

Table of Contents

1.	Postshot 1.0.1: Training Radiance Field with image poses and PLY file	2
2.	Postshot 1.0.1: Camera tracking and Training Radiance Field	3
3.	Postshot 1.0.1: Camera tracking vs Metashape alignment and export to Colmap	4
4.	RealityScan 2.2: main processing steps with 100 images of 16MP (4864x3648)	5
5.	RealityScan 2.2: main processing steps with 300 images of 16MP (4864x3648) and Ephemeral drives use	6

1. Postshot 1.0.1: Training Radiance Field with image poses and PLY file

Colmap 50 jpg 61MP images, **7 MB**, 6336x9504, SONY, ILCE-7RM4, focal length 24 mm

Application	GPU (%)	CPU (%)	RAM (GB)	Splats (mn)	kSteps	Price (\$/hour)	Time	Cost (\$)
3DGS 8/32 1xT4/16GB	25	17	5	3	30	\$4.53	1:23:06	\$6.27
3DGS 8/32 1xL4/24GB	60	18	5	3	30	\$4.94	0:41:59	\$3.45
3DGS 32/256 1xL4/24GB	70	5	8	3	30	\$9.23	0:41:29	\$6.38
3DGS 8/32 1xA10G/24GB	55	18	5	3	30	\$5.23	0:28:13	\$2.46
3DGS 8/64 1xL40S/48GB	70	22	5	3	30	\$6.93	0:14:06	\$1.63
3DGS 32/256 1xL40S/48GB	70	5	8	3	30	\$12.08	0:13:52	\$2.79
3DGS 64/512 1xL40S/48GB	75	2	11	3	30	\$18.28	0:12:50	\$3.91

Colmap 911 jpg 61MP images, **20MB**, 9504x6336, SONY, ILCE-7RM4A, focal length 24 mm

3DGS 8/64 1xL40S/48GB	75	19	29	3	46	\$6.93	0:30:16	\$3.49
3DGS 32/256 1xL40S/48GB	75	8	31	3	46	\$12.08	0:23:10	\$4.66
3DGS 64/512 1xL40S/48GB	75	3	35	3	46	\$18.28	0:21:22	\$6.51

2. Postshot 1.0.1: Camera tracking and Training Radiance Field

Colmap 911 jpg images, **20MB**, ~9504x6336, SONY, ILCE-7RM4A, focal length 24 mm;

3DGS 32/256 1xL40S/48GB									
Process	CUDA (%)	CPU (%)	RAM (GB)	Splats (mn)	kSteps	Price (\$/hour)	Time	Cost (\$)	Comments
Camera trackings step 1	30	68	159	3	46	\$12.08	0:05:48	\$1.17	
Camera trackings step 2	92	100	159	3	46	\$12.08	0:29:00	\$5.84	
Camera trackings step 3	0	38	162	3	46	\$12.08	0:57:40	\$11.61	
Camera trackings step 4	0	8	163	3	46	\$12.08	0:10:00	\$2.01	350,580 points
Total:							1:42:28	\$20.63	
Training Radiance Field	100	8	184	3	46	\$12.08	0:21:52	\$4.40	
Total:							2:04:20	\$25.03	

Original 916 png images, **120MB**, 9504x6336, SONY, ILCE-7RM4A, focal length 24 mm;

3DGS 32/256 1xL40S/48GB									
Process	CUDA (%)	CPU (%)	RAM (GB)	Splats (mn)	kSteps	Price (\$/hour)	Time	Cost (\$)	Comments
Camera trackings step 1	30	68	160	3	46	\$12.08	0:13:03	\$2.63	
Camera trackings step 2	92	100	161	3	46	\$12.08	0:30:30	\$6.14	
Camera trackings step 3	0	38	164	3	46	\$12.08	1:30:30	\$18.22	
Camera trackings step 4	0	8	164	3	46	\$12.08	0:09:11	\$1.85	369,380 points
Total:							2:23:14	\$28.84	
Training Radiance Field	100	8	184	3	46	\$12.08	0:21:31	\$4.33	
Total:							2:44:45	\$33.17	

3. Postshot 1.0.1: Camera tracking vs Metashape alignment and export to Colmap

Original 916 png images, **120MB**, 9504x6336, SONY, ILCE-7RM4A, focal length 24 mm;

