



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

Name: ViaSat, Inc.
Authorization Type: License
Non Common Carrier

Call Sign: E170088
File Number: SES-LIC-20170401-00357
Grant date: 11/09/2017 Expiration Date: 11/09/2032



Nature of Service: Fixed Satellite Service

Class of Station: Other

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	CONUS, HI, PR, U.S. Virgin Islands				NA

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, 2017 (3 AM Eastern Standard Time) and ending November 9, 2032 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is November 9, 2018 (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)	29500.0000-30000.0000	L,R	5M00G7D	Tx	57.56	26.59	1		5 MBd, Digital Carrier
2)	29500.0000-30000.0000	L,R	10M0G7D	Tx	58.48	24.50	1		10 MBd, Digital Carrier
3)	29500.0000-30000.0000	L,R	20M0G7D	Tx	58.48	21.49	1		20 MBd, Digital Carrier
4)	29500.0000-30000.0000	L,R	320MG7D	Tx	58.48	9.45	1		320 MBd, Digital Carrier
5)	29500.0000-30000.0000	L,R	40M0G7D	Tx	58.48	18.48	1		40 MBd, Digital Carrier
6)	29500.0000-30000.0000	L,R	80M0G7D	Tx	58.48	15.47	1		80 MBd, Digital Carrier
7)	29500.0000-30000.0000	L,R	160MG7D	Tx	58.48	12.46	1		160 MBd, Digital Carrier
8)	28350.0000-29100.0000	L,R	5M00G7D	Tx	53.40	22.43	1		5 MBd, Digital Carrier
9)	28350.0000-29100.0000	L,R	10M0G7D	Tx	56.40	22.43	1		10 MBd, Digital Carrier



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: ViaSat, Inc.
 Authorization Type: License
 Non Common Carrier

Call Sign: E170088
 File Number: SES-LIC-20170401-00357

Grant date: 11/09/2017 Expiration Date: 11/09/2032

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
10)	28350.0000-29100.0000	L,R	20M0G7D	Tx	57.88	20.89	1		20 MBd, Digital Carrier
11)	28350.0000-29100.0000	L,R	320MG7D	Tx	57.88	8.85	1		320 MBd, Digital Carrier
12)	28350.0000-29100.0000	L,R	40M0G7D	Tx	57.88	17.88	1		40 MBd, Digital Carrier
13)	28350.0000-29100.0000	L,R	80M0G7D	Tx	57.88	14.87	1		80 MBd, Digital Carrier
14)	28350.0000-29100.0000	L,R	160MG7D	Tx	57.88	11.86	1		160 MBd, Digital Carrier
15)	19700.0000-20200.0000	L,R	417MG7D	Rx			1		416.6 MBd M-ary PSK Digital Data
16)	17800.0000-19300.0000	L,R	417MG7D	Rx			1		416.6 MBd M-ary PSK Digital Data
17)	17700.0000-18300.0000	L,R	500MG7D	Rx			1		500 MBd M-ary PSK Digital Data
18)	29500.0000-30000.0000	L,R	5M00G7D	Tx	65.27	34.30	2		5 MBd, Digital Carrier
19)	29500.0000-30000.0000	L,R	10M0G7D	Tx	67.42	33.44	2		10 MBd, Digital Carrier
20)	29500.0000-30000.0000	L,R	20M0G7D	Tx	67.42	30.43	2		20 MBd, Digital Carrier
21)	29500.0000-30000.0000	L,R	40M0G7D	Tx	67.42	27.42	2		40 MBd, Digital Carrier
22)	29500.0000-30000.0000	L,R	80M0G7D	Tx	67.42	24.41	2		80 MBd, Digital Carrier
23)	29500.0000-30000.0000	L,R	160MG7D	Tx	67.42	21.40	2		160 MBd, Digital Carrier
24)	29500.0000-30000.0000	L,R	320MG7D	Tx	67.42	18.39	2		320 MBd, Digital Carrier
25)	28350.0000-29100.0000	L,R	5M00G7D	Tx	65.24	34.27	2		5 MBd, Digital Carrier
26)	28350.0000-29100.0000	L,R	10M0G7D	Tx	67.04	33.06	2		10 MBd, Digital Carrier
27)	28350.0000-29100.0000	L,R	20M0G7D	Tx	67.04	30.05	2		20 MBd, Digital Carrier
28)	28350.0000-29100.0000	L,R	40M0G7D	Tx	67.04	27.04	2		40 MBd, Digital Carrier
29)	28350.0000-29100.0000	L,R	80M0G7D	Tx	67.04	24.03	2		80 MBd, Digital Carrier
30)	28350.0000-29100.0000	L,R	160MG7D	Tx	67.04	21.02	2		160 MBd, Digital Carrier
31)	28350.0000-29100.0000	L,R	320MG7D	Tx	67.04	18.01	2		320 MBd, Digital Carrier
32)	19700.0000-20200.0000	L,R	417MG7D	Rx			2		416.6 MBd M-ary PSK Digital Data



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: ViaSat, Inc.
 Authorization Type: License
 Non Common Carrier

