Date & Time Filed: May 7 2019 10:33:51:676PM File Number: SES-MOD-INTR2019-01382

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: E930320 Update Ku Hub Antenna & Add 3 New Ku Hub Antennas

Name:	Comsat, Inc.	<b>Phone Number:</b>	(805)-933-4030
DBA Name:		Fax Number:	571–599–3670
Street:	2550 Wasser Terrace	E-Mail:	HWisniewski@comsat.com
	Suite 6000		
City:	Herndon	State:	VA
<b>Country:</b>	USA	Zipcode:	20171 –
Attention:	Howard Wisniewski		

9–16. Name of Contact Representative

Name: James Lovelace Phone Number: 571.599.3643

**Company:** Comsat, Inc. **Fax Number:** 571.599.3670

Street: 2550 Wasser Terrace E-Mail: jlovelace.ctr@comsat.com

Suite 6000

City: Herndon State: VA

Country: USA Zipcode: 20171–

**Attention:** James Lovelace **Relationship:** Other

#### **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

**b** 3. Amendment to a Pending Application

**b**4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

**b**7. 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

159. If No, indicate reason for fee exemption	n (see 47 C.F.R.Section 1.1114).
Transmit/Receive Earth	
19. If this filing is an amendment to a pending modification please enter only the file number	g application enter both fields, if this filing is a r:
(a) Date pending application was filed:	(b) File number: SESRWL2018061901609
	modification please enter only the file number

### TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the	e 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)	
	h station applicant, check all that apply.
only one.	g U.S. licensed satellites
Common Carrier Non-Common Carrier Using	g Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see facilities:	instructions regarding Sec. 214 filings. Choose one. Are these
Connected to a Public Switched Network     Not connected to a Public Switched Network	tched Network N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable f	requency 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: (Please specify additional frequency	ncies in an attachment)

### 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	
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

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**

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.	·	RadI	_	Exhib	it	
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeron aeronautical fixed radio station services are not required to respond to Items 30–34.	autic	cal er	ı rou	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	•	No	0	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	•	No	0	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	•	No	0	N/A

O Yes O No

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental

	<del></del>	
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 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.	• 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.	• 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	• 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	<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, we coordinated or is in the process of coordinating the space station? Permitted List Satellites to be Used	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.)

Applicant COMSAT, Inc. requests that its E930320 license be modified to update the Ku-band Hub Antenna currently authorized by license and to add authorization for 3 new Ku-band Hub Antennas. To accomplish the update please delete all current specifications and particulars from license for the currently authorized Hub Antenna (heretofore known as Hub

Ex 1 – Lic Mark Up

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.	<b>●</b> 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.	<b>o</b> c

#### **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 applic	cable response.)	
Individual		
<ul> <li>Unincorporated Association</li> </ul>		
Partnership		
Corporation		
Governmental Entity		
Other (please specify)		
45. Name of Person Signing	46. Title of Person Signing	
Howard Wisniewski	Teleport Engineer	
>	•	
WILLELL EALSE STATEMENTS MADE (	ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IM	ADDISONMENT

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 S	tation Site					
E1: Site Identifier:	SAPA10Ku	E5. Call Sign:	E930320			
E2: Contact Name	Howard Wisniewski	E6. Phone Number:	(805)-933-4010			
E3. Street:	7676 Pine Grove Rd.	E7. City:	Santa Paula			
		E8. County:	Ventura			
E4. State	CA	E9. Zip Code	93061			
E10. Area of Opera	tion:	CONUS				
E11. Latitude:	34 °24 '7.95 "N					
E12. Longitude:	119 °4 '21.84 "W					
E13. Lat/Lon Coord	dinates are:	O NAD-27	<b>●</b> NAD-83	O N/A		
E14. Site Elevation	(AMSL):	203.32 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> Yes	O No	O N/A
--	--------------	------	-------

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	O Yes	O No	<b>⊚</b> N/A	
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	o Yes	•	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	o Yes	•	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: PERMITTED LIST   If you selected OTHER, ple	ease 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 atGHz)	
SAPA10Ku	SAPA10Ku	1	Andrews	02–210 OMT304496461	4.6	53.5 dBi at 11.95	
SAPA10Ku	SAPA10Ku	1	Andrews	02–210 OMT304496461	4.6	55.0 dBi at 14.25	

Id	Diameter		,	Height Above	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
SAPA10Ku	4.6/4.6	5.6	208.92	0.0	358.5	0.0	79.0

