



312 File Number: **SESMFS2018091102588**

Filing Description

Question	Response
Description	U.S. access to EUTELSAT 65W A FSS.

**Satellite
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	EUTELSAT 65 W A
Estimated Lifetime of Satellite(s) From Date of Launch	15 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
Fixed-Satellite Service		12750.0 MHz -13250.0 MHz	Receive
Fixed-Satellite Service		10700.0 MHz -10950.0 MHz	Transmit
Fixed-Satellite Service		11200.0 MHz -11450.0 MHz	Transmit

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	65.0 degrees
	Hemisphere of Orbital Longitude	W
Longitudinal Tolerance or East /West Station-Keeping	Toward West	0.05 degrees
	Toward East	0.05 degrees
Inclination Excursion or North /South Station-Keeping Tolerance	Inclination Excursion or North /South Station-Keeping Tolerance	0.05 degrees
Antenna Axis Attitude Accuracy	Roll	0.1 degrees
	Pitch	0.1 degrees
	Yaw	0.1 degrees

Receiving Beams 1:

Question	Response
Beam ID	SAUV
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	31.5 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	7.1 dB/K
Min. Saturation Flux Density	-92.0 dBW/m ²
Max. Saturation Flux Density	-70.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of SAUV beam

Receiving Beams 2:

Question	Response
Beam ID	BUH
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.2 dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	6.4 dB/K
Min. Saturation Flux Density	-92.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of beam BUH

**Receiving
Beams 3:**

Question	Response
Beam ID	BUV
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	33.2 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	6.4 dB/K
Min. Saturation Flux Density	-92.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of beam BUV

Receiving Channels (24)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
UL12	36.0	12976.5	Feeder Link
UL10	36.0	12935.0	Feeder Link
UL08	36.0	12893.5	Feeder Link
UL06	36.0	12852.0	Feeder Link
UL18	36.0	13102.0	Feeder Link
UL04	36.0	12810.5	Feeder Link
UL02	36.0	12769.0	Feeder Link
UL13	36.0	13019.0	Feeder Link
UL15	36.0	13060.5	Feeder Link
UL17	36.0	13102.0	Feeder Link
UL19	36.0	13143.5	Feeder Link
UL21	36.0	13185.0	Feeder Link
UL23	36.0	13226.5	Feeder Link
UL11	36.0	12976.5	Feeder Link
UL01	36.0	12769.0	Feeder Link
UL03	36.0	12810.5	Feeder Link
UL05	36.0	12852.0	Feeder Link
UL07	36.0	12893.5	Feeder Link
UL24	36.0	13226.5	Feeder Link
UL09	36.0	12935.0	Feeder Link
UL16	36.0	13060.5	Feeder Link
UL14	36.0	13019.0	Feeder Link
UL22	36.0	13185.0	Feeder Link
UL20	36.0	13143.5	Feeder Link

Transmitting Beams 1:

Question	Response
Beam ID	SADH
Transmit Beam Frequency	10700.0 MHz -10950.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	29.2 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-23.0 dBW/Hz
Max. Transmit EIRP	50.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of SADH beam

Max. Power Flux Density

	* 0° - 5° (dBW/m ²) /BW:	* 5° - 10° (dBW/m ²) /BW:	* 10° - 15° (dBW/m ²) /BW:	* 15° - 20° (dBW/m ²) /BW:	* 20° - 25° (dBW/m ²) /BW:	* 25° - 90° (dBW/m ²) /BW:
4.0 kHz	-169.3	-167.1	-164.8	-164.5	-164.0	-149.1

Transmitting Beams 2:

Question	Response
Beam ID	BDH

Transmit Beam Frequency	10700.0 MHz -10950.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	31.1 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-23.0 dBW/Hz
Max. Transmit EIRP	51.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of BDH beam

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	-166.1	-165.3	-164.2	-163.1	-160.0	-149.2

Transmitting Beams 3:

Question	Response
Beam ID	BDV
Transmit Beam Frequency	10700.0 MHz -10950.0 MHz
Beam Type	Fixed
Polarization	V

