

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
STA Exten for Satmex 5 Apr 2014

1. Applicant

Name: Gogo LLC Phone Number: 202-870-7220  
DBA Name: Fax Number:  
Street: 5614 Connecticut Avenue, NW E-Mail: bgordon@aircell.com  
#288  
City: Washington State: DC  
Country: USA Zipcode: 20015  
Attention: Mr William J Gordon

File # SES-STA-20140429-00323  
Call Sign 5-S-14 Grant Date 5-5-14  
(or other identifier)  
Term Dates 7-1-14 to 7-1-14  
Approved: [Signature]

COMMUNICATIONS COMMISSION  
GRANTED  
International Bureau

Applicant: Gogo LLC  
Call Sign: E120106  
File No.: SES-STA-20140429-00323  
Special Temporary Authority

Gogo LLC is granted extension of the special temporary authority that was previously granted under IBFS File No. SES-STA-20140128-00039, for a period of 60 days to operate up to 12 aeronautical terminals (0.24 meter AeroSat model HR6400) to communicate with Satmex 5 (Call Sign S2589) at the 114.9° W.L. orbital location using the 14.0-14.5 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands. Operations must be in accordance with the technical specifications contained in Gogo LLC's application and are subject to the following conditions:

1. Operation under this grant of special temporary authority must be on an unprotected and non-harmful interference basis, *i.e.*, while operating under this temporary authority Gogo LLC must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating radiocommunication system. Gogo LLC must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.

2. Operation pursuant to this authorization must be in compliance with the terms of Gogo LLC's coordination agreements with the National Science Foundation and the National Aeronautics and Space Administration pertaining to operation of aircraft earth stations in the Ku-Band.

3. Operation pursuant to this authorization outside the United States in the 14.0-14.5 GHz band must be in compliance with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band.

4. When operating in international airspace within line-of-sight of the territory of a foreign administration where Fixed Service networks have a primary allocation in the 14.0-14.5 GHz band, an aircraft earth station must not operate in a manner that would produce predicted ground-level power flux density (pfd) in such territory in excess of the following values unless the foreign administration has imposed other conditions for protecting its FS stations:  $-132 + 0.5 \times \text{THETA}$  dB(W/(m<sup>2</sup> MHz)) for  $\text{THETA} \leq 40^\circ$ ;  $-112$  dB(W/(m<sup>2</sup> MHz)) for  $40^\circ < \text{THETA} \leq 90^\circ$ . Where: THETA is the angle of arrival of the radio-frequency wave in degrees above the horizontal, and the aforementioned limits relate to the pfd and angles of arrival that would be obtained under free space propagation conditions.

5. Operation pursuant to this authorization must conform to the terms of coordination agreements between the operator of Satmex 5 and operators of other Ku-band geostationary satellites within six angular degrees of Satmex 5. In the event that another GSO Fixed-Satellite Service (FSS) space station commences operation in the 14.0-14.5 GHz band at a location within six degrees of any of these space stations, aircraft 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 Gogo LLC demonstrates that such operation will not cause harmful interference to the new co-frequency space station.

6. Gogo LLC must take all necessary measures to ensure that the operation authorized 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. 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 [ww.fcc.gov/oet/rfsafety](http://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.

7. Gogo LLC 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. Gogo LLC 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.

8. Aircraft earth stations 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.

9. Aircraft earth stations 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 aircraft earth station to determine if it is malfunctioning, and each aircraft 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.

10. Stations authorized herein must not be used to provide air traffic control communications.

11. For each ESAA transmitter Gogo LLC shall maintain records of the following data for each operating aircraft earth station (AES), a record of the aircraft location (i.e., latitude/longitude/altitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than one year. Records shall be recorded at time intervals no greater than one (1) minute while the AES is transmitting. The ESAA operator shall make this data available, in the form of a comma delimited electronic spreadsheet, within 24 hours of a request from the Commission, NTIA, or a frequency coordinator for purposes of resolving harmful interference events. A description of the units (i.e., degrees, minutes, MHz . . .) in which the records values are recorded will be supplied along with the records.