3DGS 32/256 1xL40S/48GB									
Process	CUDA (%)	CPU (%)	RAM (GB)	Splats (mn)	kSteps	Price (\$/hour)	Time	Cost (\$)	Comments
Camera trackings step 1	30	68	160	3	46	\$12.08	0:13:03	\$2.63	
Camera trackings step 2	92	100	161	3	46	\$12.08	0:30:30	\$6.14	
Camera trackings step 3	0	38	164	3	46	\$12.08	1:30:30	\$18.22	
Camera trackings step 4	0	8	164	3	46	\$12.08	0:09:11	\$1.85	369,380 points
Total:							2:23:14	\$28.84	

Metashape Alignment of 916 png images with Colmap Export

Process	Appilcation	CUDA (%)	CPU (%)	RAM (GB)	Price (\$/hour)	Time	Cost (\$)	Comments
Matching	Metashape 48/194 4xL4	90	8	3	\$11.663	0:17:29	\$3.398	
Alignment	Metashape 48/194 4xL4	0	99	10	\$11.663	0:16:55	\$3.288	412,993 points
Export Colmap	Metashape 16/32 CPU@3.7GHz	0	40	13	\$3.876	0:34:20	\$2.218	
Total:						1:08:44	\$8.905	

4. RealityScan 2.2: main processing steps with 100 images of 16MP (4864x3648)

	GPU	CPU	RealityScan 8/32 1xT4	RealityScan 32/128 1xT4	RealityScan 64/256 1xT4	RealityScan 48/192 4xT4	RealityScan 8/32 1xL4	RealityScan 32/128 1xL4	RealityScan 64/256 1xL4	RealityScan 48/192 4xL4
OS			Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019
Storage			Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard
GPU			1 x T4	1 x T4	1 x T4	4 x T4	1 x L4	1 x L4	1 x L4	4 x L4
CPU/RAM			8/32	32/128	64/256	48/192	8/32	32/128	64/256	48/192
Alignment	v	v	0:00:56	0:00:54	0:00:50	0:00:52	0:01:08	0:00:38	0:00:35	0:00:34
Mesh High	v	v	0:37:10	0:20:01	0:19:59	0:13:38	0:26:19	0:14:39	0:13:23	0:11:26
Coloring	v	v	0:04:59	0:02:46	0:02:38	0:01:57	0:03:15	0:02:00	0:01:53	0:01:31
Texturing	v	v	0:08:29	0:04:54	0:07:39	0:05:55	0:06:05	0:04:30	0:05:49	0:05:15
Classifying		v	0:01:23	0:00:29	0:00:45	0:00:30	0:00:58	0:00:26	0:00:28	0:00:28
Orthographic projection		v	0:03:05	0:03:10	0:03:05	0:03:05	0:02:48	0:02:50	0:02:40	0:02:44
Total time (h)			0:56:02	0:32:14	0:34:56	0:25:57	0:40:33	0:25:03	0:24:48	0:21:58
Price (\$/h)			\$4.528	\$8.342	\$13.253	\$12.855	\$4.936	\$8.355	\$12.316	\$14.268
Total price			\$4.23	\$4.48	\$7.72	\$5.56	\$3.34	\$3.49	\$5.09	\$5.22

	GPU	CPU	RealityScan 8/32 1xA10G	RealityScan 32/128 1xA10G	RealityScan 64/256 1xA10G	RealityScan 48/192 4xA10G	RealityScan 32/128 1xL40S	RealityScan 48/192 4xL40S
OS			Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019
Storage			Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard	Fixed Standard
GPU			1 x A10G	1 x A10G	1 x A10G	4 x A10G	1 x L40S	4 x L40S
CPU/RAM			8/32	32/128	64/256	48/192	32/256	48/384
Alignment	v	v	0:01:30	0:00:42	0:00:39	0:00:40	0:00:36	0:00:35
Mesh High	v	v	0:26:35	0:14:01	0:13:15	0:11:05	0:13:45	0:10:55
Coloring	v	v	0:03:38	0:02:00	0:01:49	0:01:35	0:01:58	0:01:29
Texturing	v	v	0:06:42	0:04:09	0:04:46	0:04:34	0:04:20	0:05:23
Classifying		v	0:01:05	0:00:25	0:00:27	0:00:27	0:00:27	0:00:26
Orthographic projection		v	0:02:44	0:02:48	0:02:45	0:02:42	0:02:58	0:02:44
Total time (h)			0:42:14	0:24:05	0:23:41	0:21:03	0:24:04	0:21:32
Price (\$/h)			\$5.227	\$8.938	\$13.277	\$15.782	\$12.080	\$22.881
Total price			\$3.68	\$3.59	\$5.24	\$5.54	\$4.85	\$8.21