# FREQUENCY

	E43/44. Frequency Bands (MHz)				E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
SAPA10Ku	11700 12200	R	Horizontal and Vertical	32K0D1W	0.0	0.0

E50. Modulatio entirety.)	n and Services (If	the complete descript	ion does not appear i	n this box, please	go to the end of t	he form to view it in its
	raffic Using P	hase and Ampli	tude Modulatio	ns		
SAPA10Ku	11700 12200	R	Horizontal and Vertical	32K0D7W	0.0	0.0
	raffic Using P	hase and Ampli	tude Modulatio	ns	go to the end of t	the form to view it in its
SAPA10Ku	11700 12200	R	Horizontal and Vertical	32K0F1W	0.0	0.0
E50. Modulatio entirety.)  Digital T	,	the complete descript			go to the end of t	he form to view it in its
SAPA10Ku	11700 12200	R	Horizontal and Vertical	32K0F7W	0.0	0.0

E50. Modulation entirety.)	and Services (If th	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
	affic Using Ph	ase and Amplit	ude Modulation	s		
SAPA10Ku	11700 12200	R	Horizontal and Vertical	54M0D1W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	and Services (If the				o the end of the form	to view it in its
SAPA10Ku	11700 12200	R	Horizontal and Vertical	54M0D7W	0.0	0.0
E50. Modulation entirety.)	and Services (If th	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Tr	affic Using Ph	ase and Amplit	ude Modulation	s		
SAPA10Ku	11700 12200	R	Horizontal and Vertical	54M0F1W	0.0	0.0

E50. Modulation	and Services (If the	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its	
entirety.)							
Digital Tr	affic Using Ph	ase and Amplit	ude Modulation	s			
SAPA10Ku	11700 12200	R	Horizontal and Vertical	54M0F7W	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 Tr	affic Using Ph	ase and Amplit	ude Modulation	s			
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	32K0D1W	48.2	9.2	
E50. Modulation entirety.)	and Services (If the	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its	
Digital Traffic Using Phase and Amplitude Modulations							
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	32K0D7W	48.2	9.2	

E50. Modulation entirety.)	and Services (	If the complete d	escription does not appear i	n this box, please	go to the end of the	he form to view it in	ı its
Digital Tr	raffic Using	Phase and A	Amplitude Modulatio	ns			
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	32K0F1W	48.2	9.2	
E50. Modulation entirety.)	and Services (	If the complete d	escription does not appear i	n this box, please	go to the end of the	he form to view it in	ı its
Digital Tr	raffic Using	Phase and A	Amplitude Modulatio	ns			
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	32K0F7W	48.2	9.2	
E50. Modulation entirety.)	and Services (	If the complete d	escription does not appear i	n this box, please	go to the end of the	he form to view it in	ı its
Digital Tr	raffic Using	Phase and A	Amplitude Modulatio	ns			
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	54M0D1W	48.2	18.8	

E50. Modulation entirety.)	n and Services (If	the complete descrip	ption does not appear	in this box, please	go to the end of the	he form to view it in its
	raffic Using F	hase and Ampl	itude Modulatio	ons		
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	54M0D7W	48.2	18.8
	raffic Using I	hase and Ampl	itude Modulatio	ons		he form to view it in its
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	54M0F1W	48.2	18.8
E50. Modulation entirety.)  Digital Te			otion does not appear		go to the end of the	he form to view it in its
SAPA10Ku	14000 14500	Т	Horizontal and Vertical	54M0F7W	48.2	18.8

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 Traffic Using Phase and Amplitude Modulations

### FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
SAPA10Ku	Geostationary	11700 12200	57.0/190.0	106.0	14.0	260.0	6.0	0.0
	Geostationary	14000 14500	57.0/190.0	106.0	14.0	260.0	6.0	14.0

### REMOTE CONTROL POINT LOCATION

E61. Call Sign		E66. Phone Number		
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

