



312 File Number: **SATLOA2022052600055**

Filing Description

Question	Response
Description	Turion Space Droid.001 Schedule S

Satellite
Information

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	Droid-1
Estimated Lifetime of Satellite(s) From Date of Launch	6 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating
Frequency
Bands (3)

Nature of service	Description	Frequency Band(s)	Mode Type
Space Operation Service		8025.0 MHz -8400.0 MHz	Transmit
Space Operation Service		2025.0 MHz -2110.0 MHz	Receive
Space Operation Service		2200.0 MHz -2290.0 MHz	Transmit

**Orbital
Information For
Non-
Geostationary
Satellites**

Question	Response
Total Number of Satellites in the active constellation	1
Orbit Epoch Date	04/01/2023
Celestial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	97.5 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5739.0 seconds
Apogee	550.0 km
Perigee	550.0 km
Active Service Arc Begin Angle with respect to Ascending Node	-90.0 degrees
Active Service Arc End Angle with respect to Ascending Node	90.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	0.0

Receiving Beams 1:

Question	Response
Beam ID	SRX3
Receive Beam Frequency	2025.0 MHz -2110.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	5.0 dBi
Antenna Pointing Error	0.04 degrees
Antenna Rotational Error	0.04 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-22.6 dB/K
Min. Saturation Flux Density	-99.5 dBW/m2
Max. Saturation Flux Density	-68.5 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

Receiving Beams 2:

Question	Response
Beam ID	SRX4
Receive Beam Frequency	2025.0 MHz -2110.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	5.0 dBi
Antenna Pointing Error	0.04 degrees
Antenna Rotational Error	0.04 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-22.6 dB/K
Min. Saturation Flux Density	-99.5 dBW/m2
Max. Saturation Flux Density	-68.5 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

Receiving
Channels (30)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
R432	0.8	2049.0	TT&C
R442	1.6	2049.0	TT&C
R422	0.4	2049.0	TT&C
R412	0.2	2049.0	TT&C
R312	0.2	2049.0	TT&C
R444	1.6	2055.0	TT&C
R434	0.8	2055.0	TT&C
R424	0.4	2055.0	TT&C
R414	0.2	2055.0	TT&C
R314	0.2	2055.0	TT&C
R443	1.6	2053.0	TT&C
R433	0.8	2053.0	TT&C
R423	0.4	2053.0	TT&C
R421	0.4	2047.0	TT&C
R411	0.2	2047.0	TT&C
R311	0.2	2047.0	TT&C
R441	1.6	2047.0	TT&C
R446	1.6	2076.5	TT&C
R436	0.8	2076.5	TT&C
R426	0.4	2076.5	TT&C
R416	0.2	2076.5	TT&C
R316	0.2	2076.5	TT&C
R445	1.6	2074.5	TT&C
R435	0.8	2074.5	TT&C

R425	0.4	2074.5	TT&C
R415	0.2	2074.5	TT&C
R315	0.2	2074.5	TT&C
R313	0.2	2053.0	TT&C
R413	0.2	2053.0	TT&C
R431	0.8	2047.0	TT&C

Transmitting
Beams 1:

Question	Response
Beam ID	XTX
Transmit Beam Frequency	8025.0 MHz -8400.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	17.0 dBi
Antenna Pointing Error	0.04 degrees
Antenna Rotational Error	0.04 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-53.0 dBW/Hz
Max. Transmit EIRP	20.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
* (dBW/m ² /BW):	(dBW/m ² /BW):	(dBW/m ² /BW):	(dBW/m ² /BW):	(dBW/m ² /BW):	(dBW/m ² /BW):	(dBW/m ² /BW):
4.0 kHz	-154.9	-153.2	-151.6	-150.2	-149.0	-142.8

Transmitting
Beams 2:

Question	Response
Beam ID	STX3
Transmit Beam Frequency	2200.0 MHz -2290.0 MHz

Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.0 dBi
Antenna Pointing Error	0.04 degrees
Antenna Rotational Error	0.04 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-55.1 dBW/Hz
Max. Transmit EIRP	2.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
4.0 kHz	-156.9	-155.2	-153.7	-152.3	-151.1	-144.9

Transmitting Beams 3:

Question	Response
Beam ID	STX4
Transmit Beam Frequency	2200.0 MHz -2290.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.0 dBi
Antenna Pointing Error	0.04 degrees

Antenna Rotational Error	0.04 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-58.0 dBW/Hz
Max. Transmit EIRP	9.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
4.0 kHz	-159.8	-158.1	-156.6	-155.2	-154.0	-147.8

**Transmitting
Channels (42)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
S432	5.0	2220.0	TT&C
S413	1.0	2230.0	TT&C
S423	2.0	2230.0	TT&C
S433	5.0	2230.0	TT&C
S414	1.0	2260.0	TT&C
S424	2.0	2260.0	TT&C
S434	5.0	2260.0	TT&C
S313	1.0	2230.0	TT&C
S312	1.0	2220.0	TT&C
S412	1.0	2220.0	TT&C
S422	2.0	2220.0	TT&C
S441	5.0	2210.0	Service Link
S442	5.0	2220.0	Service Link
S443	5.0	2230.0	Service Link
S444	5.0	2260.0	Service Link
S445	5.0	2270.0	Service Link
S446	5.0	2280.0	Service Link
XT11	50.0	8112.5	Service Link
XT21	20.0	8112.5	Service Link
XT31	10.0	8112.5	Service Link
S431	5.0	2210.0	TT&C
XT12	50.0	8162.5	Service Link
XT22	20.0	8162.5	Service Link
XT32	10.0	8162.5	Service Link

XT13	50.0	8212.5	Service Link
XT23	20.0	8212.5	Service Link
XT33	10.0	8212.5	Service Link
XT14	50.0	8262.5	Service Link
XT24	20.0	8262.5	Service Link
XT34	10.0	8262.5	Service Link
S436	5.0	2280.0	TT&C
S426	2.0	2280.0	TT&C
S416	1.0	2280.0	TT&C
S415	1.0	2270.0	TT&C
S425	2.0	2270.0	TT&C
S435	5.0	2270.0	TT&C
S314	1.0	2260.0	TT&C
S315	1.0	2270.0	TT&C
S316	1.0	2280.0	TT&C
S411	1.0	2210.0	TT&C
S421	2.0	2210.0	TT&C
S311	1.0	2210.0	TT&C

Certification Questions

Question	Response
Are the applicable service area coverage requirements of 25.143(b)(2) (ii) and (iii), or 25.144(a)(3)(i), or 25.145 (c)(1) and (2), or 25.146(i)(1) and (2), or 25.148(c), or 25.225 met?	N/A
Are the applicable frequency tolerances of 25.202(e) and out-of-band emission limits of 25.202(f)(1),(2), and (3) met?	Yes
Are the cessation of emissions requirements of 25.207 met?	Yes
Are the applicable power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	
For NGSO applications, are the applicable equivalent-power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	N/A
Are the applicable full-frequency-reuse requirements of 25.210 met?	
If the application is for a 17/24 GHz BSS space station, will it be operated at an offset location with full power and interference protection in accordance with 25.262(b)?	

Attachments

Information not provided.