5. RealityScan 2.2: main processing steps with 300 images of 16MP (4864x3648) and Ephemeral drives use

	GPU	CPU	RealityScan 48/192 4xA10G	RealityScan 48/192 4xA10G	RealityScan 48/192 4xA10G	RealityScan 48/192 4xA10G	RealityScan 48/192 4xT4	RealityScan 48/192 4xL40S
OS			Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019
Storage			Fixed Standard	Fixed Fast	Fixed Standard + Ephemeral 1	Fixed Fast + Ephemeral 1	Fixed Standard	Fixed Fast + Ephemeral 1
GPU			4 x A10G	4 x A10G	4 x A10G	4 x A10G	4 x T4	4 x T4
CPU/RAM			48/192	48/192	48/192	48/192	48/192	48/192
Alignment	v	v	0:02:03	0:02:01	0:01:58	0:01:22	0:02:34	0:02:30
Mesh High	v	v	0:37:27	0:28:42	0:26:32	0:27:01	0:45:45	0:36:53
Coloring	v	v	0:06:18	0:05:35	0:04:37	0:04:26	0:06:45	0:06:12
Texturing	v	v	0:13:56	0:09:01	0:08:43	0:08:33	0:17:20	0:13:48
Classifying		v	0:01:31	0:01:02	0:01:00	0:00:56	0:01:37	0:01:14
Orthographic projection		v	0:08:47	0:06:10	0:04:50	0:03:45	0:09:45	0:06:48
Total time (h)			1:10:02	0:52:31	0:47:40	0:46:03	1:23:46	1:07:25
Price (\$/h)			\$15.782	\$15.782	\$15.782	\$15.782	\$12.855	\$12.855
Total price			\$18.42	\$13.81	\$12.54	\$12.11	\$17.95	\$14.44

	GPU	CPU	RealityScan 48/192 4xL4	RealityScan 48/192 4xL4	RealityScan 48/192 4xL4	RealityScan 48/192 4xL4	RealityScan 48/192 4xL40S	RealityScan 48/192 4xL40S
OS			Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019	Windows 2019
Storage			Fixed Standard	Fixed Fast	Fixed Standard + Ephemeral 5	Fixed Fast + Ephemeral 4	Fixed Standard	Fixed Fast + Ephemeral 4
GPU			4 x L4	4 x L4	4 x L4	4 x L4	4 x L40S	4 x L40S
CPU/RAM			48/192	48/192	48/192	48/192	48/384	48/384
Alignment	v	v	0:01:46	0:01:46	0:01:40	0:01:43	0:01:46	0:01:46
Mesh High	v	v	0:40:28	0:30:52	0:27:54	0:27:55	0:39:22	0:27:52
Coloring	v	v	0:05:59	0:04:49	0:04:21	0:04:21	0:06:01	0:04:18
Texturing	v	v	0:17:19	0:13:45	0:12:51	0:12:42	0:16:28	0:12:54
Classifying		v	0:01:37	0:01:10	0:01:14	0:01:06	0:01:36	0:01:05
Orthographic projection		v	0:08:48	0:06:22	0:04:51	0:03:18	0:08:53	0:03:42
Total time (h)			1:15:57	0:58:44	0:52:51	0:51:05	1:14:06	0:51:37
Price (\$/h)			\$14.268	\$14.268	\$14.268	\$14.268	\$22.881	\$22.881
Total price			\$18.06	\$13.97	\$12.57	\$12.15	\$28.26	\$19.68

Comments:

Fixed Standard/Fast+Ephemeral 1: images and temporary folder are in Ephemeral drive, project is in Storage

Fixed Fast+Ephemeral 4: all three are in different Ephemeral drives

Fixed Standard+Ephemeral 5: images and temporary folder are in two Ephemeral drives, project is in Storage