Date & Time Filed: Sep 11 2015 4:16:49:446PM File Number: SES-AMD-INTR2015-01635

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: E961032 amendment to AMS(R)S application

2.701032 differentiate to 71116(17)5 deprication									
1–8. Legal Name of App	1–8. Legal Name of Applicant								
Name:	Iridium Satellite LLC	Phone Number:	703–287–7411						
DBA Name:		Fax Number:							
Street:	1750 Tysons Boulevard	E-Mail:	thomas.hickey@iridium.com						
	Suite 1400								
City:	McLean	State:	VA						
Country:	USA	Zipcode:	22102 –						
Attention:	Mr Thomas Hickey								
I									

9–16. Name of Contact Representative

Name: Joseph A. Godles Phone Number: 202–429–4900

Company: Goldberg Godles Wiener & Wright Fax Number: 202–429–4912

LLP

Street: 1229 19th Street, NW E-Mail: jgodles@g2w2.com

City: Washington State: DC

Country: USA **Zipcode:** 20036–2413

Attention: 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 159. If No, indicate reason for fee exemption (see 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 application enter both fields, if this filing is a modification please enter only the file number:		
(a) Call sign of station: E960132	(a) Date pending application was filed: (b) File number:		
	04/05/2013	SESMOD2013041600322	

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide	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 sefacilities:	ervice, see instructions regarding Sec. 214 filings. Choose one. Are these
O Connected to a Public Switched Network Not connected to a I	Public Switched Network N/A

24. 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)						
c.Other (Please specify upper and low Frequency Lower: 1618.725	Frequency Upper: 1626.5	(Please specify additional frequencies in an attachment)				
1 3		<u> </u>				
TYPE OF STATION						
25. CLASS OF STATION: Choose the butt	on next to the class of station th	at 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 FACILIT	·V·					
Transmit/Receive Transmit—On		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 (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

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.		Rad I	Haz			
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	al en	rout	te 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

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?	O Yes O	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.	o 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.	O 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.	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.	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.	⊚ 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	No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, v coordinated or is in the process of coordinating the space station?	vhat administi	ration has
43. Description. (Summarize the nature of the application and the services to be provided). (If the complete descriptions, please go to the end of the form to view it in its entirety.)	ion does not a	ppear in this
Applicant herein amends its pending application to add AMS(R)S in order to particular and related documentation.	provide a	full

Narrative

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
	Confidentiality

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.)	
o Individual		
O Unincorporated Association		
O Partnership		
O Corporation		
Governmental Entity		
Other (please specify)		
_		
45. Name of Person Signing	46. Title of Person Signing	
Thomas D. Hickey	Chief Legal Officer	
>		
WILLFUL FALSE STATEMENTS MAD	E ON THIS FORM ARE PUNISHABLE BY FINE AND / OR I	MPRISONMENT
(U.S. Code, Title 18, Section	1001), AND/OR REVOCATION OF ANY STATION AUTHOR	IZATION

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:	AMS(R)S Units	E5. Call Sign:	E960132			
E2: Contact Name	Thomas Hickey	E6. Phone Number:	703–287–7411			
E3. Street:	1750 Tysons Boulevard	E7. City:	McLean			
	Suite 1400	E8. County:	Fairfax			
E4. State	VA	E9. Zip Code	22102			
E10. Area of Operat	ion:	United States and U	.S. commercial aircra	aft		
E11. Latitude:	0 °0 '0.0 "					
E12. Longitude:	0 °0 '0.0 "					
E13. Lat/Lon Coord	linates 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 as a technical analysis showing compliance with two–degree spacing policy.	O Yes	O No	● 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 b measurements?	posed antenna(s) comply with the antenna	○ 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	0	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 coordination contours as	name of the country(ies) and plot of	Yes	٥	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 FAZ 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: IRIDIUM CONSTELLATIO IRIDIUM CONSTELLA	TIO NGSO If you selected OTHER, plea	ise enter th	e followi	ng:
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
POINTS OF COMMUNICATION (Destination Points)	•			
E25. Site Identifier:				

E26. Common Name:	E27. Country:
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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)	
AMS(R)S Units	1	20000	Aero Antenna	AT1621–23 Dual Patch	0.0	2.0 dBi at 1.621	
AMS(R)S Units	2	0	Aero Antenna	AT2775–110 Single Pa	0.089	1.0 dBi at 1.621	
AMS(R)S Units	3	0	Sensor Systems	S67–1575–409 Single	0.089	2.0 dBi at 1.621	
AMS(R)S Units	4	0	Sensor Systems	S67–1575–365 Dual Pa	0.0	2.0 dBi at 1.621	
AMS(R)S Units	5	0	Sensor Systems	S67-1575-168 Single	0.0	-1.0 dBi at 1.621	
AMS(R)S Units	6	0	Sensor Systems	S67-1575-160 Single	0.0	2.0 dBi at 1.621	
AMS(R)S Units	7	0	Cobham	Comant CI 490– 1 Sing	0.089	2.0 dBi at 1.621	
AMS(R)S Units	8	0	Antcom	S4IR16RR-P- XX-X Sing	0.0	1.5 dBi at 1.621	
AMS(R)S Units	9	0	Antcom	S5GIR121RR– AP–XTN Si	0.0	1.5 dBi at 1.621	