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

Location of Earth S	tation Site					
E1: Site Identifier:	SAPA08Ku	E5. Call Sign:	E930320			
E2: Contact Name	Howard Wisniewski	E6. Phone Number:	(805)-933-4010			
E3. Street:	7676 Pine Grove Rd.	E7. City:	Santa Paula			
		E8. County:	Ventura			
E4. State	CA	E9. Zip Code	93061			
E10. Area of Opera	tion:	CONUS				
E11. Latitude:	34 °24 '6.86 "N					
E12. Longitude:	119 °4 '22.02 "W					
E13. Lat/Lon Coord	dinates are:	O NAD-27	<b>●</b> NAD-83	O N/A		
E14. Site Elevation	(AMSL):	203.31 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite S Satellite Service (FSS) with non–geostationary satellites, do(es) the pr gain patterns specified in Section 25.209(a2) and (b) as demonstrated I measurements?	O Yes	O No	● N/A	
E17. Is the facility operated by remote control? If YES, provide the loc point.	cation and telephone number of the control	O Yes	§ •	No No
E18. Is frequency coordination required? If YES, attach a frequency co	pordination report as	O Yes	s 🔞	No No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	s @	ı No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25. have you attached a copy of a completed FCC Form 854 and/or the FA the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	AA's study regarding the potential hazard of	O Yes	s •	, No
POINTS OF COMMUNICATION				
Satellite Name: PERMITTED LIST   If you selected OTHER, pl	lease 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		E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
SAPA08Ku	SAPA08Ku	1	Vertex	K48PM–FRL1– G/C	4.8	55.2 dBi at 14.25	
SAPA08Ku	SAPA08Ku	1	Vertex	K48PM-FRL1- G/C	4.8	53.2 dBi at 11.725	

Id	Diameter		, ,	Height Above Ground Level	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
SAPA08Ku	4.8/4.8	5.8	209.11	0.0	400.0	0.0	79.2

# FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode		Designator	EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
SAPA08Ku	11700 12200	R	Horizontal and Vertical	32K0D1W	0.0	0.0

E50. Modulation entirety.)	n and Services (If	the complete descript	ion does not appear i	n this box, please	go to the end of t	the form to view it in its
	raffic Using F	hase and Ampli	tude Modulatio	ns		
SAPA08Ku	11700 12200	R	Horizontal and Vertical	32K0D7W	0.0	0.0
E50. Modulation entirety.)  Digital To	`	the complete descript			go to the end of t	the form to view it in its
SAPA08Ku	11700 12200	R	Horizontal and Vertical	32K0F1W	0.0	0.0
E50. Modulation entirety.)  Digital To	`	the complete descript			go to the end of t	the form to view it in its
SAPA08Ku	11700 12200	R	Horizontal and Vertical	32K0F7W	0.0	0.0

E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its
	raffic Using Ph	ase and Amplit	ude Modulation	ıs		
SAPA08Ku	11700 12200	R	Horizontal and Vertical	54M0D1W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	and Services (If the				o the end of the form	to view it in its
SAPA08Ku	11700 12200	R	Horizontal and Vertical	54M0D7W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	n and Services (If the				o the end of the form	to view it in its
SAPA08Ku	11700 12200	R	Horizontal and Vertical	54M0F1W	0.0	0.0

E50. Modulatio entirety.)	n and Services (If	the complete descrip	ption does not appear	in this box, please	go to the end of the	he form to view it in its
	raffic Using E	hase and Ampl	itude Modulatio	ons		
SAPA08Ku	11700 12200	R	Horizontal and Vertical	54M0F7W	0.0	0.0
	raffic Using E	Phase and Ampl	itude Modulatio	ons		he form to view it in its
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	32K0D1W	45.2	9.2
E50. Modulation entirety.)  Digital T			ption does not appear		go to the end of the	he form to view it in its
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	32K0D7W	45.2	9.2

E50. Modulatio entirety.)	n and Services (If	the complete des	cription does not appear	in this box, please	go to the end of the	he form to view it in its
	raffic Using 1	Phase and Am	plitude Modulatic	ns		
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	32K0F1W	45.2	9.2
E50. Modulatio entirety.)  Digital T			cription does not appear i		go to the end of the	ne form to view it in its
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	32K0F7W	45.2	9.2
E50. Modulatio entirety.)  Digital T			cription does not appear		go to the end of the	he form to view it in its
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	54M0D1W	45.2	18.8

E50. Modulation entirety.)	n and Services	(If the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in	its
Digital T	raffic Using	Phase and A	mplitude Modulatio	ns			
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	54M0D7W	45.2	18.8	
E50. Modulation entirety.)		•	escription does not appear		go to the end of the	he form to view it in	its
Digital T:	raffic Using	Phase and A	mplitude Modulatio	ns			
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	54M0F1W	45.2	18.8	
E50. Modulation entirety.)	n and Services	(If the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in	its
Digital T	raffic Using	Phase and A	mplitude Modulatio	ons			
SAPA08Ku	14000 14500	Т	Horizontal and Vertical	54M0F7W	45.2	18.8	

