



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

Name: ViaSat, Inc.

Call Sign: E120075

Authorization Type: Modification of License

File Number: SES-MOD-20160108-00029

Non Common Carrier

Grant date: 06/29/2016

Expiration Date: 07/17/2028

Nature of Service: Fixed Satellite Service

Nature of Service: Other

Class of Station: Other



A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	M32	4000 terminals (Network Ops Cen. Tel. (720) 554-7575) Greenwood Village, CO 80111 Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				UNK
2)	M40	4000 terminals (Network Ops Cen. Tel. (720) 554-7575) Greenwood Village, Arapahoe, CO Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.			0	NA

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 June 29, 2016 (3 AM Eastern Standard Time) and ending July 17, 2028 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000. 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	20M0G7D	Tx	46.00	9.00	M32	20 MBD	PSK DIGITAL CARRIER
2)	29500.0000-30000.0000	L,R	5M00G7D	Tx	46.00	15.00	M32	5 MBD	PSK DIGITAL CARRIER
3)	29500.0000-30000.0000	L,R	10M0G7D	Tx	46.00	12.00	M32	10 MBD	PSK DIGITAL CARRIER



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4)	29500.0000-30000.0000	L,R	2M50G7D	Tx	46.00	18.00	M32	2.5 MBD CARRIER	PSK DIGITAL
5)	29500.0000-30000.0000	L,R	625KG7D	Tx	42.40	20.50	M32	625 KBD CARRIER	PSK DIGITAL
6)	29500.0000-30000.0000	L,R	1M25G7D	Tx	45.40	20.50	M32	1250 KBD CARRIER	PSK DIGITAL
7)	28350.0000-29100.0000	L,R	20M0G7D	Tx	46.00	9.00	M32	20 MBD CARRIER	PSK DIGITAL
8)	28350.0000-29100.0000	L,R	5M00G7D	Tx	46.00	15.00	M32	5 MBD CARRIER	PSK DIGITAL
9)	28350.0000-29100.0000	L,R	10M0G7D	Tx	46.00	12.00	M32	10 MBD CARRIER	PSK DIGITAL
10)	28350.0000-29100.0000	L,R	2M50G7D	Tx	46.00	18.00	M32	2.5 MBD CARRIER	PSK DIGITAL
11)	28350.0000-29100.0000	L,R	625KG7D	Tx	42.40	20.50	M32	625 KBD CARRIER	PSK DIGITAL
12)	28350.0000-29100.0000	L,R	1M25G7D	Tx	45.40	20.50	M32	1250 KBD CARRIER	PSK DIGITAL
13)	28100.0000-28350.0000	L,R	20M0G7D	Tx	46.00	9.00	M32	20 MBD CARRIER	PSK DIGITAL
14)	28100.0000-28350.0000	L,R	5M00G7D	Tx	46.00	15.00	M32	5 MBD CARRIER	PSK DIGITAL
15)	28100.0000-28350.0000	L,R	10M0G7D	Tx	46.00	12.00	M32	10 MBD CARRIER	PSK DIGITAL
16)	28100.0000-28350.0000	L,R	2M50G7D	Tx	46.00	18.00	M32	2.5 MBD CARRIER	PSK DIGITAL
17)	28100.0000-28350.0000	L,R	625KG7D	Tx	42.40	20.50	M32	625 KBD CARRIER	PSK DIGITAL
18)	28100.0000-28350.0000	L,R	1M25G7D	Tx	45.40	20.50	M32	1250 KBD CARRIER	PSK DIGITAL
19)	19700.0000-20200.0000	L,R	416MG7D	Rx			M32	416 MBD CARRIER	PSK DIGITAL
20)	19700.0000-20200.0000	L,R	52M1G7D	Rx			M32	52.1 MBD CARRIER	PSK DIGITAL
21)	18300.0000-19300.0000	L,R	416MG7D	Rx			M32	416 MBD CARRIER	PSK DIGITAL



