

Frequency Coordination Template

Mission Parameters		
Attribute	Value	Comment
File Number (s)	TBD	
Launch Provider	SpaceX	
Launch Provider License Date	01/15/26	
Mission Name	GE1	
Company Name	K2 Space Corporation	
Technical POC(s)	TBD	
Number of Satellites	1	
Launch Date	TBD	
Lifetime	3 years	

Orbital Parameters (Choose one)		
Attribute	Value	Comment
Altitude Apogee (km)	500 km (LEO) and 10,000 km (MEO)	The single spacecraft will operate at multiple orbits: 500 km circular LEO and 10,000 km circular MEO.
Altitude Perigee (km)	500 km (LEO) and 10,000 km (MEO)	
Inclination (degree)	50 degrees	
Sun Sync (Y/N)	N	
LTAN or RAAN (as appropriate)	N/A	
Number of Orbital Planes (for Walker Constellation)	N/A	
Spacing between Orbital Planes	N/A	
Spacecraft spacing within planes	N/A	

Uplink Parameters					
Frequency Band	Allocation	Center Frequency (MHz)	Bandwidths (MHz)	Polarization Type (optional)	Duty Cycle % (time transmitting/time visible)
S-Band	Space Research	2040.000	0.100 0.400 0.640 0.920 2.000	RHCP	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude

Downlink Parameters							
Frequency Band	Allocation	Center Frequency (MHz)	Bandwidths (MHz)	Sat Tx Power (W) (at the antenna port)	Sat Tx Ant Gain (dBi)	Polarization Type (optional)	Duty Cycle % (time transmitting/time visible)
UHF	Space Research, Space Operations	400.400	0.013	0.562	2.10	Linear	Beacon mode. 6 of every 60 seconds, or 10%.
S-Band	Space Research	2222.000	0.022 0.040 0.080 0.086 0.090 0.130 0.185 0.750 2	0.568	6.56	RHCP	95%
X-Band	Space Research	8480.000	2.5 4.0 4.4 9.3 10	1.58	8.12	RHCP	95%

Experimental Downlink Parameters							
Frequency Band	Allocation	Center Frequency (MHz)	Bandwidth (MHz)	Sat Tx Power (W) (at the antenna port)	Sat Tx Ant Gain (dBi)	Polarization Type (optional)	Duty Cycle % (time transmitting/time visible)
Experimental UHF	Experimental	750.000	0.000001	1	15.00	Linear	50% (<= 3 passes per day, for a duration of 3 months total)
Experimental L-Band	Experimental	1100.000	0.000001	1	19.00	Linear	50% (<= 3 passes per day, for a duration of 3 months total)

Receive Earth Station Locations						
Location Name	Frequency Band	Lat. (N)	Long. (E)	Number of antennas at location	Duty Cycle % (time transmitting/time visible)	Notes
Peterborough, Australia	S, X	32° 57' 43" S	138° 50' 58" E	3		
Nangetty, Western Australia	S, X	29° 00' 37" S	115° 20' 32" E	4		
Absheron, Azerbaijan	S, X	40° 27' 59" N	49° 29' 10" E	4		
Punta Arenas, Chile	S, X	53° 02' 30" S	70° 50' 45" W	7		
Santiago, Chile	S, X	33° 21' 53" S	70° 46' 20" W	3		

Blonduos, Iceland	S, X	65° 38' 50" N	20° 14' 21" W	5		
Kandy, Sri Lanka	S, X	07° 16' 27" N	80° 43' 29" E	1		
Mon Loisir, Mauritius	S, X	20° 08' 22" S	57° 41' 13" E	1		
La Paz, Mexico	S, X	24° 05' 59" N	110° 23' 11" W	2		
Awarua, New Zealand	S, X	46° 31' 41" S	168° 22' 45" E	4		
Santa Maria, Azores, Portugal	S, X	36° 59' 51" N	25° 08' 14" W	2		
Pretoria, South Africa	S, X	25° 51' 37" S	28° 27' 13" E	2		
Nova Scotia, Canada	S, X	45° 19' 04" N	61° 02' 09" W	1		
Al Ain, UAE	S, X	24° 11' 56" N	55° 41' 00" E	2		
Talkeetna, AK, United States	X	62° 19' 55" N	150° 01' 57" W	1		
Selfoss, Iceland	UHF, S, X	64° 03' 04" N	20° 25' 18" W	2		
Colorado Springs, CO, United States	UHF, X	38° 50' 25" N	104° 43' 15" W	1		
Pitea, Sweden	UHF, S, X	65° 20' 16" N	21° 25' 31" E	2		
Pretoria, South Africa	UHF, S, X	25° 45' 08" S	28° 14' 23" E	2		AnySignal site (separate from Leaf Pretoria)
Torrance, CA, United States	UHF, X	33° 50' 02" N	118° 18' 48" W	1		
Umea, Sweden	UHF	63° 49' 20" N	20° 15' 17" E	1		
Awarua, New Zealand	UHF, S, X	46° 31' 44" S	168° 22' 51" E	2		AnySignal site (separate from Leaf Awarua)
Punta Arenas, Chile	UHF, S, X	53° 07' 03" S	70° 53' 39" W	2		AnySignal site (separate from Leaf Punta Arenas)
North Pole, AK, United States	UHF, X	64° 46' 34" N	147° 22' 52" W	1		
Vodno, Bulgaria	S, X	43° 51' 41" N	27° 09' 03" E	1		
Neu Poserin, Germany	S, X	53° 33' 15" N	12° 13' 27" E	1		

