

**Effects Processing Speed Comparison
Between 2017 iMac (Intel i5) and 2023 Mac mini (M2 Pro)**

Category	Test	2017 iMac	2023 Mac mini	% difference	X difference	Mac mini Standard
	<i>Both ran macOS Ventura 13.2</i>	<i>i5 40 GB RAM</i>	<i>M2 Pro 32 GB RAM</i>			<i>Deviation (seconds)</i>
3rd-Party Software			<i>Average</i>	65%	2.8x	
	Topaz Photo AI	00:47	00:17	63%	2.7x	00:04
	Topaz Video AI	12:31	04:15	66%	2.9x	00:05
Final Cut Performance			<i>Average</i>	57%	3.8x	
	Neat Video - FCP	02:38	01:09	56%	2.3x	00:02
	Stabilize 1:30 4K clip	00:59	00:29	51%	2x	00:00
	Create 20 proxies in FCP	10:35	01:34	85%	6.8x	00:01
	Render a 4K color graded clip	03:52	00:37	84%	6.3x	00:01
	Export 4K H.264 sequence	02:07	02:23	-13%	0.9x	00:03
	Export 4K ProRes 422 sequence	01:30	00:19	79%	4.8x	00:01
Premiere Performance			<i>Average</i>	39%	1.7x	
	Neat Video - Premiere	02:20	01:52	20%	1.3x	00:00
	Stabilize 1:30 4K clip	05:19	03:24	36%	1.6x	00:01
	Create 20 proxies in Premiere	09:41	05:13	46%	1.9x	00:04
	Render a 4K color graded clip	04:32	02:11	52%	2.1x	00:01
	Export 4K H.264 sequence	03:16	02:27	25%	1.3x	00:00
	Export 4K ProRes 422 sequence	05:02	02:10	57%	2.3x	00:01

NOTES

- * 77 tests run + plus another six for the Topaz Video AI re-test update
- * Apple Final Cut Pro version 10.6.5 used for all FCP tests
- * Adobe Premiere Pro version 23.2 used for all Premiere tests
- * The same files and settings were used on both systems
- * All tests were run three times, unless the first two results matched to the second
- * All test results were averaged (see detailed results on the next page)
- * All files were accessed and stored on OWC ThunderBlade (8 TB SSD RAID)
- * The lower the standard deviation, the more consistent the results.
For example, 00:03 equals a ±3 second variation in duration across all three tests.
- * Repeating the same task often resulted in faster performance in Premiere
- * Green cells represent fastest test results
- * Red cells show where Mac mini was slower than iMac
- * Green boxes indicate speed improvements equal to 2x or faster for the Mac mini

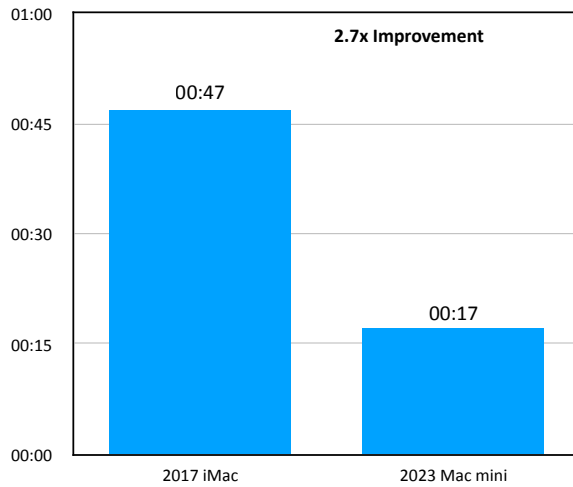
Detailed Test Results - If times matched, only two tests were run.

