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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:

Application for New Ku-Band Earth Station (GFMA - Ku) Located in Gilbert, AZ

1	_{	3.	Legal	N	lame	of A	App]	licant
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Name: EchoStar Satellite Operating Phone Number: 303–723–1000

Corporation

**DBA Fax Number:** 303–723–1699

Name:

**Street:** 9601 South Meridian Boulevard **E-Mail:** 

City: Englewood State: CO

Country: USA Zipcode: 80112 -

**Attention:** David K Moskowitz

9–16. Name of Contact Representative

Name: Pantelis Michalopoulos Phone Number: 202–429–6494

Company: Steptoe & Johnson LLP Fax Number: 202–429–3902

Street: 1330 Connecticut Ave., NW E-Mail: pmichalo@steptoe.com

City: Washington State: DC

**Country:** USA **Zipcode:** 20036–1795

Attention: Relationship: Legal Counsel

# **CLASSIFICATION OF FILING**

17. Choose the button next to the	b.						
classification that applies to this filing for	b1. Application for License of New Station						
both questions a. and b. Choose only one	b2. Application for Registration of New Domestic Receive–Only Station						
for 17a and only one for 17b.							
	(N/A) b3. Amendment to a Pending Application (N/A) b4. Modification of License or Registration						
a.	(N/A) b5. Assignment of License or Registration						
a1. Earth Station	(N/A) b6. Transfer of Control of License or Registration						
(N/A) a2. Space Station	(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  h 10. Other (Please specify)						
	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.						
	(N/A) b13. Amendment to a Pending Database Entry Application						
	(N/A) b14. Modifiction of Database Entry						
17c. Is a fee submitted with this applicati	on?						
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 Noncomme	ercial educational licensee						
Other(please explain):							
17d.							
	Fee Classification BAX – Fixed Satellite Transmit/Receive Earth						
Station	tation						

18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending a (a) Date pending application was filed:	application enter:  (b) File number of pending application:	
(a) Call sign of station: Not Applicable	Not Applicable	Not Applicable	

## TYPE OF CEDVICE

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 only one.  Common Carrier  Non–Common Carrier	22. If earth station applicant, check all that apply.  We using U.S. licensed satellites  Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER sifacilities: <ul> <li>Connected to a Public Switched Network</li> <li>Not connected to</li> </ul>	ervice, see instructions regarding Sec. 214 filings. Choose one. Are these to a Public Switched Network

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 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
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
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

environmental impact as defined by 47 CFR 1.1307? If YES, submit the

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.	Rad Hazard Report
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.	nutical 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 O No ● N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes O 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?	O Yes O No ● N/A

have a significant

statement as required by Sections

Yes

No

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 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 No
	Response to Q36

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	<b>⊚</b> 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	<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.	<b>⊚</b> 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  Response to Q	No No 42(a)
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued coordinated or is in the process of coordinating the space station? Canada	d, what administ	ration 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.)

This is an application to operate a newly constructed 13.2 meter Ku-band earth station (GFMA - Ku) located at the EchoStar earth station facility in Gilbert, Arizona.

### **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.

true, complete una correct to the best of his of he	i knowledge and benef,	, und are made in good it		
44. Applicant is a (an): (Choose the button next to	o applicable response.)			
<ul> <li>Individual</li> <li>Unincorporated Association</li> <li>Partnership</li> <li>Corporation</li> <li>Governmental Entity</li> <li>Other (please specify)</li> </ul>				
45. Name of Person Signing David K. Moskowitz		46. Title of Person Sign Executive Vice Preside	ning nt and General Counsel	
47. Please supply any need attachments.  Attachment 1:	Attachment 2:		Attachment 3:	

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (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 Station Site

E1: Site Identifier: GFMA – Ku E5. Call Sign:

E2: Contact Name Silas Cole E6. Phone 307–633–5225

Number:

E3. Street: 801 N. Dish Drive E7. City: Gilbert

E8. County: Maricopa

E4. State AZ E9. Zip Code 85233

E10. Area of Operation: United States

E11. Latitude: 33 °22 '0.8 "N

E12. Longitude: 111 °48 '54.7 "W

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

E14. Site Elevation (AMSL): 373.1 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.	<b>●</b> Ye	s <b>O</b>	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?	○ Yes	s •	No	● N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	O Ye	es	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	O Ye	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 Yo	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: AMC 16   USASAT-31U   118.75 If you selected OTHER, please enter the following:				

