

Frequency
Coordination
Template

Constellation Orbit Parameters

Parameters	Sat 1 (EOL)	Sat 2	Sat 3	Sat 4	Sat 5	Sat 6
Altitude Apogee (km)	523.403	523.403	523.403			
Altitude Perigee (km)	512.518					
Inclination (degree)	97.436	97.436	97.436			
Sun Sync (Y/N)	Y	Y	Y			
LTAN	20:41 UTC	20:46 UTC	20:51 UTC			
End of Life (EOL)	10/1/2027	10/1/2027				

Mission Parameters

Attribute	Value	Comment
Mission Name	CTC-1	
Responsible Company	Space Telecommunications, Inc.	
Technical POC(s)	Adam Wexler	
Number of Satellites	3	
Launch Date	1 October 2025	
Lifetime	2 years	

Orbital Parameters (Choose one)

Attribute	Value	Comment	
Altitude Apogee (km)	523.403		NGSO
Altitude Perigee (km)	512.518		
Inclination (degree)	97.436		
Sun Sync (Y/N)	Y	No Station Keeping	
LTAN or RAAN (as appropriate)	318.563 deg		
Number of Orbital Planes (for Walker Constellation)	1		
Spacing between Orbital Planes	n/a		
Spacecraft spacing within planes	variable 100-500 km		
Longitude of Orbital Slot (E)	n/a		GSO
Inclination (degree)	n/a		
Reference Body	n/a		non-Geocentric Orbits
Apoapsis (km)	n/a		
Periapsis (km)	n/a		
Inclination (degree)	n/a		

Uplink
Parameters

Frequency Band	Center Frequency (MHz)	Bandwidth (MHz)	Polarization Type (optional)	Duty Cycle % (time transmitting/time visible)
S-band	2067.5	0.0526	RHCP	1%
UHF	402.5	0.0024	Linear	0.5%
S-band	2072.5	10	RHCP	3%
S-band (n-256)	1995.0	10	RHCP	3%

**Downlink
Parameters**

Frequency Band	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)
S-band	2245.0	0.2104	2.25	7.0	RHCP	0.5%
UHF	401.5	0.0024	1.95	3.0	Linear	0.5%
S-band	2245.0	10	1.12	6.5	RHCP	3%
S-band (n-256)	2185.0	10	17.83	11.2	RHCP	3%

**Crosslink
Parameters**

Frequency Band	Center Frequency (MHz)	Bandwidth (MHz)	Sat Tx Power (W) (at the antenna port)	Sat Tx Ant Gain (dBi)	Polarization Type (optional)	Receive Satellite Network/System
Ka	20150.0	2	0.49	20	LHCP	CTC-1
Ka	17250.0	2	0.49	20	LHCP	CTC-1

**Receive Earth
Stations**

Location Name	Frequency Band	Lat. (N)	Long. (E)	Duty Cycle % (time transmitting/time visible)
PUNTA ARENAS CHILE	S	-53.04	-70.85	0.5%
TROMSO NORWAY	S	69.66	18.95	0.5%
TROLL ANTARCTICA	S	72.00	0.53	0.5%
AWARUA NEW ZEALAND	S	-46.53	16.38	0.5%
MINGENEW AUSTRALIA	S	-29.01	115.34	0.5%
JEJU SOUTH KOREA	S	33.39	126.32	0.5%
SVALBARD NORWAY	S	78.23	15.41	0.5%
ABSHERON AZERBAIJAN	S	40.47	49.49	0.5%
MON LOISIR MAURITIUS	S	-20.14	57.69	0.5%
SANTA MARIA AZORES	S	37.00	25.14	0.5%
KANDY SRI LANKA	S	7.27	80.72	0.5%
UNST UK	S	60.75	-0.99	0.5%
UNST UK	UHF	60.75	-0.99	0.5%
Lagos NIGERIA	S	6.42	3.45	3.0%
Lagos NIGERIA	UHF	6.42	3.45	0.5%

**Transmit Earth
Stations**

Location Name	Frequency Band	Lat. (N)	Long. (E)	Transmit Gain (dBi)	Transmit Power (W) (at the antenna port)	Duty Cycle % (time transmitting/time visible)
PUNTA ARENAS CHILE	S	-53.04	-70.85	34.6	31.60	1%
TROMSO NORWAY	S	69.66	18.95	33.1	25.10	1%
TROLL ANTARCTICA	S	72.00	0.53	33.1	25.10	1%
AWARUA NEW ZEALAND	S	-46.53	16.38	33.1	25.10	1%
MINGENEW AUSTRALIA	S	-29.01	115.34	33.1	25.10	1%
JEJU SOUTH KOREA	S	33.39	126.32	33.1	25.10	1%
SVALBARD NORWAY	S	78.23	15.41	33.1	25.10	1%
ABSHERON AZERBAIJAN	S	40.47	49.49	34.6	31.60	1%
MON LOISIR MAURITIUS	S	-20.14	57.69	34.6	19.90	1%
SANTA MARIA AZORES	S	37.00	25.14	34.6	31.60	1%
KANDY SRI LANKA	S	7.27	80.72	34.6	31.60	1%
UNST UK	S	60.75	-0.99	18.6	28.00	1%
UNST UK	UHF	60.75	-0.99	15.4	0.15	0.5%
Lagos NIGERIA	S	6.42	3.45	18.6	28.00	3%
Lagos NIGERIA	UHF	6.42	3.45	15.4	0.15	0.5%