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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:

License Application for a Ku-Band VSAT Network

1–8. Legal Name	of Applicant
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Name: DRS Technical Services Phone Number: 406–883–8523

DBA Fax Number: 406–883–8530

Name:

Street: 219 1st Street East E–Mail: cmcneal@tamsco.com

City: Polson State: MT

Country: USA Zipcode: 59860 -

Attention: Christopher J McNeal

9–16. Name of Contact Representative

Name: DRS Technical Services Phone Number: 406–883–8523

Company: Fax Number: 406–883–8530

Street: 219 1st Street East E-Mail: cmcneal@tamsco.com

City: Polson State: MT

Country: USA Zipcode: 59860-

Attention: Christopher J McNeal **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

b b10. Other (Please specify)

o 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 applied. If Yes, complete and attach FCC For	eation? m 159. If No, indicate reason for fee exemption	on (see 47 C FR Section 1 1114)
Governmental Entity Noncom		in (500 17 C.I. ICDOCTION 1.1117).
Other(please explain):		
17d.		
Fee Classification BGV – Fixed Satellit	e VSAT System	
18. If this filing is in reference to an existing station, enter: (a) Call sign of station:	19. If this filing is an amendment to a pending (a) Date pending application was filed:	ng application enter: (b) File number of pending application:
Not Applicable	Not Applicable	Not Applicable
TYPE OF SERVICE		
20. NATURE OF SERVICE: This filing i	s for an authorization to provide or use the follow	wing 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:	
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 ap	oplicable 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: Frequency Upper:	
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	
o 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	
Transmitteeerive of Transmit only of Receive only of 1971	

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 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 A
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronau aeronautical fixed radio station services are not required to respond to Items 30–34.	utical en route or
29. Is the applicant a foreign government or the representative of any foreign government?	O Yes O No
30. Is the applicant an alien or the representative of an alien?	O Yes ⊗ No O N/A

31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes	⊘ 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	⊗ 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	⊚ 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.	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 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.	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, 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.)

DRS Technical Services seeks to license a Ku-band VSAT Network. The network will provide digital video, voice and data services.

Exhibit B

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.

11	Applicant	ica	(an).	(Choose the	hutton next	to applicable	racnonca)
44.	Applicant	18 a 1	(an).	(Choose the	Dutton next	to applicable	response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing Fletcher Brown		46. Title of Person Signing V.P Technical Services		
47. Please supply any need attachments.				
Attachment 1:	Attachment 2:		Attachment 3:	
	•			
	ction 1001), AND/OR RI	EVOCATION OF ANY	Y FINE AND / OR IMPRISONMENT STATION AUTHORIZATION ode, Title 47, Section 503).	

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 Chris McNeal E6. Phone 800–330–0784

Number:

E3. Street: 122 1st Avenue E7. City: Fairbanks

E8. County: North Star

Borough

E4. State AK E9. Zip Code 99701

E10. Area of Operation: CONUS and Alaska

E11. Latitude: 64 °50 '40.0 "N

E12. Longitude: 147 °42 '33.0 "W

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

E14. Site Elevation (AMSL): 139.0 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 location and telephone number of the control point.	⊚ Yes	s O	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	O Yes	s 💿	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	O Yes	s 💿	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 Yes	s 🔞	No
POINTS OF COMMUNICATION			
Satellite Name: ALSAT ALL AUTHORIZED U.S. ALSAT If you selected OTHER, please enter the following	g:		

E21. Common Name:					E22. ITU Name:						
E23. Orbit Location: E24. Country:											
POINTS OF	COMMUNICAT	TION (D	Destination	Points)	!					
E25. Site Identif	ier:										
E26. Common N	Name:					E27. Country:					
ANTENNA						<u>I</u>					
Site ID	E28. Antenna	Id E	C29. Quanti	ity	E30. Manufac	turer	E31. M	Iodel		. Antenna <meters></meters>	E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)
Fairbanks	Hub	1			Vertex/RS	SI	4.8 KP	K	4.8		53.4 dBi at 11.950
											54.9 dBi at 14.250
E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. A Groun Level< (meter	nd 	E36. A Level< (meter		E37. Buil Height A Ground Level <bi (meters)</bi 	bove	E38. Total Input Powe antenna flange (Watts)		E39. Maximum Antenna Heig Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)

FREQUENCY

Hub

0.0/0.0

5.5

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)
	Frequency Bands	Frequency Bands	Frequency Bands Polarization(H,V,	Frequency Bands Polarization(H,V, Designator	Frequency Bands Polarization(H,V, Designator L,R) EIRP per Carrier (dBW)

