



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

Name: Intelsat License LLC

Call Sign: E000296

Authorization Type: Modification of License

File Number: SES-MOD-20170925-01053

Non Common Carrier

Grant date: 01/09/2018

Expiration Date: 08/09/2025



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 (MTN-C92) HAGERSTOWN, WASHINGTON, MD 21740	39°35'54.0"N	77°45'35.0"W	173.74	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 August 9, 2010 (3 AM Eastern Standard Time) and ending August 9, 2025 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is January 9, 2019 (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)	6424.5000-6424.5000	H, V, L, R	1M20F7D	Tx	84.70	59.90	MTN-C92		TT&C
2)	6424.5000-6424.5000	H, V, L, R	850KF7D	Tx	84.70	61.40	MTN-C92		TT&C
3)	6176.3000-6176.3000	H, V, L, R	850KF7D	Tx	81.30	58.00	MTN-C92		TT&C
4)	6173.7000-6173.7000	H, V, L, R	850KF7D	Tx	81.30	58.00	MTN-C92		TT&C
5)	5925.0000-6425.0000	H, V, L, R	800KF9D	Tx	73.80	50.80	MTN-C92		TT&C
6)	5925.0000-6425.0000	H, V, L, R	900KF9D	Tx	74.30	50.80	MTN-C92		TT&C
7)	5925.0000-6425.0000	H, V, L, R	1M08F2D	Tx	75.10	50.80	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
8)	5925.0000-6425.0000	H, V, L, R	56K0G7W	Tx	62.30	50.80	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES



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9)	5925.0000-6425.0000	H, V, L, R	660KF2D	Tx	73.00	50.80	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
10)	5925.0000-6425.0000	H, V, L, R	72M0G7W	Tx	86.50	43.90	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
11)	5853.0000-5853.0000	H, V, L, R	1M20F7D	Tx	84.70	59.90	MTN-C92		TT&C
12)	5853.0000-5853.0000	H, V, L, R	850KF7D	Tx	84.70	61.40	MTN-C92		TT&C
13)	4199.2500-4199.2500	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
14)	4198.7500-4198.7500	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
15)	4198.2500-4198.2500	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
16)	4197.7500-4197.7500	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
17)	3952.5000-3952.5000	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
18)	3952.0000-3952.0000	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
19)	3948.0000-3948.0000	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
20)	3947.5000-3947.5000	H, V, L, R	500KF7D	Rx			MTN-C92		TT&C
21)	3700.0000-4200.0000	H, V, L, R	1M08F2D	Rx			MTN-C92		TT&C
22)	3700.0000-4200.0000	H, V, L, R	250KG9D	Rx			MTN-C92		TT&C
23)	3700.0000-4200.0000	H, V, L, R	660KF2D	Rx			MTN-C92		TT&C
24)	3700.0000-4200.0000	H, V, L, R	900KF9D	Rx			MTN-C92		TT&C
25)	3625.0000-4200.0000	H, V, L, R	800KF9D	Rx			MTN-C92		TT&C
26)	3625.0000-4200.0000	H, V, L, R	56K0G7W	Rx			MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
27)	3625.0000-4200.0000	H, V, L, R	72M0G7W	Rx			MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES



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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		
1)	5925.0000-6425.0000	6.0W	149.0W	05.3	05.7	101.9	257.8	10	MTN-C92
2)	3700.0000-4200.0000	6.0W	149.0W	05.3	05.7	101.9	257.8		MTN-C92
3)	3625.0000-4200.0000	18.0W	55.5W	14.4	38.7	110.4	147.3		MTN-C92
4)	5925.0000-6425.0000	18.0W	55.5W	14.4	38.7	110.4	147.3	-9.6	MTN-C92
5)	3700.0000-4200.0000		0.0W	00.7	05.7	097.9	360.0		MTN-C92
6)	6424.5000-6424.5000	6.0W	149.0W	05.3	05.7	101.9	257.8	11.43	MTN-C92
7)	5853.0000-5853.0000	6.0W	149.0W	05.3	05.7	101.9	257.8	11.43	MTN-C92
8)	6176.3000-6176.3000	6.0W	149.0W	05.3	05.7	101.9	257.8	11.43	MTN-C92
9)	6173.7000-6173.7000	6.0W	149.0W	05.3	05.7	101.9	257.8	11.43	MTN-C92

