Date & Time Filed: Oct 22 2015 8:43:48:106AM File Number: SES-MFS-20151022-00735

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM

FCC Use Only

FCC 312 MAIN FORM FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

1–8. Legal Name of Applicant

Enter a description of this application to identify it on the main menu:

ESAA License Modification for E120106 Oct 2015

Name:	Gogo LLC	Phone Number:	202-870-7220
DBA		Fax Number:	
Name:			

Street: 5614 Connecticut Avenue, NW E-Mail: bgordon@gogoair.com

#288

City: Washington State: DC

Country: USA Zipcode: 20015 -

Attention: Mr William J Gordon

9–16. Name of Contact Representative

Name: Karis Hastings **Phone Number:** 202–599–0975

Company: SatCom Law LLC **Fax Number:**

Street: 1317 F St NW E–Mail: karis@satcomlaw.com

City: Washington State: DC

Country: USA Zipcode: 20004–

Attention: Karis Hastings Relationship: Legal Counsel

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

a1. Earth Station

a2. Space Station

(N/A) b1. Application for License of New Station

(N/A) b2. Application for Registration of New Domestic Receive-Only Station

o b3. Amendment to a Pending Application

b4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

b7. Notification of Minor Modification

(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite

(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States

(N/A) b10. Other (Please specify)

(N/A) b11. Application for Earth Station to Access a Non–U.S.satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States

(N/A) b12. Application for Database Entry

b13. Amendment to a Pending Database Entry Application

b14. Modification of Database Entry

17c. Is a fee submitted with this application If Yes, complete and attach FCC Form	on? 159. If No, indicate reason for fee exemption (s	ee 47 C.F.R.Section 1.1114).
Governmental Entity Noncomme		
Other(please explain):		
17d.		
Fee Classification CGB – Mobile Satellite	Earth Stations	
18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending a modification please enter only the file number:	pplication enter both fields, if this filing is a
(a) Call sign of station: E120106	(a) Date pending application was filed:	(b) File number:
E120100		SESMFS2014080100625

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide	e 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	22. If earth station applicant, check all that apply.
only one.	Using U.S. licensed satellites
Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER s facilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
O Connected to a Public Switched Network O Not connected to a	Public Switched Network N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all a	pplicable 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: Frequency Upper: (Please specify addition	nal 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.
a. Fixed Earth Station
b. Temporary–Fixed Earth Station
c. 12/14 GHz VSAT Network
d. Mobile Earth Station
e. Geostationary Space Station
f. Non-Geostationary Space Station
g. Other (please specify) ESAA
26. TYPE OF EARTH STATION FACILITY:
Transmit/Receive Transmit-Only Receive-Only N/A
"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)
a — authorization to add new emission designator and related service
b — authorization to change emission designator and related service
c — authorization to increase EIRP and EIRP density
d — authorization to replace antenna
e — authorization to add antenna
f — authorization to relocate fixed station
g — authorization to change frequency(ies)
h — authorization to add frequency
i — authorization to add Points of Communication (satellites & p; countries)
j — authorization to change Points of Communication (satellites & Double of Communication (satellites & Doub
k — authorization for facilities for which environmental assessment and
radiation hazard reporting is required
1 — authorization to change orbit location
m — authorization to perform fleet management
n — authorization to extend milestones
o — Other (Please specify)

ENVIRONMENTAL POLICY

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.	_		~			
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeron aeronautical fixed radio station services are not required to respond to Items 30–34.	autic	al en	ı rou	ite or		
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	•	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	•	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	No	•	N/A
32. Is the applicant a corporation of which more than one—fifth of the capital stock is owned of record 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?	0	Yes	0	No	•	N/A

 $lackbox{ Yes } lackbox{ No}$

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental

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 of record 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?	0	Yes	0	No	1 🗨	N/A
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.						
BASIC QUALIFICATIONS						
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.		•	Yes	() No	•
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 explination of circumstances.		0	Yes	•	No.)

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 explination of circumstances.	• Yes	⊚ No
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	• Yes	No
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 exhinit, an explanation of the circumstances.	• Yes	⊘ No
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.		

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.	Yes	O No
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.	Yes	O No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, vectordinated or is in the process of coordinating the space station? See Narrative	vhat administi	ation has
43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description of the services to be provided).	ion does not a	ppear in this

box, please go to the end of the form to view it in its entirety.)

Gogo LLC requests modification of its license for earth stations aboard aircraft (ESAA) to add satellites and make other technical changes.

Narr and Annexes

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.	O 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.	o 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.