Call Sign: E170088
 File Number: SES-LIC-20170401-00357

Grant date: 11/09/2017 Expiration Date: 11/09/2032

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
33)	17800.0000-19300.0000	L,R	417MG7D	Rx			2		416.6 MBd M-ary PSK Digital Data
34)	17700.0000-18300.0000	L,R	500MG7D	Rx			2		500 MBd M-ary PSK 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)	28350.0000-29100.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4	-23.48	1
2)	29500.0000-30000.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4	-15.4	1
3)	17700.0000-19300.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4		1
4)	19700.0000-20200.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4		1
5)	28350.0000-29100.0000	69.6W	-115.1W	05.0	-19.5	110.8	-235.4	-12.6	2
6)	19700.0000-20200.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4		2
7)	29500.0000-30000.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4	-16.1	2
8)	17700.0000-19300.0000	69.9W	-115.1W	05.0	-19.5	110.8	-235.4		2

D) Points of Communications

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

- 1) 1 to VIASAT-1 (S2747) @ 115.1° W.L. (U.S.-licensed)
- 2) 1 to VIASAT-2 (S2902) @ 69.90 W.L. (U.K.-licensed)
- 3) 1 to WildBlue-1 (S2355) @ 111.1° W.L. (Canada-licensed)
- 4) 1 to ANIK-F2 (S2742) @ 111.1 degrees W.L. (Canada-licensed)
- 5) 1 to GALAXY 28 (S2160) @ 89 degrees W.L. (U.S.-licensed)



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

Name: ViaSat, Inc.
Authorization Type: License
Non Common Carrier

Call Sign: E170088
File Number: SES-LIC-20170401-00357
Grant date: 11/09/2017 Expiration Date: 11/09/2032

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	4000000	0.745	ViaSat	RA40750-AB		0 AGL/ 0 AMSL	
Max Gains(s):		40.1 dBi @ 28.3500 GHz	18.3000 GHz	40.4 dBi @ 30.0000 GHz	20.2000 GHz	43.9 dBi @		
Maximum total input power at antenna flange (Watts) =					25.00			
Maximum aggregate output EIRP for all carriers (dBW) =					58.50			
1	2	10000	1.8	General Dynamics	3180		0 AGL/ 0 AMSL	
Max Gains(s):		53.6 dBi @ 29.5000 GHz	30.0000 GHz	53.3 dBi @ 28.3500 GHz	29.7500 GHz	53.1 dBi @ 20.2000 GHz	49.7 dBi @ 19.3000 GHz	
Maximum total input power at antenna flange (Watts) =					25.00			
Maximum aggregate output EIRP for all carriers (dBW) =					67.60			

F) Remote Control Point:

1	5970 South Greenwood Plaza Blv, Suite 300 Greenwood Village, Arapahoe, CO 80111 720-554-7575	Call Sign:
---	--	------------

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 (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.



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION

Name: ViaSat, Inc.

Call Sign: E170088

Authorization Type: License

File Number: SES-LIC-20170401-00357

Non Common Carrier

Grant date: 11/09/2017

Expiration Date: 11/09/2032

H) Special and General Provisions

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

- 9662 --- The 17.8 - 20.2 GHz band is shared with U.S. Government space stations and associated earth stations in the fixed-Satellite Services. Services within the United States over the satellite network of which this is a cooperating earth station are subject to coordination under US334 and operation of the earth station(s) authorized herein will be subject to any technical constraints resulting from this coordination. See 47 C.F.R. Section 2.106, Footnote US334.
- 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.
- 90445 --- Earth station operations must protect primary NGSO FSS satellite systems from interference in the 28.6-29.1 GHz (Earth-to-space) frequency band.
- 90446 --- Earth station operations may not claim protection from interference from primary NGSO FSS satellite systems in the 18.8-19.3 GHz (space-to-Earth) frequency band.
- 90447 --- The waiver requested by the licensee to operate blanket licensed terminals in the 18.8-19.3 and 28.6-29.1 GHz frequency bands is granted based on the information presented concerning interference mitigation capabilities of VIASAT-1 in Narrative Exhibit A of File No. SES-LIC-20101217-01585 and of VIASAT-2 in Technical Annex, Attachment A of IBFS File Nos. SAT-MOD-20141105-00121 and SAT-LOI-20130319-00040. Additionally, no later than sixty days before the scheduled initial launch of each NGSO FSS satellite system licensed or granted market access in the United States to operate in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands, the licensee must either: (1) notify the Commission in writing when an agreement has been reached with the NGSO satellite system operator, or (2) seek and obtain the Commission's approval of a modification of this license including detailed technical demonstrations of how the licensee will protect the NGSO FSS satellite system. If neither condition is met, the licensee must cease earth station operations in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands pursuant to this license until such time as compliance is demonstrated.



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: ViaSat, Inc.

Call Sign: E170088

Authorization Type: License

File Number: SES-LIC-20170401-00357

Non Common Carrier

Grant date: 11/09/2017

Expiration Date: 11/09/2032

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 does not meet each required construction deadline by the required date of completion unless, before such date(s), a specific application is timely filed to request an extension of the construction deadline(s), supported with good cause why that failure to construct 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.