Approved by OMB
3060−0678

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FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD − MAIN FORM FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	FCC Use Only

APPLICANT INFORMATION
Enter a description of this application to identify it on the main menu:
E060101 VMES Modification

1−8. Legal Name of Applicant

Name:	RaySat Antenna Systems, LLC	**Phone Number:**	703−483−9581
DBA Name:		**Fax Number:**	703−245−8667
Street:	1750 Old Meadow Road Suite 600	**E−Mail:**	david.gross@sigs−raysat.com
City:	Vienna	**State:**	VA
Country:	USA	**Zipcode:**	22102 −
Attention:	Mr. David Gross		

9−16. Name of Contact Representative

Name:	Carlos M. Nalda	**Phone Number:**	202−626−6659
Company:	Squire Sanders	**Fax Number:**	202−626−6780
Street:	1200 19th Street, NW	**E−Mail:**	carlos.nalda@squiresanders.com
	Suite 300		
City:	Washington	**State:**	DC
Country:	USA	**Zipcode:**	20036−
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 CGV − Fixed Satellite VSAT System	

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: E060101	(a) Date pending application was filed: (b) File number: SESMOD2008122101677

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:

- [x] a. Fixed Satellite
- [ ] b. Mobile Satellite
- [ ] c. Radiodetermination Satellite
- [ ] d. Earth Exploration Satellite
- [ ] e. Direct to Home Fixed Satellite
- [ ] f. Digital Audio Radio Service
- [x] g. Other (please specify) VMES

21. STATUS: Choose the button next to the applicable status. Choose only one.	22. If earth station applicant, check all that apply.
○ Common Carrier ◉ Non−Common Carrier	[x] Using U.S. licensed satellites [x] Using Non−U.S. licensed satellites

23. If applicant is providng INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these 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 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: (Please specify additional frequencies 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) VMES

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.)

- [x] 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
- [x] e −− authorization to add antenna
- [ ] f −− authorization to relocate fixed station
- [ ] g −− authorization to change frequency(ies)
- [ ] h −− authorization to add frequency
- [x] i −− authorization to add Points of Communication (satellites & countries)
- [x] j −− authorization to change Points of Communication (satellites & countries)
- [ ] k −− authorization for facilities for which environmental assessment and radiation hazard reporting is required
- [ ] l −− authorization to change orbit location
- [ ] m −− authorization to perform fleet management
- [ ] n −− authorization to extend milestones
- [x] o −− Other (Please specify)

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

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30−34.

29. Is the applicant a foreign government or the representative of any foreign government?	○ Yes ◉ No
30. Is the applicant an alien or the representative of an alien?	○ Yes ○ No ◉ N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	○ Yes ○ 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?	○ Yes ○ No ◉ N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non−geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?

○ Yes ○ No ◉ N/A

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.

◉ Yes ○ No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as Appendix A2	○ Yes ◉ No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	○ Yes ◉ 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.	○ Yes ◉ No

POINTS OF COMMUNICATION

Satellite Name: AMAZONAS 2 | AMAZONAS 2 | 61 W.L. If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: GALAXY 16 | GALAXY 16 | 99 W.L. If you selected OTHER, please enter the following:

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name:OTHER | OTHER | If you selected OTHER, please enter the following:	
E21. Common Name: Telstar−14	E22. ITU Name:
E23. Orbit Location: 63 W.L.	E24. Country: USA

Satellite Name:AMC−6 | AMC−6 | 72 W.L. If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name:SES−1 | SES−1 | 101 W.L. If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name:HORIZONS 1 | HORIZONS 1 | 127 WL If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name:OTHER | OTHER | If you selected OTHER, please enter the following:	
E21. Common Name: AMC−5	E22. ITU Name:
E23. Orbit Location: 81.0	E24. Country: USA

Satellite Name:AMC 21 | AMC 21 | 125 W.L. If you selected OTHER, please 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>**	**E41/42. Antenna Gain Transmint and/or Recieve (____dBi at _____GHz)**	
CONUS	Remote2	400	Raysat Antenna Systems	SR−2000/3000	0.243	27.5 dBi at 14.25	
CONUS	Remote3	400	Raysat Antenna Systems	SR−5000	0.347	30.0 dBi at 14.25	
CONUS	Remote4	400	Raysat Antenna Systems	E−7000	0.569	0.0 dBi at	

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)**	**E40. Total EIRP for al carriers(dBW)**
Remote2	0.0/0.0	0.0	0.0	0.0	40.0	0.0	41.2
Remote3	0.0/0.0	0.0	0.0	0.0	40.0	0.0	43.4
Remote4	0.0/0.0	0.0	0.0	0.0	40.0	0.0	50.9

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
Remote2	11.7 12.2	R	Horizontal	1M45G7W	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.) PSK						
Remote2	11.7 12.2	R	Horizontal and Vertical	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.) PSK						
Remote2	14.0 14.5	T	Horizontal	4M05G7W	38.6	8.54

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.)

PSK

Remote2	14.0	14.5	T	Horizontal	8M06G7W	41.2	8.15

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.)

PSK

Remote2	14.0	14.5	T	Horizontal	12M36G7W	41.2	6.3

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.)

PSK

Remote3	11.7	12.2	R	Horizontal	1M45G7W	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.)

PSK

Remote3	11.7	12.2	R	Horizontal	26M8G7W	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.)

PSK

Remote3	14.0	14.5	T	Horizontal	4M05G7W	38.9	8.89

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.)

PSK

Remote3	14.0	14.5	T	Horizontal	10M13G7W	40.4	6.36

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.)

PSK

Remote3	14.0	14.5	T	Horizontal and Vertical	13M57G7W	43.4	8.11

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.)

PSK

Remote4	11.7	12.2	R	Horizontal and Vertical	54M0G7W	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.)

PSK

Remote4	11.7	12.2	R	Horizontal and Vertical	724K1G7W	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.)

PSK

Remote4	14.0	14.5	T	Horizontal and Vertical	7M04G7W	47.2	14.75

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.)

PSK

Remote4	14.0	14.5	T	Horizontal and Vertical	9M72G7W	46.9	13.04

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.)

PSK

Remote4	14.0	14.5	T	Horizontal and Vertical	21M57G7W	50.9	13.58

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.)

PSK

FREQUENCY COORDINATION

E28. Antenna Id	**E51. Satellite Orbit Type**	**E52/53. Frequency Limits(MHz)**	**E54/55. Range of Satellite Arc Eastern/Western 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)**
Remote2	Geostationary	14.0 14.5	61.0/127.0	0.0	30.0	0.0	30.0	−14.5
Remote3	Geostationary	14.0 14.5	61.0/127.0	0.0	30.0	0.0	30.0	−14.5
Remote4	Geostationary	14.0 14.5	61.0/127.0	0.0	30.0	0.0	30.0	−14.5

REMOTE CONTROL POINT LOCATION

E61. Call Sign
E060101
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.

E66. Phone Number
703−848−1000

E62. Street Address
1750 Old Meadow Road

E63. City	E68. County	E67/68.	E64. Zip Code
McLean	Fairfax	State/Country VA/ USA	22102

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