



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION**

Name: Intelsat License LLC

Call Sign: E150002

Authorization Type: Modification of License

File Number: SES-MOD-20160219-00162

Non Common Carrier

Grant date: 05/03/2016

Expiration Date: 11/09/2030



Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	17625 Technology BLVD HAGERSTOWN, WASHINGTO, MD 21740	39°35'53.9"N	77°45'23.0"W	170	83

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

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 November 9, 2015 (3 AM Eastern Standard Time) and ending November 9, 2030 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is May 3, 2017 (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)	6681.0000-6725.0000	H,V	1M00G7W	Tx	54.00	30.00	1		Digital Data
2)	6681.0000-6725.0000	H,V	36M0G7W	Tx	69.50	30.00	1		Digital Data
3)	6681.0000-6725.0000	H,V	44M0G7W	Tx	70.40	30.00	1		Digital Data
4)	6669.0000-6681.0000	H,V	12M0G7W	Tx	61.80	27.00	1		Digital Data
5)	6669.0000-6681.0000	H,V	1M00G7W	Tx	51.00	27.00	1		Digital Data
6)	6425.0000-6669.0000	H,V	1M00G7W	Tx	54.00	30.00	1		Digital Data
7)	6425.0000-6669.0000	H,V	36M0G7W	Tx	69.50	30.00	1		Digital Data
8)	6425.0000-6669.0000	H,V	62M5G7W	Tx	71.90	30.00	1		Digital Data
9)	6421.0000-6426.0000	L,R	850KG7D	Tx	79.60	56.30	1		TT&C, Ranging



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10)	6421.0000-6426.0000	H, V, L, R	1M20FXD	Tx	81.10	56.30	1		COMMAND AND RANGING
11)	5925.0000-6425.0000	H, V, L, R	1M00G7W	Tx	80.30	56.30	1		Digital Data
12)	5925.0000-6425.0000	H, V	36M0G7W	Tx	83.00	43.50	1		Digital Data
13)	5925.0000-6425.0000	H, V	62M5G7W	Tx	83.00	41.10	1		Digital Data
14)	5850.0000-5925.0000	H, V, L, R	1M00G7W	Tx	80.30	56.30	1		Digital Data
15)	5850.0000-5925.0000	H, V	36M0G7W	Tx	83.00	43.50	1		Digital Data
16)	5850.0000-5925.0000	H, V	62M5G7W	Tx	83.00	41.10	1		Digital Data
17)	5850.0000-5853.5000	H, V, L, R	1M20FXD	Tx	81.10	56.30	1		COMMAND AND RANGING
18)	5850.0000-5853.5000	L, R	850KFXD	Tx	79.60	56.30	1		COMMAND AND RANGING
19)	5850.0000-5851.0000	L	850KG7D	Tx	79.60	56.30	1		TT&C, Ranging
20)	3700.0000-4200.0000	H, V, L, R	250KG7D	Rx			1		Digital Data, Beacon

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)	3700.0000-4200.0000	49.0W	51.0W	35.5	36.6	139.2	141.6		1
2)	5850.0000-5925.0000	49.0W	51.0W	35.5	36.6	139.2	141.6	-9.46	1
3)	6421.0000-6426.0000	49.0W	51.0W	35.5	36.6	139.2	141.6	-9.46	1
4)	6425.0000-6669.0000	49.0W	51.0W	35.5	36.6	139.2	141.6	-35.76	1
5)	6669.0000-6681.0000	49.0W	51.0W	35.5	36.6	139.2	141.6	-38.76	1
6)	6681.0000-6725.0000	49.0W	51.0W	35.5	36.6	139.2	141.6	-35.76	1
7)	5850.0000-5853.5000	49.0W	51.0W	35.5	36.6	139.2	141.6	-9.41	1
8)	6421.0000-6426.0000	49.0W	51.0W	35.5	36.6	139.2	141.6	-9.41	1



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D) Points of Communications

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

- 1) 1 to INTELSAT 29e (S2913) @ 50.0 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	1	16.4	GENERAL DYNAMICS	ST 16.4	170	16.4 AGL/ 186.4 AMSL	
Max Gains(s):		59.0 dBi @	6.0000 GHz	55.1 dBi @	4.0000 GHz			
Maximum total input power at antenna flange (Watts) =					1,275.00			
Maximum aggregate output EIRP for all carriers (dBW) =					90.10			

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:

- 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
- 2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
- 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
- 2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: (1) name of the licensee, (2) file number of the application, (3) call sign of the antenna, (4) date of the license, (5) certification that the facility as authorized has been completed, (6) certification that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209, and (7) certification that the station is operational (including the date of commencement of service) and will remain operational during the license period unless the license is submitted for cancellation.



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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:

- 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
- 5208 --- The licensee shall take all necessary measures to ensure that the antenna 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 wherever such exposures might occur. 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.
- 5216 --- All operations shall be on a non-common carrier basis.
- 6663 --- Per Clearance - The band 5850-5925 MHz is shared on a co-primary basis with federal systems. In accordance with the US245, this earth station transmitter has been successfully coordinated with the federal government. The federal operators have evaluated the potential interference from this earth station transmitter to their radiolocation receivers and have concluded that no unacceptable interference will occur. Any conditions placed on the earth station transmitter are included in supplementary details. Any conditions required to protect radiolocation receivers will also be included in the FCC license (S819); per clearance - This is a shared band with the federal government. In accordance with US245, the applicant is aware of the potential allocation and electromagnetic compatibility issues in the 5850-5925 MHz band, and agrees to accept this potential for unacceptable interference in accordance with footnote G2 and these fixed-satellite service operations are limited to international inter-continental satellite systems (S818).
- 6664 --- The use of the 6725-7025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. (United States Table of Frequency Allocations. Note 5.441).
- 6665 --- In making assignments to stations of other services to which the bands: 6650-6675.2 MHz* are allocated (*indicates radio astronomy use for spectral line observations), all practicable steps shall be taken to protect the radio astronomy service from harmful interference. (United States Table of Frequency Allocations. Note 5.149 and US342).
- 6666 --- Intelsat is authorized to conduct telemetry, tracking, and command operations using the following center frequencies: 6422 MHz or 6424.5 MHz (Earth-to-space) pursuant to Intelsat 29e (Call Sign S2913) IBFS File Nos. SAT-LOA-20130722-00097; SAT-AMD-20140718-00087.



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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.