0.0

40.0

0.0

70.9

144.5

Hub	11700.0 12200.0	R	Horizontal and Vertical	6M00G7W	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear i	n this box, please go	to the end of the form	to view it in its
Digital Vi	deo, Voice, an	d Data				
Hub	11700.0 12200.0	R	Horizontal and Vertical	48K4G7W –	0.0	0.0
entirety.) Digital Vi	deo, Voice, an	d Data				
Hub	14000.0 14500.0	Т	Horizontal and Vertical	6M00G7W	66.2	34.4
E50. Modulation entirety.) Digital Vi	and Services (If the		on does not appear i	n this box, please go	to the end of the form	to view it in its

Hub	14000.0 14500.0	Т	Horizontal and Vertical	48K4G7W –	45.2	34.4
E50. Modulation	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

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.)

Digital Video, Voice, and Data

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)
Hub	Geostationary	11700.0 12200.0	92.0/ 143.0	121.7	5.2	174.8	16.7	0.0
	Geostationary	14000.0 14500.0	92.0/ 143.0	121.7	5.2	174.8	16.7	-6.9

REMOTE CONTROL POINT LOCATION

E61. Call Sign

E65. Phone Number
800–330–0784

NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.

E62. Street Address

219 First Street East

E63. City Polson	E67. County Lake	E64/68. State/Country MT/ USA	E66. Zip Code 59860

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: Remote E5. Call Sign:

E2: Contact Name Chris McNeal E6. Phone 800–330–0784

Number:

E3. Street: Locations E7. City:

Throughout CONUS and Alaska

E8. County:

E4. State E9. Zip Code

E10. Area of Operation: CONUS and Alaska

E11. Latitude: 0 °0 '0.0 "

E12. Longitude: 0 °0 '0.0 "

E13. Lat/Lon Coordinates 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.	⊗ Ye	ès i	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 Ye	es i	O No	⊚ N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	O Y	Zes .	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	O Y	/es	•	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	O Y	Zes .	•	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.	1	/es	•	No
POINTS OF COMMUNICATION	-			
Satellite Name: ALSAT ALL AUTHORIZED U.S. ALSAT If you selected OTHER, please enter the following	g:			

E28. Antenna Id	E33/34. Diameter	E35. Above Ground	E36. Above Sea Level 	E37. Building Height Above	E38. Total Input Power at	E39. Maximum	E40. Total EIRP for al			
							49.6 dBi at 14.25			
Remote	Remote1	60	Patriot Ai Systems	nt. 2.4M	2.4	1	48.0 dBi at 11.95			
Site ID	E28. Antenna	a Id E29. Quan	E30. Manufac			22. Antenna ze <meters></meters>	E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)			
ANTENNA	vanie.			E27. Country.						
E25. Site Identif E26. Common N				E27. Country:						
	COMMUNICA	ΓΙΟΝ (Destination	on Points)	1						
E23. Orbit Location:				E24. Country:						
E21. Common N	Name:			E22. ITU Name:						

E	l	Diameter	Ground	(meters)	Height Above Ground Level 	Input Power at antenna flange (Watts)	Maximum Antenna Height	E40. Total EIRP for al carriers (dBW)
R	emote1	0.0/0.0	3.6	0.0	0.0	11.0	0.0	60.0

FREQUENCY

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

Remote1	11700.0 12200.0	R	Horizontal and Vertical	1M00G7W	0.0	0.0
E50. Modulation entirety.)	n and Services (If	the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its
Digital V	ideo, Voice an	id Data				
Remote1	11700.0 12200.0	R	Horizontal and Vertical	757KG7W –	0.0	0.0
Digital V	ideo, Voice, a	nd Data				
Remote1	14000.0 14500.0	Т	Horizontal and Vertical	1M00G7W	59.6	35.6
E50. Modulation entirety.)	n and Services (If	the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its
Digital V	ideo, Voice, a	nd Data				

Remote1	14000.0 14500.0	Т	Horizontal and Vertical	757KG7W –	58.4	35.6	
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.)							
Digital Vi	deo, Voice and	Data					

FREQUENCY COORDINATION

E28. Antenna Id		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)
Remote1	Geostationary	11700.0 12200.0	60.0/ 143.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	14000.0 14500.0	60.0/ 143.0	0.0	5.0	0.0	5.0	-0.35

REMOTE CONTROL POINT LOCATION

E61. Call Sign	E65. Phone Number
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.	
E62. Street Address	

E63. City	E67. County	E64/68.	E66. Zip Code
		State/Country	_
		/	

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