O Individual		
Unincorporated Association		
Partnership		
© Corporation		
Governmental Entity		
Other (please specify)		
-		
45. Name of Person Signing	46. Title of Person Signing	
45. Name of Person Signing Bill Gordon	46. Title of Person Signing Vice–President Regulatory Affairs	
Bill Gordon		
Bill Gordon >		ENT

SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 – Schedule B:(Technical and Operational Description) FOR OFFICIAL USE ONLY

Location of Earth St	ation Site				
E1: Site Identifier:	AES	E5. Call Sign:	E120106		
E2: Contact Name	NOC Engineer on Duty	E6. Phone Number:	866-943-4662		
E3. Street:	111 N Canal St.	E7. City:	Chicago		
		E8. County:	Cook		
E4. State	IL	E9. Zip Code	60606		
E10. Area of Operat	tion:	CONUS and OCON	IUS		
E11. Latitude:	0 °0 '0.0 "				
E12. Longitude:	0 °0 '0.0 "				
E13. Lat/Lon Coord	linates are:	O NAD-27	O NAD-83	N/A	
E14. Site Elevation	(AMSL):	0.0 meters			

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two–degree spacing policy.	O Yes ● No	O N/A
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E16. If the proposed antenna(s) do not operate in the Fixed Satellite Se Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	posed antenna(s) comply with the antenna	O Yes	O No	⊚ N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	Yes	٥	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the recoordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FAA the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	O Yes	•	No	
POINTS OF COMMUNICATION		•		
Satellite Name: AMC-1(S2445) AMC 1 129.15 If you selected OT	HER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: INTELSAT 18 (S2817) INTELSAT 18 180 E.L. If	you selected OTHER, please enter the follow	ing:		

E21, Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: OTHER OTHER If you selected OTHER, please	enter the following:					
E21. Common Name: ASIASAT 7	E22. ITU Name: ASIASAT 7					
E23. Orbit Location: 105.5 E.L.	E24. Country: China					
Satellite Name: OTHER OTHER If you selected OTHER, please of	enter the following:					
E21. Common Name: Yamal 300K	E22. ITU Name: YAMAL 300K					
E23. Orbit Location: 183 E.L.	E24. Country: Russia					
Satellite Name: EUTELSAT 117 (S2873) SATMEX-8 116.8 W.L.	If you selected OTHER, please enter the following:					
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country: USA					
Satellite Name: JCSAT 5A JCSAT - 5A 132 E.L. If you selected O	THER, please enter the following:					
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: GALAXY 17 (S2715) GALAXY 17 91 W.L. If yo	u selected OTHER, please enter the following:					
E21. Common Name:						
E23. Orbit Location: E24. Country:						
Satellite Name: OTHER OTHER If you selected OTHER, please	enter the following:					

E21. Common Name: EUTELSAT 115 WB	E22. ITU Name: EUTELSAT 115 WB
E23. Orbit Location: 114.9 W.L.	E24. Country: USA

Satellite Name: OTHER OTHER	If you selected OTHER, please enter the following:			
E21. Common Name: JCSAT 2B		E22. ITU Name: JCSAT 2B		
E23. Orbit Location: 154 E.L.		E24. Country: Japan		

Satellite Name: OTHER OTHER	If you selected OTHER, please enter the following:			
E21. Common Name: Yamal 401		E22. ITU Name: Yamal 401		
E23. Orbit Location: 90 E.L.		E24. Country: Russia		

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier:	
E26. Common Name:	E27. Country:

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
AES	AES1	1000	AeroSat	HR6400	0.24	31.8 dBi at 11.7	
AES	AES1	1000	AeroSat	HR6400	0.24	29.0 dBi at 14.47	
AES	AES2	1000	ThinKom	2Ku Antenna	0.74	35.05 dBi at 11.85	

AES	AES2	1000		ThinKo	om	2Ku Ante	enna	0.74		36.7 dBi at 14.25	
E28. Antenna Id	E33/34. Diameter Minor/Major (meters)		Above and Level ers)		bove Sea meters)	E37. Bui Height A Ground I (meters)	bove	E38. Total Input Powe antenna flat (Watts)		E39. Maximum Antenna Heigl Above Roofton (meters)	nt EIRP for al
AES1	0.0/0.0	0.0		0.0		0.0		34.5		0.0	44.5
AES2	0.0/0.0	0.0		0.0		0.0		26.8		0.0	51.0
FREQUENCY						•		•			-
E28. Antenna Id	E43/44. Frequency B (MHz)		E45. T/R M	ode	E46. Anto Polarizat L,R)		E47. E Design	Emission nator		P per Carrier	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
AES1	14000 14500		Т		Horizonta Vertical	al and	1M000	G7W	44.3	3	20.35
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) Digital Data Services											
AES1	14000 14500		T		Horizonta Vertical	al and	1M200	G7W	44.2		19.43

