

E160093 SES-STA-20171129-01284 IB2017003314
ViaSat, Inc.

Approved by OMB
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
VS-2 IOT STA-Earth Station

1. Applicant

Name:	ViaSat, Inc.	Phone Number:	760-476-4812
DBA Name:		Fax Number:	760-929-3941
Street:	6155 El Camino Real	E-Mail:	steven.hemple@viasat.com
City:	Carlsbad	State:	CA
Country:	USA	Zipcode:	92009
Attention:	Mr. Steven C. Hemple		-



File # SES - STA - 2017 1129-01284

Call Sign E160093 Grant Date 11/30/2017
(or other identifier)

Term Dates

From 12/1/2017 To: 12/31/2017

Approved: Paul E. Hample

Applicant: ViaSat, Inc.

File No.: SES-STA-20171129-01284

Call Sign: E160093

Special Temporary Authority

ViaSat, Inc. ("ViaSat") is granted special temporary authority for 30 days to operate its Denver, CO earth station beginning December 1, 2017, to conduct in-orbit testing of the ViaSat-2 (S2902) satellite at the 69.9° W.L. orbital location on center frequencies : 28.35 GHz, 28.85 GHz and 29.75 GHz (Earth -to-space) and 18.55 GHz, 19.05 GHz, and 19.95 GHz (space-to-Earth) subject to the following conditions:

1. All operations under this grant of special temporary authority must be on an unprotected and non-harmful interference basis, i.e., ViaSat must not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating station. In the event of any harmful interference under this grant of special temporary authority, ViaSat must cease operations immediately upon notification of such interference and must inform the Commission, in writing, immediately of such an event.
2. ViaSat must coordinate the operations of ViaSat-2 with existing geostationary space stations to ensure that no unacceptable interference results from its operations at the 69.9° W.L. orbital location.
3. ViaSat's operations at the 69.9° W.L. orbital location must be limited to IOT and must not include the provision of commercial services.
4. During in-orbit testing, ViaSat must maintain the ViaSat-2 space station within an east-west longitudinal station-keeping tolerance of ± 0.05 degrees of the 69.9° W.L orbital location.
5. Subject to the conditions herein, section 25.138 of the Commission's rules IS WAIVED to allow ViaSat Denver gateway earth station to operate on the frequencies specified at power levels up to 81 dBW.
6. Subject to the conditions herein, section 25.208(e) of the Commission's rules IS WAIVED to allow ViaSat-2 to operate on the frequencies specified at power levels up to 77.5 dBW, resulting in a power-flux density of $-85.2 \text{ dB(W/m}^2 \div \text{MHz)}$.
7. Stop buzzer point of contact must be available 24/7 during IOT at (720) 493-7300. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at ViaSat's risk.
8. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately



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Approved: [Signature]

2. Contact			
Name:	ViaSat, Inc.	Phone Number:	760-476-4812
Company:		Fax Number:	760-929-3941
Street:	6155 El Camino Real	E-Mail:	steven.hemple@viasat.com
City:	Carlsbad	State:	CA
Country:	USA	Zipcode:	92009 -
Attention:		Relationship:	Engineer
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)			
3. Reference File Number or Submission ID			
4a. Is a fee submitted with this application?			
☒ If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).			
☐ Governmental Entity ☐ Noncommercial educational licensee			
☐ Other (please explain):			
4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station			
5. Type Request			
☐ Use Prior to Grant ☐ Change Station Location ☒ Other			
6. Requested Use Prior Date 12/01/2017			
7. City Englewood		8. Latitude (dd mm ss.s h) 39 32 57.3 N	

9. State	CO	10. Longitude (dd mm ss.s h)	104 51 52.4 W
11. Please supply any need attachments.			
Attachment 1: STA_Description		Attachment 2: Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)			
STA to use earth station call sign E160093 for in-orbit testing at 69.9 W.L. See Attachment A.			
13. 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. Yes ☒ No ☐			
14. Name of Person Signing		15. Title of Person Signing	
Steven C. Hemple		Regulatory Engineer	
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).			

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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.

**Request for Special Temporary Authority
to Conduct In-Orbit Testing of VIASAT-2 at 69.9° W.L.**

ViaSat, Inc. ("ViaSat") seeks Special Temporary Authority ("STA") to conduct in-orbit testing of ViaSat-2 at 69.9° W.L. using its gateway in Denver, Colorado. STA is requested for a period not to exceed thirty (30) days commencing on December 1, 2017, when ViaSat-2 is expected to arrive at 69.9° W.L.

In-orbit testing will consist of performance verification of each beam on ViaSat-2. The Denver gateway (E160093) will be used to transmit and receive test signals. Consistent with industry practices and as detailed below, that gateway and the satellite temporarily will need to operate at higher-than-regularly-authorized power levels during certain tests.

To enable testing of each beam in each direction (both uplink and downlink), the spacecraft will be oriented at various times to position a given beam over the Denver gateway. In closed-loop tests, the satellite will be oriented such that both the uplink and downlink beams being tested will be positioned over the Denver gateway.

Tests that involve uplink transmissions will be performed using unmodulated CW carriers transmitted from the Denver gateway. In certain cases, this will involve a maximum uplink power level of 81 dBW. Operations at these higher-than-regularly-authorized power levels will be short-term (*i.e.*, typically several minutes) and limited to three specific frequencies that, consistent with Section 25.138, are being coordinated with adjacent satellite operators and with appropriate U.S. government operators. The frequencies that will be used are at 28.35 GHz, 28.85 GHz and 29.75 GHz on the uplink, with corresponding downlink frequencies of 18.55 GHz, 19.05 GHz, and 19.95 GHz. The corresponding downlink power level of 77.5 dBW is higher than regularly-authorized for ViaSat-2, and the resulting PFD of $-85.2 \text{ dBW}/(\text{m}^2 \cdot \text{MHz})$ exceeds the limit in Section 25.208(e). To the extent necessary, ViaSat seeks a waiver of Section 25.208(e) to allow testing at the power-density levels described above.

ViaSat is coordinating the higher-power test operations with operators of commercial Ka-band satellites within six degrees of 69.9° W.L. In the unlikely event that harmful interference occurs, ViaSat will take all necessary steps to eliminate such interference.

ViaSat will make available a 24/7 point of contact should any issues arise in connection with the proposed STA operations. Personnel will be on duty at all times during the STA operations and can be contacted at (720) 493-7300.

Grant of the STA will help expedite commercial service over ViaSat-2, which will serve the public interest, convenience and necessity.