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 SIRIUS FM 5 (S2710) satellite @96 W.L. (U.S.-licensed satellite) (DARS)
- 3) 1 to INTELSAT 35e (S2959) @ 34.5 degrees W.L. (U.S.-licensed)
- 4) 1 to INTELSAT 37e (S2972) @ 18.0 degrees W.L. (U.S.-licensed)
- 5) 1 to INTELSAT 903 (S2407) @ 31.5 W.L. (U.S.-licensed)
- 6) 1 to INTELSAT 903 (S2407) @ 31.5 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	MTN-C92	1	9	VERTEX COMM.	9 KPC	173.74	10.29 AGL/ 184.03 AMSL	
Max Gains(s):		50.1 dBi @	3.9500 GHz	53.5 dBi @	6.1750 GHz			
Maximum total input power at antenna flange (Watts) =						2,000.00		
Maximum aggregate output EIRP for all carriers (dBW) =						86.50		

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions



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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:

- 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 (IBFS) in the "Other Filings" tab within 10 days of the change.
 - 5 --- Licensee must notify the Commission when an earth station is no longer operational or when it has not been used to provide any service during any 6-month operation.
 - 6 --- Licensee must comply with the license modification and notification requirements of 47 CFR § 25.118 to change the coordinates of its authorized earth station.
- 5023 --- The extended C-band frequencies 5850-5925 MHz and 3625-3700 MHz have been cleared with the National Telecommunications & Information Administration. These frequency bands are for INTELSAT use only.
- 5802 --- This authorization is issued pursuant to and subject to the terms and policy adopted in the Commission's Order, released December 11, 2000 (FCC 00-363).
- 5803 --- This earth station is granted to operate the frequency band 3650-3700 MHz on a secondary basis.
- 5822 --- The 3600-3650 MHz band is shared on a co-primary basis in the U.S. and Possessions with Federal Government radiolocation systems. Unacceptable interference may be caused to this earth station from radiolocation systems, including high-powered, highly mobile, shipborne and airborne radar transmitters, operating in the frequency band. Consistent with the applicant's EMC analysis (as required by US245 and based on the NTIA TR-99-361 Report, Technical Characteristics of Radiolocation Systems operating in the 3.1-3.7 GHz Band and Procedures for assessing EMC with Fixed Earth Station Receivers (available at <http://www.ntia.doc.gov/osmhome/reports.html>), the licensee accepts this potential for unacceptable interference. In the case that out-of-band interference does occur, the licensee is further aware that use of a RF filter ahead of the low noise amplifier (LNA) will limit potential out-of-band interference to its receiving earth station. Additionally, per US 245, in the band 3600-3650 MHz, these fixed-satellite service operations are limited to international inter-continental satellite systems.
- 5859 --- The 3650-3700 MHz band is shared on a co-primary basis in three Federal Government radiolocation systems identified in US348. Unacceptable interference may be caused to this earth station from these three radiolocation systems operating in the frequency band. Consistent with the applicant's EMC analysis (as required by US348 and based on the NTIA TR-99-361 Report, Technical Characteristics of Radiolocation Systems operating in the 3.1-3.7 GHz Band and Procedures for assessing EMC with Fixed Earth Station Receivers (available at <http://www.ntia.doc.gov/osmhome/reports.html>), the licensee accepts this potential for unacceptable interference from the three stations identified in US348. In the case that out-of-band interference does occur, the licensee is further aware that use of a RF filter ahead of the low noise amplifier (LNA) will limit potential out-of-band interference to its receiving earth station. Additionally, per US 245, in the band 3650-3700 MHz, these fixed-satellite service operations are limited to international inter-continental satellite systems.



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

- 5938 --- Telemetry, Tracking and Command (TT&C) functions for U.S. domestic satellites shall be conducted at either or both edges of the allocated bands. Frequencies, polarization and coding shall be selected to minimize interference into other satellite networks and within their own satellite system. TT&C function not performed at band edge(s) are only permitted with specified satellites that were previously authorized, or that are outside of the U.S. satellite arc 70 to 140 degree W.L.
- 90032 --- Waiver of 47 C.F.R. § 2.106 footnote NG 104 is granted for no more than two U.S. earth stations to perform TT&C with SES-4 (S2828) per grant of SAT-PPL-20110620-00112. This waiver is granted to Earth Stations E020071 and E110104.
- 90397 --- Telemetry, tracking and command (TT&C) operations identified in part B, Particulars of Operation in this authorization may be transmitted within the assigned bands that are not at a band edge only if the transmissions cause no greater interference and require no greater protection from harmful interference than the communications traffic on the satellite network or have been coordinated with operators of authorized co-frequency space stations at orbital locations within six degrees of the assigned orbital location. Frequencies, polarization, and coding of telemetry, tracking, and command transmissions must be selected to minimize interference into other satellite networks.
- 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.



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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.