E50. Modulation entirety.)	n and Services (If	the complete descripti	on does not appear i	n this box, please go	to the end of the form	to view it in its	
Digital Da	ata Services						
AES1	14000 14500	Т	Horizontal and Vertical	1M67G7W	42.74	16.54	
Digital Da	ata Services						
AES1	14000 14500	Т	Horizontal and Vertical	1M75G7W	43.1	16.69	
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) Digital Data Services							
AES1	14000 14500	Т	Horizontal and Vertical	2M00G7W	44.5	17.5	

E50. Modulation	and Services (If	the complete descripti	on does not appear in	n this box, please go t	to the end of the form	to view it in its
entirety.)	`	1 1		· 1 C		
Digital Da	ata Services					
AES1	14000 14500	Т	Horizontal and Vertical	3M00G7W	44.5	15.75
entirety.) Digital Da	ata Services					
AES1	14000 14500	Т	Horizontal and Vertical	4M00G7W	44.5	14.5
E50. Modulation entirety.)	and Services (If	the complete descripti	on does not appear in	n this box, please go t	to the end of the form	to view it in its
Digital Da	ata Services					
AES1	14000 14500	Т	Horizontal and Vertical	5M00G7W	44.5	13.5

E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its	
	ta Services						
AES1	14000 14500	Т	Horizontal and Vertical	6M76G7W	43.5	11.22	
Digital Da	ta Services						
AES1	14000 14500	Т	Horizontal and Vertical	830KG7W	42.4	19.22	
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) Digital Data Services							
AES2	14000 14500	Т	Horizontal and Vertical	1M00G7W	44.71	20.73	

E50. Modulation entirety.)	n and Services (If the complete of	description does not appear i	n this box, please	go to the end of th	ne form to view it in i	ts
	ata Services						
AES2	14000 14500	Т	Horizontal and Vertical	1M20G7W	44.5	19.73	
Digital D	ata Services						
AES2	14000 14500	Т	Horizontal and Vertical	1M75G7W	42.6	16.19	
E50. Modulation entirety.) Digital D	n and Services (If the complete of	lescription does not appear i	n this box, please	go to the end of th	ne form to view it in i	ts
AES2	14000 14500	Т	Horizontal and Vertical	2M00G7W	46.98	19.99	

E50. Modulation	and Caminas (If the			this how places as t		
entirety.)	and Services (II th	ie compiete descriptio	on does not appear in	this box, please go to	the end of the form	to view it in its
1						
Digital Da	ta Services					
AES2	14000	Т	Horizontal and	3M00G7W	50.2	21.4
ALS2	14500	1	Vertical	31110007 W	30.2	21.4
E50. Modulation	and Services (If the	e complete description	on does not appear in	this box, please go to	the end of the form	to view it in its
entirety.)						
Digital Da	ta Services					
Digital Da	ca bervices					
	1		1			
AES2	14000	T	Horizontal and	4M00G7W	45.94	15.94
	14500		Vertical			
E50 Madulation	and Caminas (If the			<u> </u> 	. 41	L
E50. Modulation	and Services (II th	ie compiete description	on does not appear in	tins box, please go to	the end of the form	to view it in its
entirety.)						
Digital Da	ta Services					
AES2	14000	Т	Horizontal and	6M00G7W	45.08	13.32
11102	14500	-	Vertical	0111000777	15.00	13.52
	11500		VOLUCUI			

E50. Modulation entirety.)	and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of th	ne form to view it in its
Digital Da	ta Services					
AES2	14000 14500	Т	Horizontal and Vertical	7M48G7W	43.87	11.15
Digital Da	ta Services					
AES2	14000 14500	Т	Horizontal and Vertical	930KG7W	42.4	18.74
E50. Modulation entirety.) Digital Da	and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of th	ne form to view it in its

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
AES1	Geostationary	10950 11200	180.0/180.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	11450 11700	180.0/180.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	11700 12200	180.0/180.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	12200 12750	180.0/180.0	90.0	5.0	270.0	5.0	0.0
	Geostationary	14000 14500	180.0/180.0	90.0	5.0	270.0	5.0	0.6
AES2	Geostationary	10950 11200	180.0/180.0	90.0	12.5	270.0	12.5	0.0
	Geostationary	11450 11700	180.0/180.0	90.0	12.5	270.0	12.5	0.0
	Geostationary	11700 12200	180.0/180.0	90.0	12.5	270.0	12.5	0.0
	Geostationary	12200 12750	180.0/180.0	90.0	12.5	270.0	12.5	0.0
	Geostationary	14000 14500	180.0/180.0	90.0	12.5	270.0	12.5	-7.1

REMOTE CONTROL POINT LOCATION

E61. Call Sign NOTE: Please enter the callsign of the contro callsign for which this application is being filed.		E66. Phone Number 866–943–4662		
E62. Street Address 111 N Canal St.				
E63. City Chicago	E68. County Cook		E67/68. State/Country IL/ USA	E64. Zip Code 60606

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