Date & Time Filed: Jun 5 2020 2:14:44:590AM File Number: SES-MOD-INTR2020-01404

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

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

GetSat MilliEX and Ka5000

Legal Name of A _l	pplicant		
Name:	ISAT US Inc.	Phone Number:	202-248-5150
DBA Name:		Fax Number:	
Street:	1441 L Street, NW	E-Mail:	brennan.price@inmarsat.com
	Suite 610		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20005 –
Attention:	Brennan Price		

9–16. Name of Contact Representative

Name: Bennan Price Phone Number: 703–223–3327

Company: ISAT US Inc. Fax Number:

Street: 1441 L Street, NW E-Mail: brennan.price@inmarsat.com

Suite 610

City: Washington State: DC

Country: USA Zipcode: 20005–

Attention: Brennan Price 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

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 Noncommercial educational licensee						
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: E140114	(a) Date pending application was filed:	(b) File number:				
E140114		SESMFS2018011200020				

TYPE OF SERVICE

se the following type(s) of service(s): Select all that apply:
f earth station applicant, check all that apply.
Jsing U.S. licensed satellites
Jsing Non–U.S. licensed satellites
e, see instructions regarding Sec. 214 filings. Choose one. Are these
Switched Network N/A
ble frequency band(s).
Please specify additional 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)
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 & Double
j — authorization to change Points of Communication (satellites & Double of Communication)
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

under the laws of a foreign country?

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.		Exhi	bit C			
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronateronautical fixed radio station services are not required to respond to Items 30–34.	autic	cal en	rou	te or		
29. Is the applicant a foreign government or the representative of any foreign government?	٥	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	0	Yes	0	No	•	N/A

O Yes O No

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 1.1308 and 1.1311 of

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	•	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	C) No	0
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	•	N	0
	Exh	iibit E)			

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, we coordinated or is in the process of coordinating the space station? United Kingdom	hat administr	ration has
43. Description. (Summarize the nature of the application and the services to be provided). (If the complete descripti box, please go to the end of the form to view it in its entirety.)	on does not a	ppear in this
ISAT US Inc. seeks authorization to add two terminal types to its Global Exp	ress	
aeronautical ESIM license as described in the narrative of Exhibit A.		
Eulikia A		
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.	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.

44. Applicant is a (an): (Choose the button next to ap	plicable response.)	
Individual		
O Unincorporated Association		
O Partnership		
© Corporation		
Governmental Entity		
Other (please specify)		
45. Name of Person Signing	46. Title of Person Signing	
Brennan T. Price	Director, Regulatory Affairs	
>		_
	DE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPR	

(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).

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 4	E5. Call Sign:		
E2: Contact Name	Ananda Mishra	E6. Phone Number:	8086385820	
E3. Street:	Aboard Aircraft	E7. City:		
		E8. County:		
E4. State		E9. Zip Code		
E10. Area of Opera	tion:	CONUS, OCONUS	\$	
E11. Latitude:	0 °0 '0.0 "			
E12. Longitude:	0 °0 '0.0 "			
E13. Lat/Lon Coord	linates are:	O NAD-27	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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set 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		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.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION				
Satellite Name: INMARSAT 5F1 INMARSAT 5F1 63 E.L. If you	selected OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: INMARSAT 5F3 INMARSAT 5F3 179.6 E.L. If y	ou selected OTHER, please enter the following	ng:		

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: INMARSAT 5F2 INMARSAT 5F2 55.0 W.L. If y	ou selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

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)	
Aero 4	Milli–EX	4000	Get SAT	Milli SAT EX	0.3	34.9 dBi at 20.2	
Aero 4	Milli–EX	4000	Get SAT	Milli SAT EX	0.3	35.3 dBi at 19.7	
Aero 4	Milli–EX	4000	Get SAT	Milli SAT EX	0.3	37.8 dBi at 29.5	
Aero 4	Milli–EX	4000	Get SAT	Milli SAT EX	0.3	38.2 dBi at 30.0	

Id	Diameter		` ′	Height Above	E38. Total Input Power at antenna flange (Watts)	0	EIRP for al
Milli-EX	0.48/0.2	0.0	0.0	0.0	12.0	0.0	48.9

FREQUENCY

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
Milli–EX	19700 20200	R	Left Hand Circular	32M0G7W	0.0	0.0

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.)

