Approved by OMB 3060–0678

Date & Time Filed: Aug 1 2019 4:10:02:160PM File Number: SES–MOD–INTR2019–02882

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: Modification of E150097 to Add Panther II Terminals

1–8. Legal Name of Ap	pplicant		
Name:	ISAT US Inc.	Phone Number:	703–223–3327
DBA Name:		Fax Number:	202–248–5177
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:	Brennan Price	Phone Number:	703–223–3327
Company:	ISAT US Inc.	Fax Number:	202–248–5177
Street:	1441 L St NW	E-Mail:	Brennan.Price@inmarsat.com
	Suite 610		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20005-
Attention:		Relationship:	
CLASSIFICATION C			
 17. Choose the button in classification that applied both questions a. and b for 17a and only one for al. Earth Station a1. Earth Station a2. Space Station 	es to this filing for . Choose only one or 17b.	 (N/A) b1. Application for License of New Static (N/A) b2. Application for Registration of New E 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 Receivatellite (N/A) b9. Letter of Intent to Use Non–U.S. Lice States (N/A) b10. Other (Please specify) (N/A) b11. Application for Earth Station to Action (N/A) b12. Application for Database Entry b13. Amendment to a Pending Database Entry 	Domestic Receive–Only Station on ive–Only Station Using Non–U.S. Licensed ensed Satellite to Provide Service in the United ccess a Non–U.S.satellite Not Currently Authorized Frequencies in the United States

17c. Is a fee submitted with this application	on?				
● 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	rcial educational licensee				
• Other(please explain):					
17d.					
Fee Classification CGX – Fixed Satellite 7 Station	Transmit/Receive Earth				
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:	application enter both fields, if this filing is a			
(a) Call sign of station:	(a) Date pending application was filed:	(b) File number:			
E150097		SESMOD2019041700528			

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provid	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	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CAPPIER	service, see instructions regarding Sec. 214 filings. Choose one. Are these
facilities:	service, see instructions regarding Sec. 214 mings. Choose one. Are mese
• Connected to a Public Switched Network • Not connected to a	Public Switched Network 👩 N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all a	applicable frequency band(s).
a. C–Band (4/6 GHz) \square b. Ku–Band (12/14 GHz)	
c.Other (Please specify upper and lower frequencies in MHz.)	
Frequency Lower: 19700 Frequency Upper: 30000	(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.
o a. Fixed Earth Station
• b. Temporary–Fixed Earth Station
o c. 12/14 GHz VSAT Network
O 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



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 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.	● Yes ● No Exhibit C							
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aerona aeronautical fixed radio station services are not required to respond to Items 30–34.	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?	0	Yes	۲	No				
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	۲	N/A		
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	No	۲	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	۲	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 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.	Yes	O No

O Yes O No ⊚ N/A

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.	O 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	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.	• Yes	O 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.



Exhibit B

Yes

O No

O No

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?

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.)

Application to add Panther II earth station terminals to communicate with Inmarsat 5F2 and Inmarsat 5F3 satellites.

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
	Exhibit G

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.

ENT
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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:	17	E5. Call Sign:	E150097			
E2: Contact Name	Ananda Mishra	E6. Phone Number:	808-638-5820			
E3. Street:	58–350 Kamehameha Hwy	E7. City:	Haleiwa			
		E8. County:	Honolulu			
E4. State	HI	E9. Zip Code	96712			
E10. Area of Opera	tion:	CONUS, Puerto Rico, USVI, Alaska, Hawaii, US Territories				
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	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	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	۲	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	۲	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have 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	۲	No

POINTS OF COMMUNICATION

Satellite Name: INMARSAT 5F3 INMARSAT 5F3 179.6 E.L. If y	ou selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: INMARSAT 5F2 | INMARSAT 5F2 | 55.0 W.L. If you 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 at GHz)
17	Panther 60	50	L3–GCS	Panther II 60	0.6	39.97 dBi at 20.2
17	Panther 60	50	L3–GCS	Panther II 60	0.6	40.96 dBi at 19.7
17	Panther 60	50	L3–GCS	Panther II 60	0.6	43.21 dBi at 30.0
17	Panther 60	50	L3–GCS	Panther II 60	0.6	45.47 dBi at 29.5

Id			· · · ·	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
Panther 60	0.6/0.6	0.0	0.0	0.0	7.0	0.0	54.0

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)	
Panther 60	19700 20200	R	Left Hand Circular	32M0G7W	0.0	0.0	
E50. Modulation entirety.) Various mo		o 32 APSK Digit			o the end of the form	to view it in its	
Panther 60	29500 30000	Т	Right Hand Circular	460KG7W	54.0	33.4	
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/Data Signaling							
Panther 60	29500 30000	Т	Right Hand Circular	5M00G1W	54.0	23.0	

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/Data Signaling

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	0	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)
Panther 60	Geostationary	19700 20200	0.0/0.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	29500 30000	0.0/0.0	0.0	5.0	0.0	5.0	-9.0

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 808–638–5820			
E62. Street Address 6211 Glen Circle				
E63. City Lino Lakes	E68. County Anoka		E67/68. State/Country MN/ USA	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:	18	E5. Call Sign:	E150097			
E2: Contact Name	Ananda Mishra	E6. Phone Number:	808-638-5820			
E3. Street:	58–350 Kamehameha Hwy	E7. City:	Haleiwa			
		E8. County:	Honolulu			
E4. State	HI	E9. Zip Code	96712			
E10. Area of Operat	tion:	CONUS, Puerto Rico, USVI, Alaska, Hawaii, US Territories				
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	• Yes	⊖ ^{No}	● N/A
two-degree spacing policy.			

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 [№]	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	۲	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	۲	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have 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	۲	No

POINTS OF COMMUNICATION

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:

Satellite Name: INMARSAT 5F3 | INMARSAT 5F3 | 179.6 E.L. If you 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 at GHz)
18	Panther 96	50	L3–GCS	Panther II 96	0.96	43.71 dBi at 19.7
18	Panther 96	50	L3–GCS	Panther II 96	0.96	43.82 dBi at 20.2
18	Panther 96	50	L3–GCS	Panther II 96	0.96	47.66 dBi at 30.0
18	Panther 96	50	L3–GCS	Panther II 96	0.96	48.83 dBi at 29.5

Id			· · · ·	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
Panther 96	0.96/0.96	0.0	0.0	0.0	7.0	0.0	57.3

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)
Panther 96	19700 20200	R	Left Hand Circular	32M0G7W	0.0	0.0
E50. Modulation entirety.) Various mo	and Services (If the odulation up to				o the end of the form	to view it in its
Panther 96	29500 30000	Т	Right Hand Circular	460KG7W	52.61	36.7
E50. Modulation entirety.)					o the end of the form	to view it in its
Various mc	odulation up to	0 32 APSK Digit	al Data Link/D	ata Signaling		
Panther 96	29500 30000	Т	Right Hand Circular	5M00G1W	52.61	26.4

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/Data Signaling

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	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)
Panther 96	Geostationary	19700 20200	0.0/0.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	29500 30000	0.0/0.0	0.0	5.0	0.0	5.0	-9.0

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 808–638–5820			
E62. Street Address 6211 Glen Circle				
E63. City Lino Lakes	E68. County Anoka		E67/68. State/Country MN/ USA	E64. Zip Code 55014

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