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 Traffic Using Phase and Amplitude Modulations

### FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
SAPA08Ku	Geostationary	11700 12200	57.0/190.0	106.0	14.0	260.0	6.0	0.0
	Geostationary	14000 14500	57.0/190.0	106.0	14.0	260.0	6.0	14.0

### REMOTE CONTROL POINT LOCATION

E61. Call Sign	E66. Phone Number			
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

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

tation Site							
SAPA19Ku	E5. Call Sign:	E930320					
Howard Wisniewski	E6. Phone Number:	(805)-933-4010					
7676 Pine Grove Rd.	E7. City:	Santa Paula					
	E8. County:	Ventura					
CA	E9. Zip Code	93061					
tion:	CONUS						
34 °24 '9.57 "N							
119 °4 '23.25 "W							
dinates are:	O NAD-27	● NAD-83	O N/A				
(AMSL):	203.48 meters						
	Howard Wisniewski 7676 Pine Grove Rd.  CA Attion: 34 °24 '9.57 "N	SAPA19Ku E5. Call Sign: Howard E6. Phone Wisniewski Number: 7676 Pine Grove Rd. E7. City: Rd. E8. County: CA E9. Zip Code ation: CONUS 34 °24 '9.57 "N 119 °4 '23.25 "W dinates are: NAD-27	SAPA19Ku E5. Call Sign: E930320  Howard E6. Phone (805)–933–4010  Wisniewski Number:  7676 Pine Grove E7. City: Santa Paula  Rd. E8. County: Ventura  CA E9. Zip Code 93061  ation: CONUS  34 °24 '9.57 "N  119 °4 '23.25 "W  dinates are: NAD–27 NAD–83	SAPA19Ku E5. Call Sign: E930320  Howard E6. Phone (805)–933–4010  Wisniewski Number:  7676 Pine Grove E7. City: Santa Paula  Rd. E8. County: Ventura  CA E9. Zip Code 93061  ction: CONUS  34 °24 '9.57 "N  119 °4 '23.25 "W  dinates are: NAD-27 NAD-83 N/A	SAPA19Ku E5. Call Sign: E930320  Howard E6. Phone (805)–933–4010  Wisniewski Number:  7676 Pine Grove Rd.  E8. County: Ventura  CA E9. Zip Code 93061  ction: CONUS  34 °24 '9.57 "N  119 °4 '23.25 "W  dinates are: NAD–27 NAD–83 N/A	SAPA19Ku E5. Call Sign: E930320  Howard E6. Phone (805)–933–4010  Wisniewski Number:  7676 Pine Grove Rd. E7. City: Santa Paula  E8. County: Ventura  CA E9. Zip Code 93061  ation: CONUS  34 °24 '9.57 "N  119 °4 '23.25 "W  dinates are: NAD-27 NAD-83 N/A	SAPA19Ku E5. Call Sign: E930320  Howard E6. Phone (805)–933–4010  Wisniewski Number:  7676 Pine Grove Rd.  E8. County: Ventura  CA E9. Zip Code 93061  tion: CONUS  34 °24 '9.57 "N  119 °4 '23.25 "W  dinates are: NAD-27 NAD-83 N/A

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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	oposed antenna(s) comply with the antenna	O Yes	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the location.	ation and telephone number of the control	O 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	O Yes	•	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 FAI the structure to aviation? FAA Exhibit 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: PERMITTED LIST   If you selected OTHER, ple	ease 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 atGHz)
SAPA19Ku	SAPA19Ku	1	General Dynamics	GD 7.3M Ku	7.3	57.38 dBi at 12.00
SAPA19Ku	SAPA19Ku	1	General Dynamics	GD 7.3M Ku	7.3	58.2 dBi at 14.25

Id	Diameter		` ′	Height Above	E38. Total Input Power at antenna flange (Watts)		EIRP for al
SAPA19Ku	7.3/7.3	8.1	211.58	0.0	750.0	0.0	85.1

# FREQUENCY

	E43/44. Frequency Bands (MHz)				EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
SAPA19Ku	11700 12200	R	Horizontal and Vertical	32K0D1W	0.0	0.0

E50. Modulation entirety.)	n and Services (If the	ne complete description	on does not appear in	this box, please go t	to the end of the form	to view it in its
	raffic Using Ph	ase and Amplit	ude Modulatior	ıs		
SAPA19Ku	11700 12200	R	Horizontal and Vertical	32K0D7W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	and Services (If the contract of the contract				to the end of the form	to view it in its
SAPA19Ku	11700 12200	R	Horizontal and Vertical	32K0F1W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	n and Services (If the				to the end of the form	to view it in its
SAPA19Ku	11700 12200	R	Horizontal and Vertical	32K0F7W	0.0	0.0