Peak Gain	31.1 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-23.0 dBW/Hz
Max. Transmit EIRP	51.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of BDV beam

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	-166.1	-165.3	-164.2	-163.1	-160.0	-149.2

Transmitting Beams 4:

Question	Response
Beam ID	SAD2
Transmit Beam Frequency	11200.0 MHz -11450.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	29.2 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-23.0 dBW/Hz
Max. Transmit EIRP	50.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of SAD2 beam

Max. Power Flux Density

	* 0° - 5° (dBW/m ² /BW):	* 5° - 10° (dBW/m ² /BW):	* 10° - 15° (dBW/m ² /BW):	* 15° - 20° (dBW/m ² /BW):	* 20° - 25° (dBW/m ² /BW):	* 25° - 90° (dBW/m ² /BW):
4.0 kHz	-169.3	-167.1	-164.8	-164.5	-164.0	-149.1

Transmitting Beams 5:

Question	Response
Beam ID	BDH2
Transmit Beam Frequency	11200.0 MHz -11450.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	31.1 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-23.0 dBW/Hz
Max. Transmit EIRP	51.9 dBW

Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of BDH2 beam

Max. Power Flux Density

	* 0° - 5° (dbW/m ² /BW):	* 5° - 10° (dbW/m ² /BW):	* 10° - 15° (dbW/m ² /BW):	* 15° - 20° (dbW/m ² /BW):	* 20° - 25° (dbW/m ² /BW):	* 25° - 90° (dbW/m ² /BW):
4.0 kHz	-166.1	-165.3	-164.2	-163.1	-160.0	-149.2

Transmitting Beams 6:

Question	Response
Beam ID	BDV2
Transmit Beam Frequency	11200.0 MHz -11450.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	31.1 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-23.0 dBW/Hz
Max. Transmit EIRP	51.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour of BDV2 beam

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	-166.1	-165.3	-164.2	-163.1	-160.0	-149.2

Transmitting Channels (24)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
DL23	36.0	11428.75	Service Link
DL22	36.0	11387.25	Service Link
DL21	36.0	11387.25	Service Link
DL20	36.0	11345.75	Service Link
DL19	36.0	11345.75	Service Link
DL18	36.0	11304.25	Service Link
DL17	36.0	11304.25	Service Link
DL16	36.0	11262.75	Service Link
DL15	36.0	11262.75	Service Link
DL14	36.0	11221.25	Service Link
DL13	36.0	11221.25	Service Link
DL12	36.0	10926.5	Service Link
DL24	36.0	11428.75	Service Link
DL01	36.0	10719.0	Service Link
DL02	36.0	10719.0	Service Link
DL03	36.0	10760.5	Service Link
DL04	36.0	10760.5	Service Link
DL05	36.0	10802.0	Service Link
DL06	36.0	10802.0	Service Link
DL07	36.0	10843.5	Service Link
DL08	36.0	10843.5	Service Link
DL09	36.0	10885.0	Service Link
DL10	36.0	10885.0	Service Link
DL11	36.0	10926.5	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?	Yes
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?	Yes
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
E65w2_B_KU_Rx_gain.gxt	BUH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Rx, Hor pol, Brazil service area
E65w2_SA_KU_Tx_gain.gxt	SAD2	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Tx (11.2-11.45 GHz), Hor pol, South America and Eastern US service area
E65w2_SA_KU_Tx_gain.gxt	SADH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Tx, Hor pol, South America and Eastern US service area
E65w2_B_KU_Tx_gain.gxt	BDV2	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Tx (11.2-11.45 GHz), Ver pol, Brazil service area
E65w2_B_KU_Tx_gain.gxt	BDV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Tx, Ver pol, Brazil service area
E65w2_B_KU_Tx_gain.gxt	BDH2	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Tx (11.2-11.45 GHz), Hor pol, Brazil service area
E65w2_B_KU_Tx_gain.gxt	BDH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Tx, Hor pol, Brazil service area
E65w2_SA_KU_Rx_gain.gxt	SAUV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Rx, Hor pol, South America and Eastern US service area
E65w2_B_KU_Rx_gain.gxt	BUV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	KU Rx, Ver pol, Brazil service area

