Approved by OMB 3060–0678

Date & Time Filed: Oct 23 2014 11:04:34:103AM File Number: SES–LIC–INTR2014–02105 Callsign/Satellite ID:

APPLICATION FOR EARTH STATION AUTHORIZATIONS	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

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

GX Aeronautical Mobile Blanket License Application

1–8. Legal Name of A	pplicant		
Name:	ISAT US Inc.	Phone Number:	202–248–5158
DBA Name:		Fax Number:	202–248–5186
Street:	1101 Connecticut Avenue NW	E-Mail:	chris.murphy@inmarsat.com
	Suite 1200		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036 –
Attention	: Mr Chris Murphy		

Name:	ISAT US Inc.	Phone Number:	202-248-5158
Company:		Fax Number:	202-248-5186
Street:	1101 Connecticut Avenue NW	E-Mail:	chris.murphy@inmarsat.com
	Suite 1200		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036-
Attention:		Relationship:	

CLASSIFICATION OF FILING

17. Choose the button next to the	b.
classification that applies to this filing for	b1. Application for License of New Station
both questions a. and b. Choose only one	b2. Application for Registration of New Domestic Receive–Only Station
for 17a and only one for 17b. a. a. a1. Earth Station (N/A) a2. Space 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 (N/A) b9. Letter of Intent to Use Non–U.S. Licensed Satellite to Provide Service in the United States
	b 10. Other (Please specify)
	• 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. b12. Application for Database Entry
	(N/A) b13. Amendment to a Pending Database Entry Application (N/A) b14. Modifiction of Database Entry
17c. 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).
O Governmental Entity O Noncomme	ercial educational licensee
• Other(please explain):	
17d.	
Fee Classification BGV – Fixed Satellite V	/SAT System

18. If this filing is in reference to an19. If this filing is an amendment to a pending application enter:			
existing station, enter:	(a) Date pending application was filed:	(b) File number of pending application:	
(a) Call sign of station:			
Not Applicable	Not Applicable	Not Applicable	

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
O Common Carrier	Using Non–U.S. licensed satellites
facilities:	ervice, see instructions regarding Sec. 214 filings. Choose one. Are these
• Connected to a Public Switched Network • Not connected	to a Public Switched Network 💿 N/A

2	4. 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)
X	c.Other (Please specify upper and	lower frequencies in MHz.)
	Frequency Lower: 19700	Frequency Upper: 30000

TYPE OF STATION

a. Fixed Earth Stati					
b. Temporary–Fixe	Earth Station				
c. 12/14 GHz VSA	Network				
d. Mobile Earth Sta	ion				
/A) e. Geostationary	Space Station				
/A) f. Non-Geostatic	nary Space Station				
g. Other (please spo	cify)Earth station on	fixed/moving p	latforms		
PE OF EARTH STAT	ON FACILITY: Cho	oose only one.			

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	• Yes	● ^{No}
1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this	Exhibit C	
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, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30–34.

29. Is the applicant a foreign government or the representative of any foreign government?	O Yes	● No
30. Is the applicant an alien or the representative of an alien?	O Yes	O No ⊚ N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes	O ^{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?	O Yes	O No ⊚ N/A

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?

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.

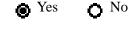
BASIC QUALIFICATIONS

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	O No
36. Has the applicant or any party to this application or amendment had any FCC station authorization or licer 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.		O No
	Exhibit D	

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 attemptiing 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	O 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.	O 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.

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

Exhibit E

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?United Kingdom

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.)

ISAT US Inc. seeks blanket authority to operate earth stations mounted on aircraft using the Inmarsat-5 F2 satellite.

Exhibit A

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.	О ^В
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.

44. Applicant is a (an): (Choose the butto	n next to applicable respons	se.)			
• Individual					
• Unincorporated Association					
• Partnership					
• Corporation					
Governmental Entity					
Other (please specify)					
•					
45. Name of Person Signing		46. Title of Per	son Signing		
Christopher J. Murphy		Vice President, Government Affairs			
47. Please supply any need attachments.					
Attachment 1:	Attachment 2:		Attachment 3:		
WILLFUL FALSE STATEMI	ENTS MADE ON THIS FO	RM ARE PUNISHA	ABLE BY FINE AND / OR IMPRISON	JMENT	
			FANY STATION AUTHORIZATION		
(U.S. Code, Title 47	', Section 312(a)(1)), AND/0	OR FORFEITURE (U.S. Code, Title 47, Section 503).		

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

Location of Earth St	tation Site					
E1: Site Identifier:	Aero 1	E5. Call Sign:				
E2: Contact Name	Kevin Baker	E6. Phone Number:	808-469-7104			
E3. Street:	6211 Glen Circle	E7. City:	Lino Lakes			
		E8. County:	Anoka			
E4. State	MN	E9. Zip Code	55014			
E10. Area of Opera	tion:	CONUS, PR, USVI, Atlantic Ocean Region, Pacific Ocean Region				
E11. Latitude:	0 °0 '0.0 "					
E12. Longitude:	0 °0 '0.0 "					
E13. Lat/Lon Coord	linates are:	ONAD-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}	● N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non–geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	O Yes	O ^{No}	● N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	• Yes	0	No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0	Yes	● ^N	10
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	● ^N	10
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, hav you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	0	Yes	() N	10