Rio Gallegos, Argentina	S, X	51° 40' 03" S	69° 15' 51" W	1		
Bismarck, ND, United States	X	46° 52' 56" N	100° 48' 17" W	1		Northwood site
Loring, ME,United States	X	46° 56' 01" N	67° 54' 34" W	1		Northwood site
Kihei, HI,United States	X	20° 44' 44" N	156° 26' 13" W	1		Northwood site
Athens, Greece	S, X	37° 50' 43" N	22° 37' 26" E	1		
Jeju, South Korea	S, X	33° 23' 14" N	126° 19' 01" E	3		
Bel Ombre, Mauritius	S, X	20° 30' 02" S	57° 27' 03" E	1		
Mingenew, Australia	S, X	29° 00' 39" S	115° 20' 29" E	4		
Awarua, New Zealand	S, X	46° 31' 42" S	168° 22' 44" E	4		KSAT site (separate from Leaf/AnySignal Awarua)
Punta Arenas, Chile	S, X	52° 56' 08" S	70° 52' 24" W	3		KSAT site (separate from Leaf/AnySignal Punta Arenas)
Puertollano, Spain	S, X	38° 40' 20" N	04° 09' 46" W	2.0		
Hartebeesthoek, South Africa	S, X	25° 53' 10" S	27° 42' 22" E	2.0		
Tromso, Norway	S, X	69° 39' 44" N	18° 56' 29" E	1.0		
Fairbanks, AK,United States	X	64° 49' 04" N	147° 43' 30" W	1		KSAT site
Puunene, HI,United States	X	20° 49' 02" N	156° 27' 17" W	3		KSAT site
Dublin, Ireland	S, X	53° 24' 24" N	06° 13' 28" W	2.0		
Punta Arenas, Chile	S, X	52° 56' 32" S	70° 50' 59" W	2.0		
Singapore, Singapore	S, X	01° 18' 59" N	103° 42' 03" E	2.0		
Stockholm, Sweden	S, X	59° 38' 57" N	16° 35' 05" E	2.0		
Sydney, Australia	S, X	32° 10' 31" S	148° 36' 56" E	2.0		
Cape Town, South Africa	S, X	34° 01' 39" S	18° 43' 07" E	2.0		
Columbus, OH,United States	X	40° 06' 03" N	83° 11' 51" W	2		
Boardman, OR,United States	X	45° 51' 16" N	119° 37' 55" W	2		
Kapolei, HI,United States	X	21° 20' 12" N	158° 05' 24" W	2		
Deadhorse, AK,United States	X	70° 12' 14" N	148° 28' 24" W	2		

Aurora, CO, United States	Experimental L	39° 33' 34" N	104° 49' 39" W	1		
Rolling Meadows, IL, United States	Experimental UHF, Experimental L	42° 06' 10" N	88° 01' 47" W	1		

Transmit Earth Station Locations

Location Name	Frequency Band	Lat. (N)	Long. (E)	Transmit Gain (dBi)	Transmit Power (W) (at the antenna port)	Number of antennas at location	Duty Cycle % (time transmitting/time visible)	Notes
Peterborough, Australia	S	32° 57' 43" S	138° 50' 58" E	35.0	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Nangetty, Western Australia	S	29° 00' 37" S	115° 20' 32" E	35.0	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Absheron, Azerbaijan	S	40° 27' 59" N	49° 29' 10" E	35.0	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Punta Arenas, Chile	S	53° 02' 30" S	70° 50' 45" W	35.0	31.6227766	5	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Santiago, Chile	S	33° 21' 53" S	70° 46' 20" W	35.0	31.6227766	3	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Blonduos, Iceland	S	65° 38' 50" N	20° 14' 21" W	37.0	6.309573445	5	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Kandy, Sri Lanka	S	07° 16' 27" N	80° 43' 29" E	35.0	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Mon Loisir, Mauritius	S	20° 08' 22" S	57° 41' 13" E	35.0	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
La Paz, Mexico	S	24° 05' 59" N	110° 23' 11" W	35.0	31.62	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Awarua, New Zealand	S	46° 31' 41" S	168° 22' 45" E	35.0	31.62	4	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Santa Maria, Azores, Portugal	S	36° 59' 51" N	25° 08' 14" W	35	31.62	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Pretoria, South Africa	S	25° 51' 37" S	28° 27' 13" E	35	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude

