



**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-20160401-00305

Non Common Carrier

Grant date: 04/18/2016

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 April 18, 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)	5925.0000-6425.0000	H, V, L, R	800KF9D	Tx	73.80	50.80	MTN-C92		TT&C
2)	5925.0000-6425.0000	H, V, L, R	900KF9D	Tx	74.30	50.80	MTN-C92		TT&C
3)	5925.0000-6425.0000	H, V, L, R	1M08F2D	Tx	75.10	50.80	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
4)	5925.0000-6425.0000	H, V, L, R	56K0G7W	Tx	62.30	50.80	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
5)	5925.0000-6425.0000	H, V, L, R	660KF2D	Tx	73.00	50.80	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
6)	5925.0000-6425.0000	H, V, L, R	72M0G7W	Tx	86.50	43.90	MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
7)	3700.0000-4200.0000	H, V, L, R	1M08F2D	Rx			MTN-C92		TT&C
8)	3700.0000-4200.0000	H, V, L, R	250KG9D	Rx			MTN-C92		TT&C



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9)	3700.0000-4200.0000	H, V, L, R	660KF2D	Rx			MTN-C92		TT&C
10)	3700.0000-4200.0000	H, V, L, R	900KF9D	Rx			MTN-C92		TT&C
11)	3625.0000-4200.0000	H, V, L, R	800KF9D	Rx			MTN-C92		TT&C
12)	3625.0000-4200.0000	H, V, L, R	56K0G7W	Rx			MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES
13)	3625.0000-4200.0000	H, V, L, R	72M0G7W	Rx			MTN-C92		DIGITAL DATA, VOICE AND VIDEO SERVICES

**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

**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)



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**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

**H) Special and General Provisions**

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

- 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
- 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.
- 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.
- 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).
- 3428 --- This authorization is not to be construed as including any uplink or downlink authority in other countries.
- 3465 --- This authorization is subject to the policies adopted in the Report and Order, "Amendment of the Commission's Regulatory Policies to allow Non-US-Licensed Space Stations to provide Domestic and International Satellite Services in the United States," IB Docket 96-111, FCC 97-399 (Released November 26, 1997). (DISCO II)



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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:

- 5011 --- The Licensee(s) shall maintain on file with the Commission a current list or plan of the precise frequencies in use at the station, specifying for each frequency the RF center frequency, polarization, emission designator, nominal EIRP (in dBW) and maximum EIRP density (in dBW/4kHz). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis and shall be updated within seven (7) days of any changes in frequency usage at this station. The Licensee(s) need not notify the Commission of temporary usage of frequencies for periods of less than seven (7) days. However, the Licensee(s) shall maintain accurate station records of the times and particulars of such temporary frequency usage.
- 5013 --- In the event of the failure of a satellite with which operations are authorized in Section D of this license, operations are authorized in conjunction with the authorized INTELSAT satellite in the affected Ocean Region that provides the services authorized herein in order to maintain the continuity of commercial service; provided that the licensee(s) immediately notify the Commission of the nature of this emergency and its expected duration; and provided that the operational limits of elevation angle and azimuth range specified in Section C of this license are not exceeded. In the event that such emergency operations require emissions not specified in Section B of this license, such emissions may be utilized provided that the EIRP's of such emissions do not exceed the limits set forth in this license.
- 5014 --- With respect to potential co-channel interference to or from terrestrial microwave radio stations, the transmit and receive frequency bands listed in this license have been cleared for transmissions to and from satellites located in the geostationary or non-geostationary orbit for the emissions designated in Section B of this license.
- 5015 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and 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.
- 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.
- 5738 --- This authorization is subject to the conditions and terms set forth in the Commission's Order and Authorization, FCC 99-210, released August 6, 1999, and Memorandum Opinion and Order, FCC 01-107, released March 29, 2001, and New Skies Satellites N.V., Petition for Declaratory Ruling, Order, DA 01-513 (Int'l Bureau, Satellite and Radiocommunication Division, released Mar. 29, 2001)
- 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.



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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:

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.

5823 --- The 5850-5925 MHz band is shared in the U.S. and Possessions on a co-primary basis with Federal Government radiolocation systems. Unacceptable interference may be caused to this earth station's communication links from radiolocation systems, including high-powered land-based transportable and shipborne radar transmitters, operating in the frequency band in accordance with footnote G2. (See, e.g., NTIA Report Federal Radar Spectrum Requirements, (<http://www.ntia.doc.gov/osmhome/reports/ntia00-40/ntia00-40.pdf>), NTIA Report 83-115, Spectrum Resource Assessment in the 5650-5925 MHz Band ([http://www.fcc.gov/ib/srd/fedreg\\_ntiareport.html](http://www.fcc.gov/ib/srd/fedreg_ntiareport.html)), and FCC Fifth Notice of Inquiry in Preparation for a General World Administrative Conference in 1979 (Docket No. 20271; FCC 77-349)). As required by US245, the earth station licensee is aware of the EMC environment and this sharing situation with the radiolocation service and accepts the potential for unacceptable interference. Additionally, this fixed-satellite service earth station is limited to operations over 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.

5880 --- Use of this facility to provide international service on a common carrier basis requires a separate authorization under Section 214 of the Communication Act of 1934, as amended.

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 bandedge(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.

9659 --- The licensee is afforded 30 days from the date of issuance of this license to decline it as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.



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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.

