

see also
SAT-RMD-20110728-00140



S2747 SAT-LOA-20110722-00132 IE2011003597
ViaSat, Inc.
VIASAT-1

Date & Time Filed: Jul 22 2011 5:21:17:230PM
File Number: SAT-LOA-20110722-00132
Callsign/Satellite ID: S2830 S2747

Approved by OMB
3060-0678

Approved: Stephen J. Duall
Stephen J. Duall
Chief, Satellite Policy Branch

APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS
FCC 312 MAIN FORM
FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
ViaSat-1 TT&C Space Station License

1-8. Legal Name of Applicant	
Name:	ViaSat, Inc.
DBA Name:	
Street:	6155 El Camino Real
City:	Carlsbad
Country:	USA
Attention:	Mr Daryl T Hunter
Phone Number:	760-476-2583
Fax Number:	760-929-3941
E-Mail:	daryl.hunter@viasat.com
State:	CA
Zipcode:	92009
FCC Use Only	

Conditions of Authorization
ViaSat, Inc.
File Nos. SAT-LOA-20110722-00132 and
SAT-AMD-20110728-00140
Call Sign: S2747
October 14, 2011

The request of ViaSat, Inc. (ViaSat) for construction, launch and operating authority for the ViaSat-1 space station, IBFS File Nos. SAT-LOA-20110722-00132 and SAT-AMD-20110728-00140, is GRANTED.¹ Accordingly, ViaSat is authorized to construct, launch, and operate its geostationary satellite orbit (GSO) space station, ViaSat-1, Call Sign S2747, to provide Fixed-Satellite Service (FSS) at the 115.1° W.L. orbital location. ViaSat is authorized to operate using the 28.10-29.1 GHz and 29.5-30.0 GHz frequency bands (Earth-to-space), and the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands (space-to-Earth). Operations shall be in accordance with the technical specifications set forth in ViaSat's applications, the Federal Communication Commission's Rules, and the conditions of this Attachment:

1. ViaSat is authorized to operate the ViaSat-1 telecommand receiver using one megahertz of bandwidth at each of the following uplink center frequencies: 29500.5 MHz and 29503.0 MHz (right-hand or left-hand circular polarization); the telemetry transmitter using one megahertz of bandwidth at each of the downlink center frequencies 19701.0 MHz (left-hand circular polarization) and 19703.0 MHz (right-hand circular polarization); the autotrack beacon using one kilohertz of bandwidth at the uplink center frequency 29999.0 MHz (right-hand or left-hand circular polarization); and downlink beacon using one kilohertz of bandwidth at the downlink frequency 20199.0 MHz (right-hand circular polarization).

2. ViaSat's use of the 28.10-28.35 GHz frequency band (Earth-to-space) in the United States is on a secondary basis for gateway earth station operations only. This band is designated on a primary basis to the Local Multipoint Distribution Service (LMDS). 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 Service and for Fixed Satellite Services, *Third Report and Order*, FCC 97-378, 12 FCC Rcd 22310 (1997). Accordingly, ViaSat's operations must be on an unprotected, non-harmful interference basis relative to LMDS, in accordance with 47 C.F.R. § 2.105(c)(2). ViaSat shall not cause harmful interference to, nor claim protection from, authorized LMDS stations in the 28.10-28.35 GHz frequency band that are presently assigned, or that may be assigned these frequencies in the future. Further, ViaSat must terminate operations immediately upon notification of such interference. In addition, ViaSat may not claim protection from interference from LMDS stations authorized to operate in this band.

3. ViaSat shall maintain the ViaSat-1 space station with an east/west longitudinal station-keeping tolerance of ± 0.05 degrees.

4. Pursuant to 47 C.F.R. § 25.145(g), operations of the ViaSat-1 space station in the 18.3-18.8 GHz frequency band (space-to-Earth) are not entitled to protection from co-primary terrestrial services until the period during which the terrestrial Fixed Service stations remain co-primary has expired.

5. We grant ViaSat a waiver of Footnote NG165 to Section 2.106 of the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, to permit ViaSat to operate ViaSat-1 in the 18.8-19.3 GHz (space-to-Earth) frequency band on a non-conforming basis. In the United States, the 18.8-19.3 GHz frequency band is designated for non-Federal, non-geostationary satellite orbit (NGSO) FSS operations on a primary basis, with no designation for non-Federal GSO FSS operations, and is allocated to Federal

¹ ViaSat's application was placed on Public Notice on August 5, 2011. See Policy Branch Information, Public Notice, Report No. SAT-00798 (Aug. 5, 2011). No comments were filed in response to the notice.