Various modulation up to 32 APSK; Digital Data Link

Milli-EX	29500	T	Right Hand	460KG7W	38.8	18.2
	30000		Circular			

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.)

Various modulation up to 32 APSK; Digital Data Link

Milli–EX 29500	1	Right Hand	[5M00G1W	48.9	17.9
30000		Circular			

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.)

Various modulation up to 32 APSK; Digital Data Link

Milli-EX	29500	T	Right Hand	7M34G7W	48.9	16.3
	30000		Circular			

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.)

Various modulation up to 32 APSK; Digital Data Link

FREQUENCY COORDINATION

	E51. Satellite Orbit Type	Frequency Limits(MHz)	Range of Satellite Arc Eastern/West	Station Azimuth Angle		Station Azimuth Angle	Elevation Angle Western	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
Milli–EX	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	REMOTE CONTROL POINT LOCATION										
E120072 NOTE: Plea	E61. Call Sign E120072 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed. E66. Phone Number 8086385820										
E62. Street A											
E63. City Lino Lakes			E68. County Anoka	у			E67/68 State/Cou MN/	*	E64. Zip Code 55014		

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:	Aero 5	E5. Call Sign:				
E2: Contact Name	Ananda Mishra	E6. Phone Number:	8086385820			
E3. Street:	Aboard Aircraft	E7. City:				
		E8. County:				
E4. State		E9. Zip Code				
E10. Area of Operat	ion:	CONUS, OCONUS				
E11. Latitude:	0 °0 '0.0 "					
E12. Longitude:	0 °0 '0.0 "					
E13. Lat/Lon Coord	linates are:	NAD-27	○ 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.	● Yes	O No	O 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 loca point.	ation and telephone number of the control	● Yes	O 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.	A's study regarding the potential hazard of	O Yes	No
POINTS OF COMMUNICATION			
Satellite Name: INMARSAT 5F3 INMARSAT 5F3 179.6 E.L. If yo	ou selected OTHER, please enter the following	ıg:	
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
Satellite Name: INMARSAT 5F2 INMARSAT 5F2 55.0 W.L. If yo	u selected OTHER, please enter the following	g:	
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
Satellite Name: INMARSAT 5F1 INMARSAT 5F1 63 E.L. If you s	selected OTHER, please enter the following:		

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

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)
Aero 5	KA5000	200	Smiths Interconnect	KA5000	0.3	32.1 dBi at 19.7
Aero 5	KA5000	200	Smiths Interconnect	KA5000	0.3	32.1 dBi at 20.2
Aero 5	KA5000	200	Smiths Interconnect	KA5000	0.3	37.0 dBi at 29.5
Aero 5	KA5000	200	Smiths Interconnect	KA5000	0.3	37.0 dBi at 30.0

Id	Diameter		` ′	Height Above Ground Level	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
KA5000	0.3/0.3	0.0	0.0	0.0	10.0	0.0	47.0

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)
KA5000	19700 20200	R	Left Hand Circular	32M0G7W	0.0	0.0
E50. Modulation entirety.) Various modulation			ital Data Link	uns box, piease go	to the end of the form	to view it iii its
KA5000	29500 30000	Т	Right Hand Circular	460KG7W	39.0	18.4
E50. Modulation entirety.) Various modulation			ital Data Link	this box, please go	to the end of the form	to view it in its
KA5000	29500 30000	Т	Right Hand Circular	5M00G1W	47.0	16.0

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.)

Various modulation up to 32 APSK; Digital Data Link

KA5000	29500	Т	Right Hand	7M34G7W	47.0	14.4
	30000		Circular			

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.)

Various modulation up to 32 APSK; Digital Data Link

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)
KA5000	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	-7.6

REMOTE CONTROL POINT LOCATION

E61. Call Sign E120072 NOTE: Please enter the callsign of the contro callsign for which this application is being filed.	E66. Phone Number 8086385820			
E62. Street Address 6211 Glen Circle				
E63. City Lino Lakes	E68. County Anoka		E67/68. State/Country MN/ USA	E64. Zip Code 55014

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD–PERM, Paperwork Reduction Project (3060–0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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