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)	E39. Maximum Antenna Height Above Rooftop (meters)	
1	0.2/0.076	0.0	0.0	0.0	5.16	0.0	9.0
2	0.0/0.0	0.0	0.0	0.0	5.16	0.0	8.0
3	0.0/0.0	0.0	0.0	0.0	5.16	0.0	9.0
4	0.2/0.076	0.0	0.0	0.0	5.16	0.0	9.0
5	0.2/0.076	0.0	0.0	0.0	5.16	0.0	6.0
6	0.2/0.076	0.0	0.0	0.0	5.16	0.0	9.0
7	0.0/0.0	0.0	0.0	0.0	5.16	0.0	9.0
8	0.086/0.056	0.0	0.0	0.0	5.16	0.0	8.5
9	0.128/0.056	0.0	0.0	0.0	5.16	0.0	8.5

FREQUENCY

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
1	1618.725 1626.5	R	Right Hand Circular	41K7Q7W	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.)

Voice and Data;	DQPSK		

1	1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	9.0	-10.8
E50. Modulation entirety.)	and Services (If the	ne complete descripti	on does not appear	in this box, please go	to the end of the form	n to view it in its
Voice and	Data; DQPSK					
2	1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
Voice and	Data; DQPSK					
2	1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	8.0	-11.8
E50. Modulation entirety.) Voice and	and Services (If the Data; DQPSK; 5	•		in this box, please go	to the end of the form	n to view it in its

3	1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descri	iption does not appea	r in this box, please	go to the end of t	the form to view it in its
Voice and	Data; DQPSK					
3	1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	9.0	-10.8
Voice and	Data; DQPSK					
4	1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
E50. Modulation entirety.) Voice and	and Services (If the Data; DQPSK	ne complete descri	iption does not appea	r in this box, please	go to the end of t	the form to view it in its

the end of the form	to view it in its
0.0	0.0
6.0	-13.8
the end of the form	to view it in its
6	the end of the form

1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
and Services (If the	ne complete descri	ption does not appea	r in this box, please	go to the end of t	he form to view it in its
Data; DQPSK					
1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	9.0	-10.8
Data; DQPSK					
1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
and Services (If the Data; DQPSK	ne complete descri	ption does not appea	r in this box, please	go to the end of t	he form to view it in its
	and Services (If the Data; DQPSK 1618.725 1626.5 and Services (If the Data; DQPSK 1618.725 1626.5 and Services (If the Data; DQPSK	and Services (If the complete description of the complete	and Services (If the complete description does not appear Data; DQPSK 1618.725	and Services (If the complete description does not appear in this box, please Data; DQPSK T Right Hand Circular and Services (If the complete description does not appear in this box, please Data; DQPSK Right Hand Circular Data; DQPSK Data; DQPSK Right Hand Circular 1618.725 R Right Hand Circular 1618.725 R Right Hand Circular 1618.725 R Right Hand Circular 1626.5 Right Hand Circular	and Services (If the complete description does not appear in this box, please go to the end of to Data; DQPSK 1618.725

7	1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	9.0	-10.8
E50. Modulation entirety.)	and Services (If	the complete descript	tion does not appea	r in this box, please	go to the end of t	the form to view it in its
Voice and	Data; DQPSK					
8	1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
voice and	Data; DQPSK					
8	1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	8.5	-11.3
E50. Modulation entirety.)	and Services (If	the complete descript	tion does not appea	r in this box, please	go to the end of t	the form to view it in its
Voice and	Data; DQPSK					

9	1618.725 1626.5	R	Right Hand Circular	41K7Q7W	0.0	0.0
E50. Modulation entirety.)	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
Voice and	Data; DQPSK					
9	1618.725 1626.5	Т	Right Hand Circular	41K7Q7W	8.5	-11.3
E50. Modulation entirety.) Voice and	and Services (If the Data; DQPSK	ne complete description	on does not appear in	this box, please go to	o the end of 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 Eastern/West ern Limit	Station Azimuth Angle	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)
1	Non– Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-10.8

2	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-11.8
3	Non– Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-10.8
4	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-10.8
5	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-13.8
6	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-10.8
7	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-10.8
8	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-11.3
9	Non- Geostationary	1618.725 1626.5	0.0/0.0	360.0	8.2	360.0	8.2	-11.3
			1					

REMOTE CONTROL POINT LOCATION

E61. Call Sign	E66. Phone Number
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.	1–480–752–5111

E62. Street Address 8440 South River Parkway			
E63. City Tempe	E68. County Maricopa	E67/68. State/Country	E64. Zip Code 85284
		AZ/ USA	

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