



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: Intelsat License LLC, as debtor-in-possession

Call Sign: E190491

Authorization Type: Modification of License

File Number: SES-MOD-20200403-00369

Non Common Carrier

Grant date: 09/15/2020

Expiration Date: 07/31/2034

Nature of Service: Fixed Satellite Service

Class of Station: Temporary Fixed Earth Station

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	CONUS			0	NA

Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning July 31, 2019 (3 AM Eastern Standard Time) and ending July 31, 2034 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is September 15, 2021 (3 AM Eastern Standard Time) . Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	41.70	14.50	1		Digital Data
2)	14000.0000-14500.0000	H, V, L, R	780KG7W	Rx	37.70	14.50	1		Digital Data
3)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			1		Digital Data
4)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			1		Digital Data
5)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	42.00	14.80	10		Digital Data
6)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	37.70	14.80	10		Digital Data
7)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			10		Digital Data
8)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			10		Digital Data
9)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	42.00	14.80	11		Digital Data



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10)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	37.70	14.80	11		Digital Data
11)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			11		Digital Data
12)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			11		Digital Data
13)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	41.70	14.50	2		Digital Data
14)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	37.40	14.50	2		Digital Data
15)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			2		Digital Data
16)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			2		Digital Data
17)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	41.70	14.50	3		Digital Data
18)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	37.40	14.50	3		Digital Data
19)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			3		Digital Data
20)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			3		Digital Data
21)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	46.70	19.50	4	21	Digital Data
22)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	42.40	19.50	4	21	Digital Data
23)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			4		Digital Data
24)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			4		Digital Data
25)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	42.00	14.80	5	21	Digital Data
26)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	37.70	14.80	5	21	Digital Data
27)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			5		Digital Data
28)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			5		Digital Data
29)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	39.40	12.20	6		Digital Data
30)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	35.10	12.20	6		Digital Data
31)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx	0.00	0.00	6		Digital Data
32)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx	0.00	0.00	6		Digital Data
33)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	39.00	11.80	7		Digital Data



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The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
34)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	34.70	11.80	7		Digital Data
35)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx	0.00	0.00	7		Digital Data
36)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx	0.00	0.00	7		Digital Data
37)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	38.70	11.50	8		Digital Data
38)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	34.40	11.50	8		Digital Data
39)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			8		Digital Data
40)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx	0.00	0.00	8		Digital Data
41)	14000.0000-14500.0000	H, V, L, R	2M10G7W	Tx	42.00	14.80	9		Digital Data
42)	14000.0000-14500.0000	H, V, L, R	780KG7W	Tx	37.70	14.80	9		Digital Data
43)	11700.0000-12200.0000	H, V, L, R	12M7G7W	Rx			9		Digital Data
44)	11700.0000-12200.0000	H, V, L, R	15M0G7W	Rx			9		Digital Data

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	14000.0000-14500.0000			05.0	-05.0				4
2)	11700.0000-12200.0000			05.0	-05.0				4
3)	14000.0000-14500.0000			05.0	-05.0				5
4)	11700.0000-12200.0000			05.0	-05.0				5
5)	14000.0000-14500.0000			05.0	-05.0				1
6)	11700.0000-12200.0000			05.0	-05.0				1
7)	14000.0000-14500.0000			05.0	-05.0				2
8)	11700.0000-12200.0000			05.0	-05.0				2
9)	11700.0000-12200.0000			05.0	-05.0				3
10)	14000.0000-14500.0000			05.0	-05.0				3
11)	14000.0000-14500.0000			05.0	-05.0				6



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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
12)	11700.0000-12200.0000			05.0-05.0					6
13)	14000.0000-14500.0000			05.0-05.0					7
14)	11700.0000-12200.0000			05.0-05.0					7
15)	14000.0000-14500.0000			05.0-05.0					8
16)	11700.0000-12200.0000			05.0-05.0					8
17)	14000.0000-14500.0000			05.0-05.0					9
18)	11700.0000-12200.0000			05.0-05.0					9
19)	14000.0000-14500.0000			05.0-05.0					10
20)	11700.0000-12200.0000			05.0-05.0					10
21)	14000.0000-14500.0000			05.0-05.0					11
22)	11700.0000-12200.0000			05.0-05.0					11

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) 1 to Permitted Space Station List
- 2) 1 to GALAXY 18 satellite (S2733) @ 123 W.L.(U.S.-licensed satellite)
- 3) 1 to INTELSAT 37e (S2972) @ 18.0 degrees W.L. (U.S.-licensed)
- 4) 1 to SKY-B1 (S2922) satellite @ 43.15 degrees W.L. (U.S.-licensed)

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)	
1	1	500	0.75	GATR	075M	0	0.37 AGL		
		Max Gains(s):	70.0 dBi @	14.0000 GHz	55.0 dBi @	12.0000 GHz			
		Maximum total input power at antenna flange (Watts) =				10.50			
		Maximum aggregate output EIRP for all carriers (dBW) =				49.70			



