

Frequency Coordination Template

Mission Parameters		
Attribute	Value	Comment
File Number (s)	TBD	
Launch Provider	SpaceX	
Launch Provider License Date	TBD	
Mission Name	GE2	
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 7,800 km (MEO)	The single spacecraft will operate at multiple orbits: 500 km circular LEO and 7,800 km circular MEO.
Altitude Perigee (km)	500 km (LEO) and 7,800 km (MEO)	
Inclination (degree)	50 degrees	
Sun Sync (Y/N)	N	
LTAN or RAAN (as appropriate)	N/A	

NGSO

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%

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		

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° 56' 38" N	104° 44' 46" 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° 51' 37" S	28° 27' 14" 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° 48' 27" N	118° 21' 00" 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° 45' 49" N	147° 22' 13" 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