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## 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:

License Application for KA-Band Transmit/Receive Earth Stations in Fairbanks, Alaska

1–8. Legal Name of	Applicant
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Name: Iridium Satellite LLC Phone Number: 301–571–6200

**DBA Fax Number:** 301–571–6250

Name:

Street: 6701 Democracy Blvd. E–Mail: olga.madruga–forti@iridium.com

Suite 500

City: Bethesda State: MD

Country: USA Zipcode: 20817 -

**Attention:** Ms Olga Madruga–Forti

9–16. Name of Contact Representative

Name: Olga Madruga–Forti Phone Number: 301–571–6200

**Company:** Iridium Satellite LLC **Fax Number:** 301–571–6250

Street: 6701 Democracy Blvd. E-Mail: olga.madruga-forti@iridium.com

Suite 500

City: Bethesda State: MD

Country: USA Zipcode: 20817–

Attention: Relationship:

### 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.

a.

a1. Earth Station

(N/A) a2. Space Station

b.

b1. Application for License of New Station

**6** b2. Application for Registration of New Domestic Receive-Only 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

o b10. 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.

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).  Governmental Entity Noncommercial educational licensee  Other(please explain):			
Fee Classification BAX – Fixed Satellite T Station	Transmit/Receive Earth		
<ul><li>18. If this filing is in reference to an existing station, enter:</li><li>(a) Call sign of station:</li><li>Not Applicable</li></ul>	19. If this filing is an amendment to a pending (a) Date pending application was filed: Not Applicable	application enter:  (b) File number of pending application:  Not Applicable	
TYPE OF SERVICE  20. NATURE OF SERVICE: This filing is for	or an authorization to provide or use the following	ng 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		
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	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: 19400.0 Frequency Upper: 19600.0			
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			
(N/A) e. Geostationary Space Station			
(N/A) f. Non–Geostationary Space Station			
g. Other (please specify)			
26. TYPE OF EARTH STATION FACILITY: Choose only one.			
Transmit/Receive Transmit-Only Receive-Only N/A	<b>L</b>		

## 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	O 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 application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.	Exhibit B	
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.	autical en route	or
29. Is the applicant a foreign government or the representative of any foreign government?	O Yes O N	O
30. Is the applicant an alien or the representative of an alien?	O Yes  N	o o N/A

31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes	<b>⊘</b> No	O 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	<b>⊗</b> No	o o 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?	O Yes	<b>⊚</b> No	o o 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.	٥	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.	<b>O</b> Yes	<b>⊚</b> 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.	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 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	<b>⊚</b> 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	<b>⊚</b> 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	<b>⊚</b> No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, w coordinated or is in the process of coordinating the space station?	hat administr	ation has

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.)

Iridium Satellite, Inc. seeks to license three low-earth-orbit transmit/receive earth stations. The earth stations will be operational to the Iridium Satellite Constellation. They will be used as a telemetry, tracking, and command satellite communications' earth terminal, as well as Gateway earth stations.

### **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.

	rue, 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 applicable response.)		
0	Individual		
0	Unincorporated Association		
0	Partnership		
•	Corporation		
0	Governmental Entity		
0	Other (please specify)		

45. Name of Person Signing Carmen Lloyd	1		46. Title of Person Signing Chief Executive Officer	
47. Please supply any need attachments Attachment 1:	. Attachment 2:		Attachment 3:	
	MENTS MADE ON THIS FO e 18, Section 1001), AND/O 47, Section 312(a)(1)), AND	R REVOCATION OF AN	Y STATION AUTHORIZA	TION

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

Location of Earth Station Site

E1: Site Identifier: Fairbanks E5. Call Sign:

E2: Contact Name Mark Durazo E6. Phone 480–752–1172

Number:

E3. Street: North Star E7. City: Fairbanks

**Industrial Park** 

Lot 1 of Tract B–5 E8. County: North Star

Borough

E4. State AK E9. Zip Code 99701

E10. Area of Operation: Fairbanks, Alaska Area

E11. Latitude: 64 °49 '3.2 "N

E12. Longitude: 147 °43 '26.8 "W

E13. Lat/Lon Coordinates are: NAD-27 NAD-83 N/A

E14. Site Elevation (AMSL): 128.02 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	s <b>O</b> 1	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?	<b>⊚</b> Ye:	s O¹	No	O N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	● Ye	es	0	No
	т—			
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	● Ye	es	0	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	O Ye	es	•	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.	O Ye	es	•	No
POINTS OF COMMUNICATION	-			
Satellite Name:OTHER   OTHER   If you selected OTHER, please enter the following:				

E21. Common Name: Iridium Constellatio	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			E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)
Fairbanks	A1	3	Scientific-Atlanta	3M	3.0	54.0 dBi at 19.500
						57.4 dBi at 29.200

E28. Antenna Id	Diameter	E35. Above Ground Level  (meters)	(meters)	Height Above Ground	Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers  (dBW)
A1	0.0/0.0	4.5	132.52	0.0	120.0	0.0	78.2

# FREQUENCY

E28. Antenna Id	E43/44.	E45. T/R Mode	E46. Antenna	E47. Emission	E48. Maximum	E49. Maximum
	Frequency Bands		Polarization(H,V,	Designator	EIRP per Carrier	ERIP Density per
	(MHz)		L,R)		(dBW)	Carrier
						(dBW/4kHz)
						(dBW

A1		19400.0 19600.0	R	Linear and Circular	3M31G7W	0.0	0.0
E:	50. Modulation ety.)	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
	Digital Te	lemetry, Track	ing and Comman	d Carriers			
A1		29100.0 29300.0	Т	Linear and Circular	3M13G7W	67.5	38.6
E5 entire	50. Modulation ety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	the end of the form	to view it in its
	Digital Te	lemetry, Track	ing and Comman	d Carriers			

# 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	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)
A1	Non– Geostationary	19400.0 19600.0	0.0/ 360.0	0.0	5.0	0.0	5.0	0.0

	Non– Geostationary	29100.0 29300.0	0.0/ 360.0	0.0		5.0	0.0	5.0	-7.3
REMOTE CO	 NTROL POIN	LOCATION							
NOTE: Plea	E61. Call Sign  E65. Phone Number  703–724–8000  NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.								
E62. Street Address 44330 Woodridge Pkwy									
E63. City Leesburg			E67. County Loudoun	ý			E64/68. State/Country / USA		E66. Zip Code 20176

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