

Group n.	Project n.	Platform	Attitude parameters	Mandatory sensor	Actuators
1	609	minisat (100-500 kg)	quaternions	star sensor	variable thrust jets
2	452	microsat (10-100 kg)	quaternions	gyroscopes	4 reaction wheels
3	123	cubesat 3U	Euler angles	horizon sensor	variable thrust jets
4	448	microsat (10-100 kg)	direction cosines	magnetic field sensor	3 magnetic coils
5	772	large satellite (over 500 kg)	Euler angles	gyroscopes	3 magnetic coils
6	99	cubesat 3U	Euler angles	gyroscopes	3 magnetic coils, 1 inertia wheel
7	746	large satellite (over 500 kg)	quaternions	star sensor	3 magnetic coils, 1 reaction wheel
8	174	cubesat 6U	direction cosines	magnetic field sensor	1 inertia wheel, 2 reaction wheels
9	333	cubesat 12U	quaternions	Sun sensor	3 magnetic coils, 1 inertia wheel
10	635	minisat (100-500 kg)	Euler angles	gyroscopes	constant thrust jets
11	556	minisat (100-500 kg)	direction cosines	Sun sensor	3 magnetic coils
12	396	cubesat 12U	Euler angles	horizon sensor	3 magnetic coils, 1 inertia wheel
13	699	large satellite (over 500 kg)	direction cosines	star sensor	variable thrust jets
14	294	cubesat 12U	direction cosines	star sensor	variable thrust jets
15	244	cubesat 6U	Euler angles	star sensor	3 reaction wheels
16	281	cubesat 12U	direction cosines	Sun sensor	4 reaction wheels
17	692	large satellite (over 500 kg)	direction cosines	Sun sensor	3 magnetic coils, 1 reaction wheel
18	32	cubesat 3U	direction cosines	horizon sensor	constant thrust jets
19	643	minisat (100-500 kg)	Euler angles	Sun sensor	control moment gyroscopes
20	361	cubesat 12U	Euler angles	gyroscopes	3 reaction wheels
21	408	microsat (10-100 kg)	direction cosines	gyroscopes	1 inertia wheel, 2 reaction wheels
22	40	cubesat 3U	direction cosines	magnetic field sensor	control moment gyroscopes
23	22	cubesat 3U	direction cosines	star sensor	control moment gyroscopes
24	460	microsat (10-100 kg)	quaternions	Sun sensor	3 reaction wheels
25	261	cubesat 6U	Euler angles	horizon sensor	3 magnetic coils, 1 inertia wheel
26	303	cubesat 12U	direction cosines	horizon sensor	variable thrust jets
27	653	minisat (100-500 kg)	Euler angles	star sensor	constant thrust jets
28	175	cubesat 6U	direction cosines	magnetic field sensor	control moment gyroscopes
29	545	minisat (100-500 kg)	direction cosines	gyroscopes	constant thrust jets
30	34	cubesat 3U	direction cosines	horizon sensor	3 magnetic coils
31	758	large satellite (over 500 kg)	quaternions	magnetic field sensor	4 reaction wheels
32	773	large satellite (over 500 kg)	Euler angles	gyroscopes	3 magnetic coils, 1 reaction wheel
33	646	minisat (100-500 kg)	Euler angles	Sun sensor	3 magnetic coils
34	152	cubesat 6U	direction cosines	Sun sensor	3 magnetic coils, 1 reaction wheel
35	796	large satellite (over 500 kg)	Euler angles	horizon sensor	control moment gyroscopes
36	678	large satellite (over 500 kg)	direction cosines	gyroscopes	1 inertia wheel, 2 reaction wheels
37	343	cubesat 12U	quaternions	horizon sensor	3 reaction wheels
38	744	large satellite (over 500 kg)	quaternions	star sensor	variable thrust jets
39	92	cubesat 3U	Euler angles	gyroscopes	4 reaction wheels
40	705	large satellite (over 500 kg)	direction cosines	horizon sensor	1 inertia wheel, 2 reaction wheels