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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
22)	18300.0000-19300.0000	L,R	52M1G7D	Rx			M32	52.1 MBd	PSK, DIGITAL CARRIER
23)	29500.0000-30000.0000	L,R	10M0G7D	Tx	43.50	9.50	M40	10 MBd	PSK, Digital Carrier
24)	29500.0000-30000.0000	L,R	20M0G7D	Tx	43.50	6.50	M40	20 MBd	PSK, Digital Carrier
25)	29500.0000-30000.0000	L,R	2M50G7D	Tx	43.50	15.50	M40	2.5 MBd	PSK, Digital Carrier
26)	29500.0000-30000.0000	L,R	5M00G7D	Tx	43.50	12.50	M40	5.0 MBd	PSK, Digital Carrier
27)	29500.0000-30000.0000	L,R	625KG7D	Tx	42.40	20.50	M40	625 kBd	PSK, Digital Carrier
28)	29500.0000-30000.0000	L,R	1M25G7D	Tx	43.50	18.60	M40	1250 kBd	PSK, Digital Carrier
29)	28350.0000-29100.0000	L,R	20M0G7D	Tx	43.50	6.50	M40	20 MBd	PSK, Digital Carrier
30)	28350.0000-29100.0000	L,R	10M0G7D	Tx	43.50	9.50	M40	10.0 MBd	PSK, Digital Carrier
31)	28350.0000-29100.0000	L,R	2M50G7D	Tx	43.50	15.50	M40	2.5 MBd	PSK, Digital Carrier
32)	28350.0000-29100.0000	L,R	5M00G7D	Tx	43.50	12.50	M40	5.0 MBd	PSK, Digital Carrier
33)	28350.0000-29100.0000	L,R	1M25G7D	Tx	43.50	18.60	M40	1250 kBd	PSK, Digital Carrier
34)	28350.0000-29100.0000	L,R	625KG7D	Tx	42.40	20.50	M40	625 kBd	PSK, Digital Carrier (Used under faded conditions only)
35)	28100.0000-28350.0000	L,R	10M0G7D	Tx	43.50	9.50	M40	10 MBd	PSK, Digital Carrier
36)	28100.0000-28350.0000	L,R	20M0G7D	Tx	43.50	6.50	M40	20 MBd	PSK, Digital Carrier
37)	28100.0000-28350.0000	L,R	2M50G7D	Tx	43.50	15.50	M40	2.5 MBd	PSK, Digital Carrier
38)	28100.0000-28350.0000	L,R	5M00G7D	Tx	43.50	12.50	M40	5.0 MBd	PSK, Digital Carrier
39)	28100.0000-28350.0000	L,R	625KG7D	Tx	42.40	20.50	M40	625 kBd	PSK, Digital Carrier



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#	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
40)	28100.0000-28350.0000	L,R	1M25G7D	Tx	43.50	18.60	M40		1250 kBd PSK, Digital Carrier
41)	19700.0000-20200.0000	L,R	52M1G7D	Rx			M40		52 MBd PSK, Digital Carrier
42)	19700.0000-20200.0000	L,R	416MG7D	Rx			M40		416 MBd PSK, Digital Carrier
43)	18300.0000-19300.0000	L,R	52M1G7D	Rx			M40		52 MBd PSK, Digital Carrier
44)	18300.0000-19300.0000	L,R	416MG7D	Rx			M40		416 MBd PSK, Digital Carrier

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	111.1W	115.1W	19.5	30.5	108.0	235.5	-4.5	M40
2)	29500.0000-30000.0000	111.1W	115.1W	19.5	30.5	108.0	235.5	-4.5	M40
3)	28100.0000-28350.0000	111.1W	115.1W	19.5	30.5	108.0	235.5	-4.5	M40
4)	28350.0000-29100.0000	111.1W	115.1W	19.5	30.5	108.0	235.5	-10.5	M32
5)	29500.0000-30000.0000	111.1W	115.1W	19.5	30.5	108.0	235.5	-10.5	M32
6)	18300.0000-19300.0000	111.1W	115.1W	19.5	30.5	108.0	235.5		M32
7)	19750.0000-20200.0000	111.1W	115.1W	19.5	30.5	108.0	235.5		M32
8)	28100.0000-28350.0000	111.1W	115.1W	19.5	30.5	108.0	235.5	-10.5	M32

D) Points of Communications

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

- 1) M40 to VIASAT-1 (S2747) @ 115.1° W.L. (U.S.-licensed)
- 2) M40 to WildBlue-1 (S2355) @ 111.1° W.L. (Canada-licensed)
- 3) M40 to ANIK-F2 (S2742) @ 111.1 degrees W.L. (Canada-licensed)
- 4) M32 to ANIK E2 (S2597) @ 111.1 degrees W.L. (Canada-licensed)
- 5) M32 to VIASAT-1 (S2747) @ 115.1° W.L. (U.S.-licensed)



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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:

6) M32 to WildBlue-1 (S2355) @ 111.1° W.L. (Canada-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)
M32	M32	4000	0.355	VIASAT	M-32			
Max Gains(s): 36.4 dBi @ 20.2000 GHz 39.3 dBi @ 28.1000 GHz 35.9 dBi @ 19.2500 GHz 39.3 dBi @ 30.0000 GHz 35.1 dBi @ 18.3000 GHz 39.3 dBi @ 28.1000 GHz								
Maximum total input power at antenna flange (Watts) =					4.40			
Maximum aggregate output EIRP for all carriers (dBW) =					46.00			
M40	M40	4000	0.397	VIASAT	M-40	0	0 AGL/ 0 AMSL	
Max Gains(s): 33.3 dBi @ 18.3000 GHz 34.0 dBi @ 20.2000 GHz 37.0 dBi @ 28.3500 GHz 37.5 dBi @ 30.0000 GHz 37.0 dBi @ 28.1000 GHz								
Maximum total input power at antenna flange (Watts) =					4.00			
Maximum aggregate output EIRP for all carriers (dBW) =					43.50			

F) Remote Control Point:

M32 5970 South Greenwood Plaza Blv, Suite 300 **Call Sign:**
 Greenwood Village, Arapahoe, CO 80111
 720-554-7575

M40 5970 South Greenwood Plaza Blv, Suite 300 **Call Sign:**
 Greenwood Village, Arapahoe, CO 80111
 720-554-7575

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:

- 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.
- 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).
- 90053 --- 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. 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. The licensee shall ensure installation of terminals on aircraft by qualified installers who have an understanding of the antenna's radiation environment and the measures best suited to maximize protection of the general public and persons operating the aircraft and equipment. A terminal exhibiting radiation exposure levels exceeding 1.0 mW/cm² in accessible areas, such as at the exterior surface of the radome, shall have a label attached to the surface of the terminal warning about the radiation hazard and shall include thereon a diagram showing the regions around the terminal where the radiation levels could exceed 1.0 mW/cm².
- 90054 --- Operations authorized pursuant to this license are operations by U.S.-registered aircraft anywhere within the coverage area/frequency bands identified in the application for the satellites listed as points of communication. Operations authorized pursuant to this license also include operations by non-U.S.-registered aircraft within U.S. territory, including territorial waters.
- 90067 --- Operation in the territory or airspace of any country other than the United States must be in compliance with the applicable laws, regulations, and licensing procedures of that country, as well as with the conditions of this authorization.



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

90075 --- Licensee is afforded 30 days from the date of release of this grant and authorization to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.

90079 --- Antenna elevation for all operations must be at least 5 degrees above the geographic horizon while the aircraft is on the ground.

90081 --- All operations shall be on a non-common carrier basis.

90095 --- The licensee shall comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

90098 --- ViaSat Inc. is granted a waiver of the Table of Frequency Allocations, Section 2.106 of the Commission's rules, and a waiver of the Ka-band Band Plan, see Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Services and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking, 11 FCC Rcd 19005 (1996). ViaSat Inc. is authorized to operate in the 18.3-19.3 GHz, 19.7-20.2 GHz, 28.35-29.1 GHz, and 29.5-30.0 GHz frequency bands on a non-harmful interference basis. ViaSat Inc. must not cause harmful interference to any authorized radio station operating in conformance with the U.S. Table of Frequency Allocations.

90101 --- In the 17.8-20.2 GHz frequency range, in order to protect Federal satellite services, the licensee shall communicate only with satellites whose operator has completed an agreement with Federal operators pursuant to footnote US334 of the U.S. Table of Frequency Allocations, 47 C.F.R. § 2.106, and that agreement has been approved by both the Federal Communications Commission and the National Telecommunications and Information Administration. The licensee's operations pursuant to this authorization shall be consistent with such US334 agreements.

90116 --- The licensee must maintain a U.S. point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein. The licensee shall have available, at all times, the technical personnel necessary to perform supervision of remote station operations.

90122 --- The earth stations in this blanket license are operated by remote control. The remote control point is a material term of the license and may not be changed without prior authorization under Section 25.117 of the Commission's rules. Public Notice "The International Bureau Provides Guidance Concerning the Relocation of Earth Station Remote Control Points," DA 06-978 (rel. May 4, 2006).

90123 --- Operations authorized pursuant to this license are operations by U.S.-registered aircraft anywhere within the coverage area/frequency bands identified in the application for the satellites listed as points of communication. Operations authorized pursuant to this license also include operations by non-U.S.-registered aircraft within U.S. territory, including territorial waters. Authorization for operations by U.S.-registered aircraft outside U.S. territory, pursuant to this license, does not constitute a grant of access to the market in the United States under the Commission's DISCO II policies.