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

13. Gogo LLC shall comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

14. In connection with the provision of service in any particular country, Gogo LLC is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that


country.

15. Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending applications. *E.g.* IBFS File Nos. SES-MFS-20131114-01015.

16. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Gogo LLC's risk.

Operations during the period 5 May 2014 to the date of this grant were authorized pursuant to Section 1.62 of the Commission's rules 47 C.F.R. §1.62.

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. Petitions for reconsideration under Section 1.106 or applications for review under Sections 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within thirty days of the date of the public notice indicating that this action was taken.

|  |                                      |                              |
|--|--------------------------------------|------------------------------|
| <br><b>GRANTED</b><br>International Bureau | <b>File #</b> SES-STA-20140429-00323 |                              |
|  | <b>Call Sign</b> E 120106            | <b>Grant Date</b> 5-5-14     |
|  | (or other identifier)                |                              |
|  | <b>From</b> 5-5-14                   | <b>Term Dates To:</b> 7-4-14 |
|  | <b>Approved:</b> <i>[Signature]</i>  |                              |

|   |                                    |
|---|------------------------------------|
| <b>2. Contact</b>   |                                    |
| <b>Name:</b> Karis Hastings   | <b>Phone Number:</b> 202-599-0975  |
| <b>Company:</b> SatCom Law LLC  | <b>Fax Number:</b>                 |
| <b>Street:</b> 1317 F Street, N.W.<br>Suite 400   | <b>E-Mail:</b> karis@satcomlaw.com |
| <b>City:</b> Washington   | <b>State:</b> DC                   |
| <b>Country:</b> USA   | <b>Zipcode:</b> 20004 -            |
| <b>Attention:</b>   | <b>Relationship:</b> Legal Counsel |
| (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 SESMFS201311401015 or Submission ID  |                                    |
| 4a. Is a fee submitted with this application?   |                                    |
| <input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).                                   |                                    |
| <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee  |                                    |
| <input type="radio"/> Other (please explain):   |                                    |
| 4b. Fee Classification    CGB – Mobile Satellite Earth Stations   |                                    |
| 5. Type Request   |                                    |
| <input checked="" type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input type="radio"/> Other   |                                    |
| 6. Requested Use Prior Date   |                                    |
| 05/04/2014  |                                    |
| 7. City/Mobile  |                                    |
| 8. Latitude (dd mm ss.s h)    0 0 0.0   |                                    |

|   |   |
|---|---|
| 9. State  | 10. Longitude<br>(dd mm ss.s h) 0 0 0.0                           |
| 11. Please supply any need attachments.<br>Attachment 1: 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.)<br><div style="border: 1px solid black; padding: 5px;"> <p>Gogo LLC (Gogo) respectfully requests a 60-day extension of the special temporary authority it was granted in File No. SES-STA-20140128-00039 to allow up to 12 ESAA terminals to communicate with Satmex 5 for coverage of North and South America. Extension of the STA is sought pending action on Gogo's modification application, File No. SES-MFS-</p> </div> |   |
| 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 <input checked="" type="radio"/> No <input type="radio"/>  |   |
| 14. Name of Person Signing<br>William J. Gordon   | 15. Title of Person Signing<br>Vice President, Regulatory Affairs |
| WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT<br>(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION<br>(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).   |   |

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## **12. Description**

Gogo LLC (Gogo) respectfully requests a 60-day extension of the special temporary authority it was granted in File No. SES-STA-20140128-00039 to allow up to 12 ESAA terminals to communicate with Satmex 5 for coverage of North and South America. Extension of the STA is sought pending action on Gogo's modification application, File No. SES-MFS-20131114-01015, which includes a request to add Satmex 5 as an authorized point of communication under Gogo's existing ESAA license, call sign E120106. Gogo hereby incorporates by reference the supporting materials submitted in File No. SES-STA-20140128-00039.