



312 File Number: **SATLOA2024051700107**

Filing Description

Question	Response
Description	Loft Orbital - YAM-8

Satellite
Information

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	YAM-8
Estimated Lifetime of Satellite(s) From Date of Launch	10 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
Earth Exploration-Satellite Service		8025.0 MHz -8400.0 MHz	Transmit
Earth Exploration-Satellite Service		2025.0 MHz -2110.0 MHz	Receive
Earth Exploration-Satellite 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	01/01/2025
Celestial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	97.7 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5726.0 seconds
Apogee	540.0 km
Perigee	540.0 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	SRXL
Receive Beam Frequency	2064.0 MHz -2072.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	6.5 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-20.5 dB/K
Min. Saturation Flux Density	-110.2 dBW/m2
Max. Saturation Flux Density	-69.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 2:

Question	Response
Beam ID	SRX2
Receive Beam Frequency	2072.0 MHz -2110.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.5 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees

Receiving Beams 3:

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-20.5 dB/K
Min. Saturation Flux Density	-110.2 dBW/m2
Max. Saturation Flux Density	-69.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Question	Response
Beam ID	SRXR
Receive Beam Frequency	2064.0 MHz -2072.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.5 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-20.5 dB/K
Min. Saturation Flux Density	-110.2 dBW/m2
Max. Saturation Flux Density	-69.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Channels (17)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
SU53	1.0	2107.5	Service Link
SU52	1.0	2097.5	Service Link
SU51	1.0	2075.0	Service Link
SU43	3.0	2107.5	Service Link
SU42	3.0	2097.5	Service Link
SU31	5.0	2075.0	Service Link
SU32	5.0	2097.5	Service Link
SU33	5.0	2107.5	Service Link
SU41	3.0	2075.0	Service Link
SU21	0.6	2064.35	Service Link
SU12	0.12	2067.35	Service Link
SU14	0.12	2071.35	Service Link
SU11	0.12	2065.35	Service Link
SU23	0.6	2069.35	Service Link
SU24	0.6	2071.35	Service Link
SU22	0.6	2066.35	Service Link
SU13	0.12	2069.35	Service Link

Transmitting
Beams 1:

Question	Response
Beam ID	XTXR
Transmit Beam Frequency	8039.0 MHz -8327.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.0 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-68.6 dBW/Hz
Max. Transmit EIRP	16.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

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	-168.0	-165.9	-164.0	-162.4	-161.0	-154.4

Transmitting
Beams 2:

Question	Response
Beam ID	STXR
Transmit Beam Frequency	2243.0 MHz -2256.0 MHz

Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.5 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-55.1 dBW/Hz
Max. Transmit EIRP	2.33 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global (with the exception of the United States, Alaska, and Hawaii)

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	-156.8	-155.1	-153.5	-152.1	-150.9	-144.4

Transmitting Beams 3:

Question	Response
Beam ID	STXL
Transmit Beam Frequency	2243.0 MHz -2256.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	6.5 dBi
Antenna Pointing Error	0.0 degrees

Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-55.1 dBW/Hz
Max. Transmit EIRP	2.33 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global (with the exception of the United States, Alaska, and Hawaii)

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	-156.8	-155.1	-153.5	-152.1	-150.9	-144.4

Transmitting Beams 4:

Question	Response
Beam ID	XTXL
Transmit Beam Frequency	8039.0 MHz -8327.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	6.0 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees

Max. Transmit EIRP Density	-68.6 dBW/Hz
Max. Transmit EIRP	16.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
* 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	-168.0	-165.9	-164.0	-162.4	-161.0	-154.4

Transmitting Beams 5:

Question	Response
Beam ID	STX2
Transmit Beam Frequency	2250.0 MHz -2290.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	6.5 dBi
Antenna Pointing Error	0.0 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-55.0 dBW/Hz
Max. Transmit EIRP	6.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global (with the exception of the United States, Alaska, and Hawaii)

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	-157.7	-155.6	-153.7	-152.1	-150.7	-144.2

**Transmitting
Channels (22)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
SD42	3.0	2277.3	Service Link
SD43	3.0	2287.5	Service Link
SD51	1.0	2253.1	Service Link
SD53	1.0	2287.5	Service Link
SD52	1.0	2277.3	Service Link
SD31	5.0	2253.1	Service Link
SD32	5.0	2277.3	Service Link
SD33	5.0	2287.5	Service Link
SD41	3.0	2253.1	Service Link
SD26	0.964	2255.35	Service Link
XD1	288.0	8183.0	Service Link
SD14	0.12	2251.35	Service Link
SD13	0.12	2249.35	Service Link
SD12	0.12	2247.35	Service Link
SD11	0.12	2245.35	Service Link
SD22	0.964	2246.35	Service Link
SD21	0.964	2244.35	Service Link
SD16	0.12	2255.35	Service Link
SD23	0.964	2248.35	Service Link
SD25	0.964	2253.35	Service Link
SD24	0.964	2250.35	Service Link
SD15	0.12	2253.35	Service Link

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

File Name	Beam	Field	Attachment Type	Description
<u>STX2.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>XTXR.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>XTXL.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>STXR.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>STXL.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>SRXR.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>SRXL.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	
<u>SRX2.gxt</u>		NGSO Antenna Gain Data	GXT file (*.gxt)	