : 57.26 GB (1K = 1024) 62 GB (1K = 1000) |
| Ejectable          : No |
| Writable            : Yes |
+-----+
```

3 Apple System Profiler Report - Dual 1GHz Power Mac G4

System Profile

Software Overview:

```
+-----+
| System version           : Mac OS X v10.2 (6C115)
| Boot volume             : Macintosh HD
| Kernel version         : Darwin Kernel Version 6.0: Sat Jul 27 13:18:52 PDT
2002;
| root:xnu/xnu-344.obj~1/RELEASE_PPC
| User name               :
+-----+
```

Hardware Overview:

```
+-----+
| Machine speed           : 1.0 Ghz
| Bus speed              : 167 MHz
| Number of processors    : 2
| L2 cache size          : 256K (times 2)
| L3 cache size          : 1MB (times 2)
| Machine model          : Power Mac G4 (version = 2.1)
| Boot ROM info          : 4.4.7b1
| Customer serial number  : XB2320MQ-MMA-ff11
| Sales order number     : M8689LL/A
+-----+
```

Memory Overview:

```
LocationTypeSize
DIMM0/J21DDR SDRAM256 MB
DIMM1/J22DDR SDRAM256 MB
DIMM2/J23DDR SDRAM512 MB
DIMM3/J20 empty
```

Devices and Volumes

PCI:

SLOT-1 (AGP):

```
+-----+
| Card Type              : ATY,DDParent
| Card Name              : ATY,GoldStarParent
| Card Model             : ATY,RV250
| Vendor ID              : 1002
| Device ID              : 4966
| ROM#                   : 113-99701-104
| Revision               : 0
| Card (Video) Memory   : 64 MB
+-----+
```

USB Information:

USB Bus 0:

USB Bus 1:

Hub:

Product ID	:	37143 (\$9117)
Vendor ID	:	1452
Device Speed	:	Full
Power (mA)	:	500

Studio Display:

Product ID	:	37399 (\$9217)
Vendor ID	:	1452
Device Speed	:	Low
Power (mA)	:	500

Hub in Apple Extended USB Keyboard:

Product ID	:	4098 (\$1002)
Vendor	:	Mitsumi Electric
Device Speed	:	Full
Power (mA)	:	500

Apple Extended USB Keyboard:

Product ID	:	516 (\$204)
Vendor	:	Mitsumi Electric
Device Speed	:	Full
Power (mA)	:	250

Apple Optical USB Mouse:

Product ID	:	770 (\$302)
Vendor	:	Logitech
Device Speed	:	Low
Power (mA)	:	100

FireWire Information:

No FireWire devices found.:

Bus:

CD-RW/DVD-R:

```
+-----+
| Disc Burning           : Fully supported.
| Unit Number           : 0
| ATA Device Type       : atapi
| Device Serial         : BFDL130470WL
| Device Revision       : A227
| Product Identification : DVD-RW DVR-104
| Vendor Identification : PIONEER
+-----+
```

Hard Drive:

```
+-----+
| Disk Size              : 76.69 GB (1K = 1024) 83 GB (1K = 1000) |
| Unit Number           : 0
| ATA Device Type       : ata
| Device Serial         : VNC403A4GLZ92A
| Device Revision       : VA4BA52A
| Device Model          : IBM-IC35L080AVVA07-0
+-----+
```

Macintosh HD:

```
+-----+
| Volume Size           : 76.69 GB (1K = 1024) 83 GB (1K = 1000) |
| Ejectable             : No
| Writable               : Yes
+-----+
```

4 Apple System Profiler Report - Dual 1.25GHz Power Mac G4

System Profile

Software Overview:

```
-----+-----+-----+
| System version           : Mac OS X v10.2 (6C115) |
| Boot volume             : Macintosh HD          |
| Kernel version         : Darwin Kernel Version 6.0: Sat Jul 27 13:18:52 PDT |
2002; root:xnu/xnu-344.obj~1/RELEASE_PPC |
| User name               :                       |
+-----+-----+-----+
```

Hardware Overview:

```
-----+-----+-----+
| Machine speed           : 1.250 Ghz            |
| Bus speed               : 167 MHz              |
| Number of processors    : 2                    |
| L2 cache size          : 256K (times 2)       |
| L3 cache size          : 2MB (times 2)       |
| Machine model           : Power Mac G4 (version = 3.1) |
| Boot ROM info          : 4.4.7b1             |
| Customer serial number  : XB2320MH-MMA-ff11   |
| Sales order number     : M8689LL/A           |
+-----+-----+-----+
```

Memory Overview:

```
LocationTypeSize
DIMM0/J21DDR SDRAM256 MB
DIMM1/J22DDR SDRAM256 MB
DIMM2/J23DDR SDRAM512 MB
DIMM3/J20 empty
```

Devices and Volumes

PCI:

SLOT-1 (AGP):

```
-----+-----+-----+
| Card Type               : ATY,DDParent         |
| Card Name               : ATY,PheonixParent   |
| Card Model              : ATY,RV250          |
| Vendor ID               : 1002              |
| Device ID               : 4966              |
| ROM#                    : 113-99702-122     |
| Revision                : 0                  |
| Card (Video) Memory     : 64 MB             |
+-----+-----+-----+
```

USB Information:

USB Bus 0:

USB Bus 1:

Hub in Apple Extended USB Keyboard:

```
Product ID           : 4098 ($1002)
Vendor               : Mitsumi Electric
Device Speed        : Full
Power (mA)          : 500
```

Apple Extended USB Keyboard:

```
Product ID           : 516 ($204)
Vendor               : Mitsumi Electric
Device Speed        : Full
Power (mA)          : 250
```

Apple Optical USB Mouse:

```
Product ID           : 770 ($302)
Vendor               : Fujitsu Takamisawa Component
Device Speed        : Low
Power (mA)          : 100
```

FireWire Information:

No FireWire devices found.:

Bus:

CD-RW/DVD-R:

```
Disc Burning         : Fully supported.
Unit Number          : 0
ATA Device Type      : atapi
Device Serial        : BFDL130463WL
Device Revision      : A227
Product Identification : DVD-RW DVR-104
Vendor Identification : PIONEER
```

Hard Drive:

```
+-----+
| Disk Size           : 76.69 GB (1K = 1024) 83 GB (1K = 1000) |
| Unit Number        : 0 |
| ATA Device Type     : ata |
| Device Serial       : VNC403A4GN910A |
| Device Revision     : VA4BA52A |
| Device Model        : IBM-IC35L080AVVA07-0 |
+-----+
```

Macintosh HD:

```
+-----+
| Volume Size         : 76.69 GB (1K = 1024) 83 GB (1K = 1000) |
| Ejectable           : No |
| Writable             : Yes |
+-----+
```