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

- 90211 --- The antenna performance specifications do not comply with Sections 25.138(a) and 25.209 of the FCC Rules. The operation of these antennas will not be protected from harmful interference caused by other geostationary satellite networks to the extent that harmful interference would not be expected to be caused to an antenna that is compliant with the antenna performance standards of Section 25.209.
- 90213 --- This authorization is subject to an overall limit of 8000 remote terminals, of the types identified in Section A above, operating at one time.
- 90245 --- When the ESAA network is put into operation, the 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 network was put into operation and will remain operational during the license period unless the license is submitted for cancellation.
- 90246 --- ESAAs authorized herein must employ a tracking algorithm that is resistant to capturing and tracking adjacent satellite signals, and each station must be capable of inhibiting its own transmission in the event it detects unintended satellite tracking.
- 90247 --- ESAAs authorized herein must be monitored and controlled by a ground-based network control and monitoring center. Such stations must be able to receive "enable transmission" and "disable transmission" commands from the network control center and must cease transmission immediately after receiving a "parameter change" command until receiving an "enable transmission" command from the network control center. The network control center must monitor operation of each ESAA to determine if it is malfunctioning, and each ESAA must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed-satellite service network.
- 90248 --- Stations authorized herein must not be used to provide air traffic control communications.
- 90249 --- The ESAAs are authorized, on a non-protected and non-harmful interference basis, to transmit to the following geostationary-orbit space stations: VIASAT-1 (Call Sign: S2747) at 115.1° W.L. using the 28.35-29.1 GHz and 29.5-30.0 GHz frequency bands; WildBlue-1 (Call Sign S2355) at 111.1° W.L. using the 29.5-30.0 GHz frequency band; and ANIK-F2 (Call Sign: S2472) at 111.1° W.L. using the 29.5-30.0 GHz frequency band. The ESAAs authorized herein must immediately terminate operations upon notification that such operation is causing harmful interference to any other radio system lawfully operating in the 28.35-29.1 GHz and 29.5-30.0 GHz frequency bands. The ESAAs authorized herein cannot claim protection from harmful interference from any radio system lawfully operating in the 28.35-29.1 GHz and 29.5-30.0 GHz frequency bands.
- 90250 --- The ESAAs are authorized, on a non-protected and non-harmful interference basis, to receive downlink transmissions from the following geostationary-orbit space stations: VIASAT-1 (Call Sign S2747) at 115.1° W.L. in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands; WildBlue-1 (Call Sign S2355) at 111.1° W.L. in the 19.7-20.2 GHz frequency band; and ANIK-F2 (Call Sign S2742) at 111.1° W.L. in the 19.7-20.2 GHz frequency band. The ESAAs operations authorized herein must accept interference from any radio system lawfully operating in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands.



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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:

- 90251 --- Operations pursuant to this authorization must be in compliance with the terms of the coordination agreements with operators of Ka-band geostationary space stations within thirty angular degrees of the target satellites (VIASAT-1, WildBlue-1, and ANIK-F2). In the event another GSO space station commences operation in the 28.35-29.1 GHz and 29.5-30.0 GHz frequency bands at a location within thirty degrees of any of the target satellites, ESAAs operating pursuant to this authorization must cease transmitting to the target satellite(s) unless and until such operation has been coordinated with the new space station's operator or ViaSat Inc. demonstrates that such operation will not cause harmful interference to the new co-frequency space station.
- 90252 --- Communications between ViaSat Inc.'s ESAAs and WildBlue-1 and ANIK-F2 must be in compliance with all existing and future space station coordination agreements reached between Canada and other Administrations.
- 90253 --- When operating in airspace within line-of-sight of the territory of a foreign administration where Fixed Service networks have an allocation in the 28.35- 29.1 GHz or 29.5-30.0 GHz frequency bands, the ESAAs must not exceed the following EIRP limits:
+64 dBW in any 1 MHz band for Theta is less than or equal to $0^\circ + 64 + 3 * \text{Theta}$ dBW in any 1 MHz band for Theta is greater than 0° but less than or equal to 5° where Theta is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.
- 90254 --- ESAAs authorized previously (SES-LIC-20120427-00404) must cease transmissions when the antenna-to-GSO skew angle for antenna ID "1", Model M40, exceeds 60° and the off-axis EIRP spectral density emissions risk harmful interference to a GSO space station. The ESAA may resume transmissions once the risk of harmful interference has passed.
- 90255 --- ESAAs authorized herein (SES-MOD-20150911-00584) must cease transmissions when the antenna-to-GSO skew angle for antenna ID "AERO-2", Model M32, equals or exceeds 55° and the off-axis EIRP spectral density emissions risk harmful interference to a GSO space station. The ESAA may resume transmissions once the risk of harmful interference has passed.
- 90256 --- Operation of ESAAs authorized herein are subject to any requirements the Commission may adopt in any future proceeding concerning operations in the 18.3-19.3 GHz, 19.7-20.2 GHz, 28.35-29.1 GHz, and 29.5-30.0 GHz band frequencies including, but not limited to, ESAAs communicating with geostationary orbit space stations.
- 90257 --- ESAAs authorized herein must be in compliance with the terms of coordination agreements with operators of non-geostationary orbit Fixed Satellite Service space stations operating in the 18.8-19.3 and 28.6-29.1 GHz frequency band. In the event another NGSO FSS system commences operation in the 18.8-19.3 and 28.6-29.1 GHz frequency bands, ESAAs operating pursuant to this authorization must cease operation unless and until such operation has been coordinated with the new NGSO system operator or the ESAA licensee demonstrates that such operation will not cause harmful interference to the new NGSO system.
- 90258 --- The licensee must maintain records of the following data for each operating ESAA: location (latitude, longitude, altitude); aircraft attitude (pitch, yaw, roll); transmit frequency and occupied bandwidth; data rate; EIRP; and target satellite. This data must be recorded at intervals of no more than one minute while an ESAA is transmitting and every 30 seconds when aircraft roll angle is greater than 10 degrees. The licensee must also record instances when ESAA pointing error exceeds 0.2 degrees. The licensee must make this data available upon request to a fixed-satellite service system operator or the Commission within 24 hours after receiving the request.