Conditions of Authorization
ViaSat, Inc.
File Nos. SAT-LOA-20110722-00132 and
SAT-AMD-20110728-00140
Call Sign: S2747
October 14, 2011

GSO and NGSO FSS operations on a primary basis. As a non-conforming user, ViaSat must accept any interference from any non-Federal NGSO FSS system, any Federal GSO FSS or NGSO FSS system, or any grandfathered co-primary fixed service stations authorized to use the 18.8-19.3 GHz frequency band. In addition, ViaSat shall not cause harmful interference to any authorized non-Federal NGSO FSS system, any authorized Federal GSO FSS or NGSO FSS system, or any grandfathered co-primary fixed service stations, and shall immediately cease operations upon notification of such harmful interference resulting from its operations.

6. We grant ViaSat a waiver of Section 25.210(i) of the Commission's rules. Section 25.210(i) requires space station antennas in the FSS to be designed to meet a cross-polarization isolation of 30 dB within the primary coverage area of the antenna.² We grant this waiver with the condition that ViaSat-1's operations must accommodate future satellite networks serving the United States that are two-degree compliant. Further, ViaSat shall accept any interference to its non-compliant operations caused by space stations that comply with Section 25.210(i). *See* Star One S.A.- Petition for Declaratory Ruling to Add the Star One C1 Satellite at 65° W.L. to the Permitted Space Station List, *Order*, 19 FCC Rcd 16334 (Sat. Div. 2004) (finding that the impact on neighboring satellite systems of a 3-5 dB difference from the required cross polarization isolation ratio would be negligible).

7. The operations of ViaSat-1 shall not cause harmful interference to any Federal or non-Federal station authorized to operate on a primary basis in the 28.6-29.1 GHz frequency band, must accept any interference from these systems, and must terminate operations immediately upon notification of harmful interference.

8. ViaSat has completed coordination for the ViaSat-1 space station, including Federal operations to earth stations in foreign countries, in accordance with footnote US334 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106. In addition to meeting the terms of the coordination agreement, the non-conforming ViaSat-1 GSO operations in the 18.8-19.3 GHz frequency band, shall not cause harmful interference to, nor claim protection from, present and future Federal, non-Federal, GSO and NGSO systems.

9. The power flux-density (pfd) at the Earth's surface produced by the emissions from the ViaSat-1 space station for all atmospheric conditions, and for all methods of modulation in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands (space-to-Earth) must not exceed -122.1 dBW/m²/MHz at any angle of arrival. Based on ViaSat operating at pfd value of -122.1 dBW/m²/MHz, the pfd limits contained in 47 C.F.R. §§ 25.138(a)(6), 25.208(c),(d),(e), and ITU Article 21.16 will also be met.³

² 47 C.F.R. § 25.210(i).

³ Section 25.208(d) requires that the pfd across the 200 megahertz of the 18.6-18.8 GHz band not exceed -95 dBW/m². ViaSat proposes to operate at -122 dBW/m²/MHz, which is below the -118 dBW/m²/MHz pfd limit specified in 47 C.F.R. § 25.138(a)(6). This -118 dBW/m²/MHz pfd limit corresponds to a maximum pfd limit of -95 dBW/m²/200 MHz. Consequently, ViaSat's operations at -122.1 dBW/m²/MHz meet the pfd limits in Section 25.208(d). We note that the pfd limits in Footnote US255 to the Table of Frequency Allocations, 47 C.F.R. § 2.106, correspond with the pfd limits in Section 25.208(d). Therefore, ViaSat's operations at -122.1 dBW/m²/MHz also satisfy the limits in Footnote US255.

Conditions of Authorization
ViaSat, Inc.
File Nos. SAT-LOA-20110722-00132 and
SAT-AMD-20110728-00140
Call Sign: S2747
October 14, 2011

10. The ViaSat-1 space station must be constructed, launched, and placed into operation in accordance with the technical parameters of its application and the Commission's rules, Section 25.164. The Commission has previously determined that ViaSat met the first three milestones for the ViaSat-1 space station. Policy Branch Information, *Public Notice*, DA 10-1715, 25 FCC Rcd 12797 (Sept. 10, 2010). Accordingly, ViaSat must launch and operate the space station by August 18, 2014. Failure to meet this date renders this grant null and void

11. Within 30 days of the grant of this authorization, ViaSat must either: 1) file a bond with the Commission in the amount of \$750,000 pursuant to the procedures set forth in Section 25.165 of the Commission's rules; or 2) file a statement from the International Fidelity Insurance Company that it will be bound for this license under the bond previously submitted for ViaSat1, bond number 0500433; or 3) submit a certification that ViaSat has completed the launch and operation milestone for ViaSat-1. Failure to meet one of these conditions renders this grant null and void.

12. ViaSat shall prepare the necessary information as may be required, for submission to the International Telecommunication Union (ITU) to initiate and complete the advance publication, international coordination, due diligence, and notification process of this space station, in accordance with ITU Radio Regulations. ViaSat shall be held responsible for all cost recovery fees associated with these ITU filings. We also note that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other administrations. See 47 C.F.R. § 25.111(b).