Satellite Name:OTHER | OTHER | If you selected OTHER, please enter the following:

E21. Common Name: Inmarsat 5 F2	E22. ITU Name: Inmarsat–KA 55W
E23. Orbit Location: 55 W.L.	E24. Country: United Kingdom
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 GainTransmint and/or Recieve (dBi at GHz)
Aero 1	MCS 8200	4000	Honeywell	MCS 8200	0.0	36.8 dBi at 19.7
						36.9 dBi at 20.2
						39.8 dBi at 29.5
						39.8 dBi at 30.0
						36.9 dBi at 19.95
						39.8 dBi at 29.75

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	Height Above Ground	E38. Total Input Power at antenna flange (Watts)	Maximum Antenna Height	E40. Total EIRP for al carriers (dBW)
MCS 8200	0.195/0.65	0.0	0.0	0.0	12.6	0.0	50.8

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
MCS 8200	19700 20200	R	Left Hand Circular	32M0G7W	0.0	0.0
entirety.) Various Mo	odulations up t	o 32APSK; Digi	ital Data Link			
MCS 8200	29500 30000	Т	Right Hand Circular	460KG7W	44.6	24.0

	ion and Services	(If the complete de	escription does not appea	r in this box, please	go to the end of t	the form to view it in its
entirety.) Various	Modulations v	up to 32APSK;	Digital Data Lir	ık		
MCS 8200	29500 30000	Т	Right Hand Circular	5M00G1W	7.0	-24.0
entirety.)			escription does not appea			
MCS 8200	29500 30000	Т	Right Hand Circular	7M34G7W	46.0	13.4
entirety.)			escription does not appea		go to the end of t	the 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 E/W 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)
MCS 8200	Geostationary	19700 20200	0.0/ 360.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	29500 30000	0.0/ 360.0	0.0	5.0	0.0	5.0	10.0
REMOTE CO	ONTROL POIN	T LOCATION						•
	ign ase enter the calls iich this applicati	•	•	808-	. Phone Number -469–7104			
E62. Street 6211 Glen				·				
E63. City Lino Lakes			E67. County Anoka	/		E64/68. State/Country MN/ US		E66. Zip Code 55014

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

Location of Earth St	tation Site						
E1: Site Identifier:	Aero 2	E5. Call Sign:					
E2: Contact Name	Kevin Baker	E6. Phone Number:	808-469-7104				
E3. Street:	6211 Glen Circle	E7. City:	Lino Lakes				
		E8. County:	Anoka				
E4. State	MN	E9. Zip Code	55014				
E10. Area of Opera	tion:	CONUS, PR, USVI, Atlantic Ocean Region, Pacific Ocean Region					
E11. Latitude:	0 °0 '0.0 "						
E12. Longitude:	0 °0 '0.0 "						
E13. Lat/Lon Coord	dinates are:	● 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 asExhibit G a technical analysis showing compliance with two-degree spacing policy.	O ^{Yes}	O ^{No}	N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non–geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	O Yes	○ ^{No}	● N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	• Yes	0	No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0	Yes	I N	10
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	● ^N	10
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, hav you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	0	Yes	() N	10

Satellite Name:OTHER | OTHER | If you selected OTHER, please enter the following:

E21. Common Name: Inmarsat 5 F2	E22. ITU Name: Inmarsat–Ka 55W
E23. Orbit Location: 55 W.L.	E24. Country: United Kingdom
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 GainTransmint and/or Recieve (dBi at GHz)
Aero 2	MCS 8000	4000	Honeywell	MCS 8000	0.3	32.57 dBi at 20.2
						32.7 dBi at 19.7
						37.0 dBi at 29.5
						37.0 dBi at 30.0
						32.83 dBi at 19.95
						37.0 dBi at 29.75

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	Maximum Antenna Height	E40. Total EIRP for al carriers (dBW)
MCS 8000	0.0/0.0	0.0	0.0	0.0	12.0	0.0	47.8

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
MCS 8000	19700 20200	R	Left Hand Circular	32M0G7W	0.0	0.0
entirety.) Various Mo	odulations up t	o 32APSK; Digi	ital Data Link			
MCS 8000	29500 30000	Т	Right Hand Circular	460KG7W	32.6	12.0

E50. Modula entirety.)	tion and Services	(If the complete d	escription does not appea	r in this box, please	go to the end of t	he form to view it in its
Various	Modulations u	p to 32APSK;	Digital Data Lir	ık		
MCS 8000	29500 30000	Т	Right Hand Circular	5M00G1W	7.0	-24.0
entirety.)			escription does not appea		go to the end of t	the form to view it in its
MCS 8000	29500 30000	Т	Right Hand Circular	7M34G7W	44.6	12.0
entirety.)			escription does not appea		go to the end of t	the 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 E/W 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)
MCS 8000	Geostationary	19700 20200	0.0/ 360.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	29500 30000	0.0/ 360.0	0.0	5.0	0.0	5.0	-9.0
REMOTE CO	DNTROL POIN	T LOCATION						
	ign ase enter the calls ich this applicati	•	•	808-	. Phone Number -469–7104			
E62. Street 6211 Glen (·				
E63. City Lino Lakes			E67. County Anoka	1		E64/68. State/Country MN/ US	4	E66. Zip Code 55014

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