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION

Name: ViaSat, Inc.

Call Sign: E120075

Authorization Type: Modification of License

File Number: SES-MOD-20160108-00029

Non Common Carrier

Grant date: 06/29/2016

Expiration Date: 07/17/2028

H) Special and General Provisions

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

- 90259 --- For purposes of this authorization, the term earth stations aboard aircraft, or ESAA, is used to refer to any earth station on aircraft communicating with Fixed-Satellite Service (FSS) geostationary-orbit (GSO) space stations, without reference to the technical and licensing rules specifically adopted for earth stations on aircraft in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz, and 14.0-14.5 GHz frequency bands. See 47 C.F.R. § 25.227; Revisions to Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.34-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands, IB Docket No. 12-376, Notice of Proposed Rulemaking and Report and Order, FCC 12-161, 27 FCC Rcd 16510 (2012); Revisions of Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands, IB Docket No. 12-376, Second Report and Order on Reconsideration, FCC 14-45, 29 FCC Rcd 4226 (2014). Nothing in this authorization extends those technical and licensing rules to earth stations on aircraft not operating in those specified frequency bands.
- 90261 --- Waiver of the 25.138(d)(1)(i)(A) requirement to submit co-polarized patterns in the E- and H-planes for linear-polarized antennas or in two orthogonal planes for circularly-polarized antennas in the azimuth plane, plus and minus 10 degrees and plus and minus 180 degrees from beam peak is granted, for angles greater than 90 degrees from the main beam, based on this multi-aperture phased array antenna design.
- 90293 --- Antenna IDs: M32 and M40 are authorized to communicate only with Viasat-1 (S2747) at orbital location 115.1 degrees W.L. on 28100-28350 MHz for the requested emission carriers at altitudes of 10,000 feet and above mean sea level.
- 90333 --- The Commission has not adopted technical rules governing ESAA operations in the 28.1-28.35 GHz frequency band, which is allocated to LMDS on a primary basis. We grant waivers of the U.S. Table of Frequency Allocations, the Commission's Ka-band plan, and footnote 2 to the table in 47 C.F.R. § 25.202 to authorize the operation of ESAA Antenna IDs M32 and M40 in this frequency band. Operations of ESAA Antenna IDs M32 and M40 in the 28.1-28.35 GHz frequency band are secondary to fixed and mobile operations and must be conducted on a non-interference basis and must cease in the event of harmful interference. Operations of ESAAs in the 28.1-28.35 GHz frequency band are subject to any future decisions the Commission may take about operations in this band. Waiver is based on the public interest in providing broadband services to passengers aboard aircraft. Because the waiver is conditioned on operations on an unprotected and non-interference basis solely at altitudes above 10,000 feet of mean sea level, the underlying purpose of the rules in protecting primary terrestrial spectrum users from interference is not undermined by grant of this waiver.



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Non Common Carrier

Grant date: 06/29/2016

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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.