13. The license term for the ViaSat-1 space station, Call Sign S2747, is 15 years and will be begin to run on the date that ViaSat certifies to the Commission that the satellite has been successfully placed into orbit and its operation fully conforms to the terms and conditions of this authorization. ViaSat is directed to file this certification within 5 business days of the space station commencing operations at the regularly assigned orbital location.

14. ViaSat is afforded 30 days from the date of the release of this grant and authorization to decline it, as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization, as conditioned.


15. This authorization is issued pursuant to Sections 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately. Petitions for Reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106 and 1.115, may be filed within 30 days of the public notice indicating this action was taken.

SAT-LOA-20110722-00132
File # SAT-AMD-20110728-00140

Call Sign S2747 Grant Date 10/14/11
(or other identifier)

From see conditions Term Dates see conditions
To: conditions

Approved: Stephen J. Duall
Stephen J. Duall
Chief, Satellite Policy Branch


GRANTED*
International Bureau
*with conditions

9-16. Name of Contact Representative

Name: John P. Janka Phone Number: 202-637-2200
 Company: Latham & Watkins LLP Fax Number: 202-637-2201
 Street: 555 Eleventh Street, NW E-Mail: john.janka@lw.com
 Suite 1000
 City: Washington State: DC
 Country: USA Zipcode: 20004 -
 Attention: Mr. John P Janka Relationship: Legal Counsel

CLASSIFICATION OF FILING

17. Choose the buttonnext to the classification that applies to thisfiling for both questions a. and b. Choose only one for 17a and only one for 17b.

a.

- (N/A) a1. Earth Station
- a2. Space Station

b.

- b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- (N/A) b3. Amendment to a Pending Application
- (N/A) b4. Modification of License or Registration
- (N/A) b5. Assignment of License or Registration
- (N/A) b6. Transfer of Control of License or Registration
- (N/A) b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- b10. Replacement Satellite Application - no new frequency bands
- b11. Replacement Satellite Application - new frequency bands (Not eligible for streamlined processing)
- b12. Petition for Declaratory Ruling to be Added to the Permitted List
- (N/A) b13. Other (Please specify)

<p>17c. Is a fee submitted with this application?</p> <p><input checked="" type="radio"/> If Yes, complete and attach FCC Form 159.</p> <p>If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).</p> <p><input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee</p> <p><input checked="" type="radio"/> Other (please explain):</p>	
<p>17c. Fee Classification BNY – Space Station (Geostationary)</p>	
<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: Not Applicable</p>	
<p>19. If this filing is an amendment to a pending application enter:</p> <p>(a) Date pending application was filed: Not Applicable</p>	<p>(b) File number of pending application: Not Applicable</p>

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier
- Non-Common Carrier

22. If earth station applicant, check all that apply.
Not Applicable

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network
- Not connected to a Public Switched Network

N/A

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz)
- b. Ku-Band (12/14 GHz)

c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: 19700 Frequency Upper: 30000 (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- (N/A) a. Fixed Earth Station
- (N/A) b. Temporary-Fixed Earth Station
- (N/A) c. 12/14 GHz VSAT Network
- (N/A) d. Mobile Earth Station
- e. Geostationary Space Station.
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY: Not Applicable

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an "X" in the box(es) next to all that apply.) Not Applicable

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

Yes No

ALIEN OWNERSHIP

Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

<p>29. Is the applicant a foreign government or the representative of any foreign government?</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>30. Is the applicant an alien or the representative of an alien?</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A</p>
<p>31. Is the applicant a corporation organized under the laws of any foreign government?</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A</p>
<p>32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A</p>
<p>33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A</p>
<p>34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.</p>	

BASIC QUALIFICATIONS

<p>35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Exhibit B</p>
<p>36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
<p>39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>

<p>40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.</p>	<p style="text-align: right;">Exhibit C</p>
<p>41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes.</p>	<p style="text-align: right;">Yes <input checked="" type="radio"/> No <input type="radio"/></p>
<p>42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.</p>	<p style="text-align: right;">Yes <input type="radio"/> No <input checked="" type="radio"/></p>
<p>42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?</p>	

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

By this application, ViaSat, Inc. seeks a radiofrequency license from the Commission for the Ka-band telemetry transmitter and command receiver on the ViaSat-1 satellite, as well as for the autotrack and downlink beacons. See Exhibit E for more information.

Exhibit E

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
Daryl T. Hunter

46. Title of Person Signing
Director, Regulatory Affairs

47. Please supply any need attachments.

1: Exhibit A

2:

3:

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Completed Schedule S

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 0.25 – 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.