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Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	10	500	0.95	TAMPA MICROWAVE	95CMMANPACK	0		
	Max Gains(s):		38.4 dBi @	11.8500 GHz	41.4 dBi @	14.4750 GHz		
	Maximum total input power at antenna flange (Watts) =				16.00			
	Maximum aggregate output EIRP for all carriers (dBW) =				52.00			
1	11	500	1.3	TAMPA MICROWAVE	1.3SATTERMINAL	0		
	Max Gains(s):		42.5 dBi @	11.8500 GHz	44.0 dBi @	14.4750 GHz		
	Maximum total input power at antenna flange (Watts) =				16.00			
	Maximum aggregate output EIRP for all carriers (dBW) =				54.30			
1	2	500	1.2	GATR	1.2M	0	0.6 AGL	
	Max Gains(s):		65.0 dBi @	14.0000 GHz	62.0 dBi @	12.0000 GHz		
	Maximum total input power at antenna flange (Watts) =				12.00			
	Maximum aggregate output EIRP for all carriers (dBW) =				43.00			
1	3	500	2.4	GATR	2.4M	0	1.2 AGL	
	Max Gains(s):		65.0 dBi @	14.0000 GHz	62.0 dBi @	12.0000 GHz		
	Maximum total input power at antenna flange (Watts) =				12.00			
	Maximum aggregate output EIRP for all carriers (dBW) =				59.60			
1	4	500	0.96	GCS	L3-Panther 2	0	0.45 AGL	21
	Max Gains(s):		55.0 dBi @	14.0000 GHz	70.0 dBi @	12.0000 GHz		
	Maximum total input power at antenna flange (Watts) =				14.00			
	Maximum aggregate output EIRP for all carriers (dBW) =				54.90			
1	5	500	0.6	GCS	L3-Panther 2	0	0.3 AGL	21
	Max Gains(s):		50.0 dBi @	14.0000 GHz	75.0 dBi @	12.0000 GHz		
	Maximum total input power at antenna flange (Watts) =				14.00			
	Maximum aggregate output EIRP for all carriers (dBW) =				51.20			



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Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	6	500	0.4	SATCUBE	SATCUBEKU	0		
		Max Gains(s):	30.9 dBi @	12.0000 GHz	31.7 dBi @	14.2500 GHz		
		Maximum total input power at antenna flange (Watts) =			30.00			
		Maximum aggregate output EIRP for all carriers (dBW) =			46.00			
1	7	500	0.35	L3 HARRIS	SHADOW	0		
		Max Gains(s):	32.3 dBi @	12.0000 GHz	32.8 dBi @	14.2500 GHz		
		Maximum total input power at antenna flange (Watts) =			15.80			
		Maximum aggregate output EIRP for all carriers (dBW) =			43.00			
1	8	500	0.32	PARADIGM	SWARMKU	0		
		Max Gains(s):	30.8 dBi @	12.0000 GHz	31.3 dBi @	14.2500 GHz		
		Maximum total input power at antenna flange (Watts) =			40.00			
		Maximum aggregate output EIRP for all carriers (dBW) =			47.00			
1	9	500	0.65	TAMPA MICROWAVE	65CMMANUPACK	0		
		Max Gains(s):	36.4 dBi @	11.8500 GHz	38.8 dBi @	14.1250 GHz		
		Maximum total input power at antenna flange (Watts) =			16.00			
		Maximum aggregate output EIRP for all carriers (dBW) =			49.00			

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 4 --- Licensee must ensure that a current listing of the name, title, mailing address, email address, and telephone number of the responsible point of contact are on file at the FCC. Any changes must be filed electronically in the International Bureau Filing System (MyIBFS) using the "Pleadings and Comments" link on the MyIBFS homepage within 10 days of the change.
- 8 --- Licensee must notify the Commission when all earth stations operating under this authorization are no longer operational or when they have not been used to provide any service during any 6-month operation.



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

21 --- Operation of antenna must comply with the off-axis eirp spectral density level specified in 25.218.

90398 --- Changes to previously authorized transmitting facilities, operations and devices regulated by the Commission that may have significant environmental impact, and are not excluded by §1.1306, require the preparation of an Environmental Assessment (EA) by the licensee. (See 47 C.F.R. §§1.1307, 1.1308 and 1.1311)

90399 --- The licensee shall, at all times, take all necessary measures to ensure that operation of this (these) authorized earth station(s) does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR §§ 1.1307(b) and 1.1310. Physical measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.

90405 --- Operations with PERMITTED LIST satellite must comply with §25.212 levels and operations above these levels must coordinate with satellite operators prior to operations.

900407 --- The Permitted Space Station List (Permitted List) is a list of all geostationary space stations providing fixed-satellite service pursuant to a Commission license or grant of U.S. market access. The Permitted List currently includes the following frequency bands per §25.103 and §25.115(k)(1):

- 3600-4200 MHz (space-to-Earth)
- 5850-6725 MHz (Earth-to-space)
- 10.95-11.2 GHz (space-to-Earth)
- 11.45-12.2 GHz (space-to-Earth)
- 13.75-14.5 GHz (Earth-to-space)
- 18.3-18.8 GHz (space-to-Earth)
- 19.7-20.2 GHz (space-to-Earth)
- 24.75-25.25 GHz (Earth-to-space)
- 28.35-28.6 GHz (Earth-to-space)
- 29.25-30.0 GHz (Earth-to-space).

Earth stations with "Permitted List" designated as a point of communication may access any space station on the Permitted List, provided the operations comply with the applicable "routine" uplink and downlink limits, are within the specific frequency bands authorized in the earth station license, have completed coordination with terrestrial stations pursuant to §25.203, and otherwise comply with all terms and conditions of both the earth station license and the space station grant.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.