E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear i	n this box, please go	to the end of the form	to view it in its
	raffic Using P	hase and Amplit	tude Modulatio	ns		
SAPA19Ku	11700 12200	R	Horizontal and Vertical	54M0D1W	0.0	0.0
E50. Modulation entirety.)  Digital T	`	he complete descripti hase and Amplit			to the end of the form	to view it in its
SAPA19Ku	11700 12200	R	Horizontal and Vertical	54M0D7W	0.0	0.0
E50. Modulation entirety.)  Digital T	`	he complete descripti			to the end of the form	to view it in its
SAPA19Ku	11700 12200	R	Horizontal and Vertical	54M0F1W	0.0	0.0

E50. Modulatio entirety.)	n and Services (If	the complete des	scription does not appear	in this box, please	go to the end of t	he form to view it in its	
	raffic Using I	Phase and Am	mplitude Modulatic	ns			
SAPA19Ku	11700 12200	R	Horizontal and Vertical	54M0F7W	0.0	0.0	
	raffic Using I	Phase and Am	scription does not appear in a politude Modulation	ns			
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	32K0D1W	45.2	9.2	
E50. Modulatio entirety.)  Digital T			scription does not appear in a position does not a position does not appear in a position does n		go to the end of t	he form to view it in its	
SAPA19Ku	14000 14500	T	Horizontal and Vertical	32K0D7W	45.2	9.2	

E50. Modulatio entirety.)	n and Services (I	f the complete d	escription does not appear i	n this box, please	go to the end of the	he form to view it in it	is
	raffic Using	Phase and A	mplitude Modulatio	ns			
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	32K0F1W	45.2	9.2	
	raffic Using	Phase and A	escription does not appear i	ns			:S
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	32K0F7W	45.2	9.2	
E50. Modulatio entirety.)  Digital T			escription does not appear i		go to the end of the	he form to view it in it	is .
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	54M0D1W	54.8	18.8	

E50. Modulation entirety.)	and Services (If	the complete descript	tion does not appear	in this box, please §	go to the end of the	he form to view it in its
Digital Tr	raffic Using P	hase and Ampli	tude Modulatio	ns		
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	54M0D7W	54.8	18.8
E50. Modulation entirety.)	`		• •		go to the end of the	he form to view it in its
Digital Tr	raffic Using P	hase and Ampli	tude Modulatio	ns		
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	54M0F1W	54.8	18.8
E50. Modulation entirety.)	and Services (If	the complete descript	tion does not appear	in this box, please §	go to the end of the	he form to view it in its
Digital Tr	raffic Using P	hase and Ampli	tude Modulatio	ns		
SAPA19Ku	14000 14500	Т	Horizontal and Vertical	54M0F7W	54.8	18.8

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 Traffic Using Phase and Amplitude Modulations

# FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
SAPA19Ku	Geostationary	11700 12200	57.0/190.0	106.0	14.0	260.0	6.0	0.0
	Geostationary	14000 14500	57.0/190.0	106.0	14.0	260.0	6.0	14.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign		E66. Phone Number		
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

### 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:	SAPA40Ku	E5. Call Sign:	E930320			
E2: Contact Name	Howard Wisniewski	E6. Phone Number:	(805)933–4010			
E3. Street:	7676 Pine Grove Rd.	E7. City:	Santa Paula			
		E8. County:	Ventura			
E4. State	CA	E9. Zip Code	93061			
E10. Area of Operat	tion:	CONUS				
E11. Latitude:	39°24 '9.76 "N					
E12. Longitude:	119 °4 '22.48 "W					
E13. Lat/Lon Coord	linates are:	<b>○</b> NAD-27	● NAD-83	O N/A		
E14. Site Elevation	(AMSL):	206.5 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	oposed antenna(s) comply with the antenna	O Yes	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the location.	ation and telephone number of the control	O Yes	0	No
E18. Is frequency coordination required? If YES, attach a frequency co	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	O Yes	•	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 FA. 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: PERMITTED LIST   If you selected OTHER, ple	ease 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 atGHz)
SAPA40Ku	SAPA40Ku	1	General Dynamics	GD7.3MKu	7.3	57.38 dBi at 12.00
SAPA40Ku	SAPA40Ku	1	General Dynamics	GD7.3MKu	7.3	58.2 dBi at 14.25

