



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

Name: Denali 20020, LLC

Call Sign: E960222

Authorization Type: Modification of License

File Number: SES-MOD-20160323-00271

Non Common Carrier

Grant date: 05/31/2016

Expiration Date: 07/19/2021



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	1711 OLD HWY. 97 BREWSTER, OKANOGAN, WA 98812	48°8'50.5"N	119°41'33.2"W	377.1	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 July 19, 2006 (3 AM Eastern Standard Time) and ending July 19, 2021 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is May 31, 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)	14000.0000-14500.0000	H, V	72M0G7D	Tx	88.70	46.10	1		DIGITAL DATA AND VIDEO
2)	11700.0000-12200.0000	H, V	72M0G7D	Rx			1		DIGITAL DATA AND VIDEO
3)	5850.0000-6425.0000	L	2M40G7D	Tx	83.50	55.70	1	1900 5023 5630	
4)	5850.0000-6425.0000	L	36M0F3F	Tx	83.50	56.50	1	1900 5023 5630	
5)	5850.0000-6425.0000	L	36M0G7F	Tx	83.50	43.90	1	1900 5023 5630	
6)	3625.0000-4200.0000	L	2M40G7D	Rx			1	1010 5023 5630	
7)	3625.0000-4200.0000	L	36M0F3F	Rx			1	1010 5023 5630	



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

Name: Denali 20020, LLC

Call Sign: E960222

Authorization Type: Modification of License

File Number: SES-MOD-20160323-00271

Non Common Carrier

Grant date: 05/31/2016

Expiration Date: 07/19/2021

**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
8)	3625.0000-4200.0000	L	36M0G7F	Rx			1	1010 5023 5630	

**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)	5850.0000-6425.0000	60.0W	-191.0W	11.1	-03.7	113.5	-255.9	17.45	1
2)	3625.0000-4200.0000	60.0W	-191.0W	11.1	-03.7	113.5	-255.9	0	1
3)	14000.0000-14500.0000	60.0W	-188.0W	11.1	-05.6	113.5	-253.5	4.49	1
4)	11700.0000-12200.0000	60.0W	-188.0W	11.1	-05.6	113.5	-253.5		1

**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

**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	9	VERTEX	9KPC	377.1	9.68 AGL/ 386.81 AMSL	
Max Gains(s):		50.1 dBi @	4.0000 GHz	53.5 dBi @	6.0000 GHz	58.5 dBi @		
		11.9500 GHz	60.1 dBi @	14.2500 GHz				
Maximum total input power at antenna flange (Watts) =					724.40			
Maximum aggregate output EIRP for all carriers (dBW) =					88.69			

**F) Remote Control Point:**

1

Call Sign: E960222



**UNITED STATES OF AMERICA**  
**FEDERAL COMMUNICATIONS COMMISSION**  

---

**RADIO STATION AUTHORIZATION**

Name: Denali 20020, LLC

Call Sign: E960222

Authorization Type: Modification of License

File Number: SES-MOD-20160323-00271

Non Common Carrier

Grant date: 05/31/2016

Expiration Date: 07/19/2021

**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.
- 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.
- 2454 --- All satellite uplink transmissions carrying broadband video information shall comply with the Automatic Transmitter Identification System (ATIS) requirements of Section 25.281 of the Rules, as modified by FCC Report No. DS-1066, released on April 3, 1991.
- 2511 --- Domestic satellite services are limited to "ALSAT" only.
  
- 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.
- 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).
- 5012 --- The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.



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

Name: Denali 20020, LLC

Call Sign: E960222

Authorization Type: Modification of License

File Number: SES-MOD-20160323-00271

Non Common Carrier

Grant date: 05/31/2016

Expiration Date: 07/19/2021

## H) Special and General Provisions

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

- 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.
- 5017 --- Operation of this station is governed by the terms, conditions and limitations in Part 25 of the Commission's Rules and Regulations and the following additional conditions: 1. This license shall not vest in the Licensee(s) any right to operate the station or any right in the use of the frequencies designated in the license beyond its term or in any other manner than authorized in the license; 2. Neither the license nor the right granted under it shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended, or the Commission's Rules and Regulations issued under it; and 3. This station is subject to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended.
- 5018 --- This license shall be forfeited automatically if this station is not ready for operation within the time specified unless, prior to the expiration date of this license, the Commission receives an Application for Additional Time to Construct a Radio Station (FCC Form 701) filed by the Licensee(s) showing good cause why the Licensee(s) could not complete construction on time.
- 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.
- 5202 --- Use of this facility to provide international service on a common carrier basis will require appropriate authorization under Section 214 of the Communication Act of 1934, as amended.
- 5203 --- All communications shall be in accordance with the satellites and services which have completed consultations under Article XIV(d) of the INTELSAT Agreement and which the Commission has approved.
- 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](http://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.



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

Name: Denali 20020, LLC

Call Sign: E960222

Authorization Type: Modification of License

File Number: SES-MOD-20160323-00271

Non Common Carrier

Grant date: 05/31/2016

Expiration Date: 07/19/2021

## H) Special and General Provisions

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

5220 --- All operations via TDRS-174 are restricted to the provision of capacity through the sale or lease of transponder capacity for communications not interconnected with the public-switched message networks (except for emergency restoration service) and shall be in accordance with the parameters summarized and conditions described in the INTELSAT Board of Governors document entitled "Article XIV (d) Consultation Concerning the Proposed Use of the Columbia Satellite System", BG-90-67E, August 27, 1991. This authorization is subject to all terms and conditions imposed on the Columbia satellite system by the Commission. This authorization is not to be construed as including any uplink or downlink authority in other countries, and all communications via TDRS-174 shall be between the US and those countries authorized in the above-referenced application which TDRS-174 is authorized by the Commission to serve.

5222 --- The provision of purely domestic service via non-ALSAT satellites is prohibited.

5223 --- All operations via the PANAMSAT satellite system are restricted to the provision of capacity through the sale or lease of transponder capacity for communications not interconnected to the public switched network. This authorization is subject to all terms and conditions imposed on the PANAMSAT satellite system by the Commission. This authorization is not to be construed as including any uplink or downlink authority in other countries, and all communications via PANAMSAT satellite system shall be between the US and those countries authorized in the above-referenced application which PANAMSAT satellite system is authorized by the Commission to serve.

5225 --- This action constitutes the final step with respect to the provision of the services only insofar as the US regulatory process is concerned. However, this authority shall not be construed as authorizing the distribution of programming where the appropriate copyright clearances have not been obtained or where the U.S. Government has determined that appropriate copyright protection does not otherwise exist.

5500 --- All services via non-ALSAT satellites are not interconnected to the public-switched network.

5630 --- International services shall be consistent with this emission designator, the underlying title III application(s) and the acquisition of any necessary Section 214 authority.



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

Name: Denali 20020, LLC

Call Sign: E960222

Authorization Type: Modification of License

File Number: SES-MOD-20160323-00271

Non Common Carrier

Grant date: 05/31/2016

Expiration Date: 07/19/2021

**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.