

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WM9XTO

(Call Sign)

XT MO

(Class of Station)

0902-EX-ST-2018

(File Number)

NAME Viasat, Inc.

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

Demonstrate antenna performance per customer contract.

Station Locations

- (1) MOBILE: Flight Path starting and ending at Greenville, TX and Carlsbad, CA as shown in exhibit

Frequency Information

MOBILE: Flight Path starting and ending at Greenville, TX and Carlsbad, CA as shown in exhibit

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
30000-30700 MHz	MO	50M6M1D	61126 W (ERP)	1.0E-6 %

Special Conditions:

- (1) All customers participating in the experiment shall be informed that this operation is for experimental purposes only and can be cancelled at any time.
- (2) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.

This authorization effective June 11, 2018 and
will expire 3:00 A.M. EST September 12, 2018

**FEDERAL
COMMUNICATIONS
COMMISSION**



Special Conditions:

- (3) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (4) POINT-OF-COMMUNICATIONS: Inmarsat I5-F2 @ 55 degree W.L. and Inmarsat I5-F3@ 180 degree W.L. satellites.
- (5) The flight path authorized herein does not include the flying over the Pacific Ocean and is limited to the flight path between Greenville, TX and Carlsbad, CA.
- (6) Operation pursuant to this authorization must be in compliance with the terms of coordination agreements between the operators of the Inmarsat I5-F2 and Inmarsat I5-F3 space stations and operators of other geostationary space stations within six angular degrees of those space stations. In the event that another GSO FSS space station commences operation in the 30-31 GHZ band at a location within six degrees of any of these space stations, earth stations operating pursuant to this temporary authority shall cease transmitting to that space station unless and until such operation has been coordinated with the new space station's operator or Viasat demonstrates that such operation will not cause harmful interference to the new co-frequency space station.
- (7) Communications between Viasat's ESAAs and the Inmarsat I5-F2 and Inmarsat I5-F3 space stations must be in compliance with all existing and future space station coordination agreements reached between United Kingdom and other administrations.
- (8) ESAAs must cease transmissions when the antenna-to-GSO skew angle for antenna Model M40 and GM40, exceeds 90° 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.
- (9) Viasat must maintain records of the following data for each ESAA operating pursuant to this authorization: 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 two minutes while an earth station is transmitting and every 30 seconds when aircraft roll angle is greater than 10 degrees. Viasat must also record antenna pointing error at 30-second intervals when the error exceeds 0.25 degrees. Viasat shall make this data available upon request to an FSS system operator or the Commission within 24 hours after receiving the request.
- (10) Viasat's ESAAs 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.
- (11) Viasat's ESAAs 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 earth station to determine if it is malfunctioning, and each earth station must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed satellite service network.

Special Conditions:

- (12) Viasat must maintain a point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein, for discussing interference concerns with other licensees, and must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.
- (13) ESAAs authorized herein must not be used for air traffic control communication.
- (14) Aircraft operations are limited to U.S.-registered aircraft.
- (15) Stop Buzzer: Program Manager: Mike Mester (phone: 760 893 1980; mobile phone: 760 585 5076); Systems Engineer: Alton Earle (phone: 678 924 2653; mobile phone: 678 409 4356).
- (16) The authorized station must be in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules.
- (17) The authorized station must be in compliance with environmental requirement set forth in Section 1.1307 of the Commission's Rules.
- (18) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications.
- (19) Operations are on a non-interference basis (NIB) and shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference and notify the FCC in writing.
- (20) Viasat shall be conducted IAW the configuration and parameters that Viasat coordinated with Air Force (Jimmy Nguyen) for this STA.
- (21) The emissions designators listed in this grant are approved for the stated occupied bandwidth only. Occupied bandwidths that are less than the above emissions are not authorized.
- (22) This STA is limited to 6 months and is subject to re-coordination with Air Force (Jimmy Nguyen, jimmy.nguyen@us.af.mil).
- (23) As soon as possible but no later than 3 business days prior to any planned testing, Viasat is required to provide Jimmy Nguyen (Email: jimmy.nguyen@us.af.mil, AFSMO) and Travis J. Inghram (Email: travis.j.ingram.civ@mail.mil, ARSTRAT) with the planned testing date/duration and the stop buzzer POC for the testing. If planned testing conflicts with DoD operations, additional evaluations and/or restrictions will be required.
- (24) Viasat, Inc must notify NMSC via email to Richard.ontiveros1@navy.mil and keith.k.jones@navy.mil, 24 hours prior to testing.
- (25) This authorization SUPERSEDES the previous issues authorization with same callsign and file number: amended conditions.