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41	600	minisat (100-500 kg)	quaternions	Sun sensor	variable thrust jets
42	723	large satellite (over 500 kg)	quaternions	gyroscopes	1 inertia wheel, 2 reaction wheels
43	301	cubesat 12U	direction cosines	horizon sensor	control moment gyroscopes
44	170	cubesat 6U	direction cosines	horizon sensor	3 magnetic coils, 1 reaction wheel
45	325	cubesat 12U	quaternions	Sun sensor	3 reaction wheels
46	784	large satellite (over 500 kg)	Euler angles	star sensor	3 reaction wheels
47	756	large satellite (over 500 kg)	quaternions	horizon sensor	3 magnetic coils, 1 inertia wheel
48	682	large satellite (over 500 kg)	direction cosines	gyroscopes	3 magnetic coils
49	520	microsat (10-100 kg)	Euler angles	star sensor	3 magnetic coils
50	440	microsat (10-100 kg)	direction cosines	horizon sensor	3 magnetic coils, 1 reaction wheel
51	409	microsat (10-100 kg)	direction cosines	gyroscopes	control moment gyroscopes
52	304	cubesat 12U	direction cosines	horizon sensor	3 magnetic coils
53	742	large satellite (over 500 kg)	quaternions	star sensor	control moment gyroscopes
54	797	large satellite (over 500 kg)	Euler angles	horizon sensor	constant thrust jets
55	91	cubesat 3U	Euler angles	gyroscopes	3 reaction wheels
56	146	cubesat 6U	direction cosines	Sun sensor	4 reaction wheels
57	119	cubesat 3U	Euler angles	horizon sensor	4 reaction wheels
58	763	large satellite (over 500 kg)	quaternions	magnetic field sensor	3 magnetic coils
59	190	cubesat 6U	quaternions	Sun sensor	3 reaction wheels
60	672	minisat (100-500 kg)	Euler angles	magnetic field sensor	variable thrust jets
61	319	cubesat 12U	quaternions	gyroscopes	control moment gyroscopes
62	625	minisat (100-500 kg)	quaternions	magnetic field sensor	control moment gyroscopes
63	112	cubesat 3U	Euler angles	star sensor	control moment gyroscopes
64	127	cubesat 3U	Euler angles	magnetic field sensor	3 reaction wheels
65	241	cubesat 6U	Euler angles	Sun sensor	3 magnetic coils
66	798	large satellite (over 500 kg)	Euler angles	horizon sensor	variable thrust jets
67	762	large satellite (over 500 kg)	quaternions	magnetic field sensor	variable thrust jets
68	592	minisat (100-500 kg)	quaternions	gyroscopes	3 magnetic coils
69	423	microsat (10-100 kg)	direction cosines	Sun sensor	3 magnetic coils, 1 inertia wheel
70	475	microsat (10-100 kg)	quaternions	star sensor	3 magnetic coils
71	749	large satellite (over 500 kg)	quaternions	horizon sensor	4 reaction wheels
72	532	microsat (10-100 kg)	Euler angles	magnetic field sensor	3 reaction wheels
73	402	cubesat 12U	Euler angles	magnetic field sensor	variable thrust jets
74	165	cubesat 6U	direction cosines	horizon sensor	1 inertia wheel, 2 reaction wheels
75	306	cubesat 12U	direction cosines	horizon sensor	3 magnetic coils, 1 inertia wheel
76	35	cubesat 3U	direction cosines	horizon sensor	3 magnetic coils, 1 reaction wheel
77	6	cubesat 3U	direction cosines	gyroscopes	variable thrust jets
78	265	cubesat 6U	Euler angles	magnetic field sensor	control moment gyroscopes
79	720	large satellite (over 500 kg)	direction cosines	magnetic field sensor	3 magnetic coils, 1 inertia wheel
80	752	large satellite (over 500 kg)	quaternions	horizon sensor	constant thrust jets