<i>Category</i>	<i>Software</i>	<i>System</i>	<i>Test 1</i>	<i>Test 2</i>	<i>Test 3</i>	<i>Average</i>	<i>St. Dev.</i>
3-rd Party Software							
	Topaz Photo AI	2017 iMac	00:47	00:47		00:47	00:00
	(4 TIFF images)	2023 Mac mini	00:22	00:15	00:15	00:17	00:04
	Topaz Video AI	2017 iMac	12:29	12:32	12:33	12:31	00:02
	1:30 NTSC DV clip scaled to 1080p	2023 Mac mini	04:11	04:21	04:14	04:15	00:05
Final Cut Performance							
	Neat Video - FCP	2017 iMac	02:37	02:38	02:38	02:38	00:01
	<i>NTSC - Sharpen - Beginner settings</i>	2023 Mac mini	01:11	01:08	01:09	01:09	00:02
	Stabilize 1:30 4K ProRes 422 clip	2017 iMac	00:57	00:59	01:00	00:59	00:02
	<i>Smoothcam</i>	2023 Mac mini	00:29	00:29		00:29	00:00
	Create 20 4K ProRes 50% proxies	2017 iMac	10:38	10:41	10:25	10:35	00:09
		2023 Mac mini	01:34	01:33	01:35	01:34	00:01
	Render a 4:00 4K color graded clip	2017 iMac	03:50	03:52	03:54	03:52	00:02
	<i>4 clips - ProRes 422 renders</i>	2023 Mac mini	00:36	00:37	00:38	00:37	00:01
	Export 4K H.264 sequence	2017 iMac	02:08	02:06	02:07	02:07	00:01
	<i>(color grade and transitions)</i>	2023 Mac mini	02:24	02:20	02:25	02:23	00:03
	Export 4K ProRes 422 sequence	2017 iMac	01:27	01:32	01:31	01:30	00:03
	<i>(color grade and transitions)</i>	2023 Mac mini	00:19	00:18	00:19	00:19	00:01
Premiere Performance							
	Neat Video - Premiere	2017 iMac	02:20	02:20		02:20	00:00
	<i>NTSC - Sharpen - Beginner settings</i>	2023 Mac mini	01:52	01:52		01:52	00:00
	Stabilize 1:30 4K ProRes 422 clip	2017 iMac	05:19	05:19		05:19	00:00
	<i>Warp Stabilizer - Smooth Motion</i>	2023 Mac mini	03:25	03:23	03:24	03:24	00:01
	Create 20 4K proxies in Premiere	2017 iMac	10:23	09:18	09:23	09:41	00:36
	<i>Starts with AME running - creating default Medium ProRes</i>	2023 Mac mini	05:17	05:09	05:12	05:13	00:04
	Render a 4K color graded clip	2017 iMac	04:32	04:32		04:32	00:00
	<i>4 clips - ProRes 422 renders</i>	2023 Mac mini	02:11	02:12	02:10	02:11	00:01
	Export 4K H.264 sequence	2017 iMac	03:19	03:14	03:15	03:16	00:03
	<i>Render files deleted - H.264 Match Source - hardware accel.</i>	2023 Mac mini	02:27	02:27		02:27	00:00
	Export 4K ProRes 422 sequence	2017 iMac	05:03	05:01	05:03	05:02	00:01
	<i>Render files deleted - ProRes 222 Match Source</i>	2023 Mac mini	02:09	02:10	02:10	02:10	00:01

Summary Results Used for Charts

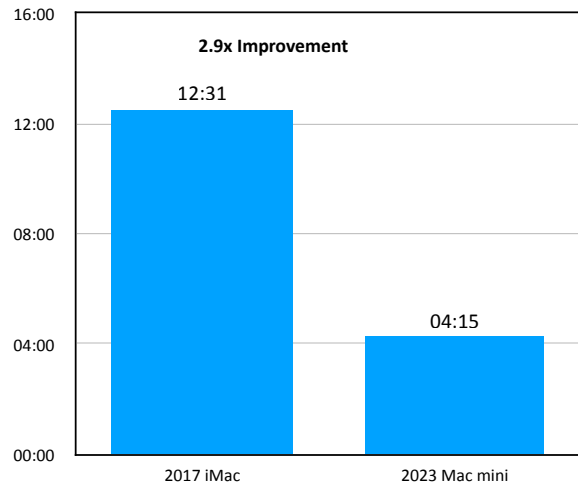
Category	2017 iMac	2023 Mac mini
Topaz Photo AI	00:47	00:17
Topaz Video AI	12:31	04:15
Final Cut Suite	21:40	06:31
Premier Suite	30:11	17:16

Topaz Photo AI Speed Comparison



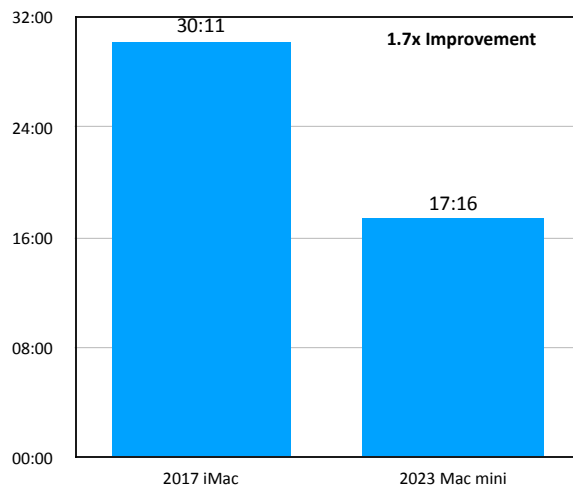
Time to render and save suite of four TIFF images

Topaz Video AI Speed Comparison



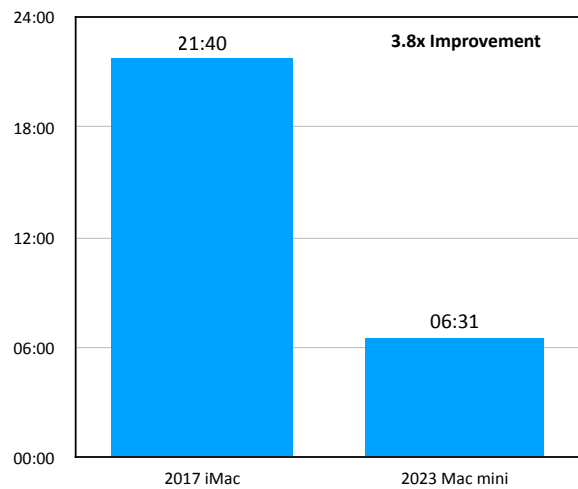
Time to deinterlace and up-res a 1:30 ProRes clip.

Speed Comparison - Adobe Premiere Pro (v23.2) Suite



Time to process suite of six common Premiere tasks.

Speed Comparison - Apple Final Cut Pro (v10.6.2) Suite



Time to process suite of six common Final Cut tasks.