Nova Scotia, Canada	S	45° 19' 04" N	61° 02' 09" W	35	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Al Ain, UAE	S	24° 11' 56" N	55° 41' 00" E	35	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Athens, Greece	S	37° 50' 43" N	22° 37' 26" E	35.6	8.7096359	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Jeju, South Korea	S	33° 23' 14" N	126° 19' 01" E	37	6.309573445	3	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Bel Ombre, Mauritius	S	20° 30' 02" S	57° 27' 03" E	35.6	8.7096359	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Mingenew, Australia	S	29° 00' 39" S	115° 20' 29" E	35.6	8.7096359	4	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Puertollano, Spain	S	38° 40' 20" N	04° 09' 46" W	35.6	8.7096359	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Hartebeesthoek, South Africa	S	25° 53' 10" S	27° 42' 22" E	35.6	8.7096359	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Tromso, Norway	S	69° 39' 44" N	18° 56' 29" E	35.6	8.7096359	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Vodno, Bulgaria	S	43° 51' 41" N	27° 09' 03" E	32.6	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Neu Poserin, Germany	S	53° 33' 15" N	12° 13' 27" E	32.6	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Rio Gallegos, Argentina	S	51° 40' 03" S	69° 15' 51" W	32.6	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Dublin, Ireland	S	53° 24' 24" N	06° 13' 28" W	38.4	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Singapore, Singapore	S	01° 18' 59" N	103° 42' 03" E	38.4	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude

Stockholm, Sweden	S	59° 38' 57" N	16° 35' 05" E	38.4	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Sydney, Australia	S	32° 10' 31" S	148° 36' 56" E	38.4	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Cape Town, South Africa	S	34° 01' 39" S	18° 43' 07" E	38.4	31.6227766	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Talkeetna, AK, United States	S	62° 19' 55" N	150° 01' 57" W	35	31.6227766	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude
Selfoss, Iceland	S	64° 03' 04" N	20° 25' 18" W	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site
Colorado Springs, CO, United States	S	38° 50' 25" N	104° 43' 15" W	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site
Pitea, Sweden	S	65° 20' 16" N	21° 25' 31" E	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site
Pretoria, South Africa	S	25° 45' 08" S	28° 14' 23" E	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site (separate from Leaf Pretoria)
Torrance, CA, United States	S	33° 50' 02" N	118° 18' 48" W	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site
Awarua, New Zealand	S	46° 31' 44" S	168° 22' 51" E	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site (separate from Leaf/KSAT Awarua)
Punta Arenas, Chile	S	53° 07' 03" S	70° 53' 39" W	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site (separate from Leaf/KSAT/ Punta Arenas)
North Pole, AK, United States	S	64° 46' 34" N	147° 22' 52" W	33.3	69.9841996	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude AnySignal site

Bismarck, ND, United States	S	46° 52' 56" N	100° 48' 17" W	32.5	64.5654229	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude Northwood site
Loring, ME, United States	S	46° 56' 01" N	67° 54' 34" W	32.5	64.5654229	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude Northwood site
Kihei, HI, United States	S	20° 44' 44" N	156° 26' 13" W	32.5	64.5654229	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude Northwood site
Fairbanks, AK, United States	S	64° 49' 04" N	147° 43' 30" W	35.6	8.7096359	1	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude KSAT site
Awarua, New Zealand	S	46° 31' 42" S	168° 22' 44" E	34	10	4	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude KSAT site (separate from Leaf/AnySignal Awarua)
Punta Arenas, Chile	S	52° 56' 08" S	70° 52' 24" W	34	10	3	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude KSAT site (separate from Leaf/AnySignal/ Punta Arenas)
Puunene, HI, United States	S	20° 49' 02" N	156° 27' 17" W	34	10	3	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude KSAT site
Columbus, OH, United States	S	40° 06' 03" N	83° 11' 51" W	37.7	16.98243652	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude site
Boardman, OR, United States	S	45° 51' 16" N	119° 37' 55" W	37.7	16.98243652	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude site
Kapolei, HI, United States	S	21° 20' 12" N	158° 05' 24" W	37.7	16.98243652	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude site
Punta Arenas, Chile	S	52° 56' 32" S	70° 50' 59" W	37.7	16.98243652	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude site (separate from Leaf/AnySignal/KSAT Punta Arenas)
Deadhorse, AK, United States	S	70° 12' 14" N	148° 28' 24" W	37.7	16.98243652	2	89%	Duty cycle will be 89% in initial orbit and reduce to 62% at max altitude site

1. GE1 frequency coordination template derived from Gravitas template with ground stations updated to match GE1 NTIA Space Record Data Form.

- 2. Items highlighted in green and in bold font represent changes (additions) from previous coordination efforts
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- 4. Orbital parameters: 500 km circular LEO + 10,000 km circular MEO, 50 deg inclination
- 3. Updated orbital parameters based off the most recent pre-launch OPMs provided by launch provider (SpaceX)