Id	Diameter		` ′	Height Above Ground Level	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
SAPA40Ku	7.3/7.3	8.1	214.6	0.0	750.0	0.0	85.1

# FREQUENCY

	E43/44. Frequency Bands (MHz)				EIRP per Carrier	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
SAPA40Ku	11700 12200	R	Horizontal and Vertical	32K0D1W	0.0	0.0

E50. Modulation entirety.)	and Services (If th	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
	affic Using Ph	ase and Amplit	ude Modulation			
SAPA40Ku	11700 12200	R	Horizontal and Vertical	32K0D7W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	and Services (If the affic Using Ph				o the end of the form	to view it in its
SAPA40Ku	11700 12200	R	Horizontal and Vertical	32K0F1W	0.0	0.0
E50. Modulation entirety.)	and Services (If th	e complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Tr	affic Using Ph	ase and Amplit	ude Modulation			
SAPA40Ku	11700 12200	R	Horizontal and Vertical	32K0F7W	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
	affic Using Ph	ase and Amplit	ude Modulatior	1		
SAPA40Ku	11700 12200	R	Horizontal and Vertical	54M0D1W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	and Services (If the affic Using Ph				to the end of the form	to view it in its
SAPA40Ku	11700 12200	R	Horizontal and Vertical	54M0D7W	0.0	0.0
E50. Modulation entirety.)  Digital Tr	and Services (If the				to the end of the form	to view it in its
SAPA40Ku	11700 12200	R	Horizontal and Vertical	54M0F1W	0.0	0.0

E50. Modulation entirety.)	on and Services (I	f the complete d	lescription does not appear i	n this box, please	go to the end of t	he form to view it in i	its
	raffic Using	Phase and <i>I</i>	Amplitude Modulatio	n			
SAPA40Ku	11700 12200	R	Horizontal and Vertical	54M0F7W	0.0	0.0	
E50. Modulation entirety.)  Digital T			lescription does not appear i		go to the end of t	he form to view it in i	ts
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	32K0D1W	45.2	9.2	
E50. Modulation entirety.)  Digital T			lescription does not appear i		go to the end of t	he form to view it in i	ts
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	32K0D7W	45.2	9.2	

E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear in	n this box, please go	to the end of the form	to view it in its
	raffic Using Ph	nase and Amplit	ude Modulation	n		
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	32K0F1W	45.2	9.2
E50. Modulation entirety.)  Digital Tr	`	he complete descripti			to the end of the form	to view it in its
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	32K0F7W	45.2	9.2
E50. Modulation entirety.)  Digital Te	`	he complete descripti			to the end of the form	to view it in its
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	54M0D1W	54.8	18.8

E50. Modulation entirety.)	n and Services	(If the complete de	escription does not appear	in this box, please	go to the end of the	he form to view it in	its
	raffic Using	g Phase and A	mplitude Modulatio	on			
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	54M0D7W	54.8	18.8	
Digital T	raffic Using	g Phase and A	mplitude Modulatio	on			
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	54M0F1W	54.8	18.0	
E50. Modulation entirety.)  Digital T		· •	escription does not appear a		go to the end of the	he form to view it in	its
SAPA40Ku	14000 14500	Т	Horizontal and Vertical	54M0F7W	54.8	18.8	

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 Traffic Using Phase and Amplitude Modulation

# 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	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
SAPA40Ku	Geostationary	11700 12200	57.0/190.0	106.0	14.0	260.0	6.0	0.0
	Geostationary	14000 14500	57.0/190.0	106.0	14.0	260.0	6.0	14.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign	E66. Phone Number			
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

#### FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD–PERM, Paperwork Reduction Project (3060–0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060–0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104–13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

### 43. Description. (Summarize the nature of the application and the services to be provided).

Applicant COMSAT, Inc. requests that its E930320 license be modified to update the Ku-band Hub Antenna currently authorized by license and to add authorization for 3 new Ku-band Hub Antennas. To accomplish the update please delete all current specifications and particulars from license for the currently authorized Hub Antenna (heretofore known as Hub 4.5m, see Exhibit 1 for details and license mark up showing deletions) and then add back to license the specifications and particulars for this antenna (which is being renamed SAPA10) as per Schedule B. It is requested that the 3 new Ku-band Hub Antennas be added to license as per specifications and particulars set forth for those antennas in the Schedule B.