E21. Common Name:				E22. ITU Name:			
E23. Orbit Location:				E24. Co	ountry:		
				Į.			
Satellite Name	:ALSAT   ALL AUTH	ORIZED U.S.   ALS	SAT If yo	u selected	d OTHER, please er	nter the following:	
E21. Common Na	me:			E22. IT	U Name:		
E23. Orbit Location	on:			E24. Co	ountry:		
				•			
Satellite Name	:ALSAT   ALL AUTH	ORIZED U.S.   ALS	SAT If yo	u selected	d OTHER, please er	nter the following:	
E21. Common Na	me:			E22. IT	U Name:		
E23. Orbit Location	on:			E24. Country:			
POINTS OF C	COMMUNICATION	(Destination Poir	nts)	-!			
E25. Site Identifie	er:						
E26. Common Na	me:			E27. Co	ountry:		
ANTENNA				-!			
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer		E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)
GFMA – Ku	GFMA-Ku	1	Vertex		13.2 Meter	13.2	62.0 dBi at 12.2
ĺ					1		63.5 dBi at 14.0

Id	Diameter	E35. Above Ground Level  (meters)	E36. Above Sea Level  (meters)		Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers  (dBW)
GFMA-Ku	0.0/0.0	23.0	394.3	5.0	1000.0	18.0	93.5

# FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode			EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
GFMA-Ku	11700 12200	R	Left and Right Circular	36M0G7W	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.)

Digital Data

Ī	GFMA–Ku	11700 12200	R	Horizontal and	36M0G7W	0.0	0.0
		12200		Vertical			

E50 M. J. J. J.	1 C (IC /1-	1 . 4 1	1	41.5 - 1 1 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.)									
Digital Da	ta								
GFMA-Ku	11700 11704	R	Left and Right Circular	300KG2D	0.0	0.0			
E50. Modulation entirety.)	and Services (If the	e complete description	on does not appear in	this box, please go to	the end of the form	to view it in its			
Telemetry	Beacon (TT&C)								
GFMA-Ku	11700 11704	R	Horizontal and Vertical	300KG2D	0.0	0.0			
E50. Modulation entirety.)	and Services (If the	e complete description	on does not appear in	this box, please go to	the end of the form	to view it in its			
Telemetry	Beacon (TT&C)								
GFMA-Ku	12196 12200	R	Left and Right Circular	300KG2D	0.0	0.0			

E50. Modulation	and Services (If th	ne complete description	on does not appear in	this box please go to	o the end of the form	to view it in its
entirety.)	and services (if the	ie complete description	on does not appear in	tins oon, prease go to	o the cha of the form	to view it in its
T	Beacon (TT&C)					
GFMA-Ku	12196 12200	R	Horizontal and Vertical	300KG2D	0.0	0.0
E50. Modulation entirety.)  Telemetry	Beacon (TT&C)	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
GFMA–Ku	11700 12200	R	Left and Right Circular	24M0M1F	0.0	0.0
E50. Modulation entirety.)	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 Co	ompressed Video					
GFMA–Ku	11700 12200	R	Horizontal and Vertical	24M0M1F	0.0	0.0

E50. Modulatio	n and Services (If	the complete de	scription does not appear i	n this box, please	go to the end of th	ne form to view it in its	s
entirety.)	ir and Services (II	the complete de	scription does not appear i	ir tills oon, preuse	go to the one of th	io formi to view it in it.	,
Digital C	ompressed Vide	90					
GFMA–Ku	14000 14500	Т	Horizontal and Vertical	36M0G7W	85.5	46.0	
E50. Modulatio entirety.)  Digital D			scription does not appear i				
GFMA–Ku	14000 14004	Т	Horizontal and Vertical	1M50G2D	75.24	49.5	
E50. Modulatio entirety.)  Command C	n and Services (If	the complete de	scription does not appear i	n this box, please	go to the end of th	ne form to view it in its	s
GFMA–Ku	14496 14500	Т	Horizontal and Vertical	1M50G2D	75.24	49.5	

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.)

Command Carrier (TT&C)

CT ( ) Y	1 1000	_	TT 1	2 (2 (2) (4)	97.2	40.5
GFMA–Ku	14000	T	Horizontal and	24M0M1F	[87.3	49.5
	14500		Vertical			

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 Compressed Video

# FREQUENCY COORDINATION

E28. Antenna Id		E52/53. Frequency Limits(MHz)	Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	Antenna Elevation Angle	Station Azimuth Angle	Angle Western	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
GFMA-Ku	Geostationary	11700 14500	61.5/ 148.0	114.5	24.3	233.1	35.3	-14.0

REMOTE CONTROL POINT LOCATION

E61. Call Sign	E65. Phone Number			
NOTE: Please enter the callsign of the control callsign for which this application is being filed.				
E62. Street Address				
E63. City	E67. County		E64/68. State/Country	E66. Zip Code

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