Date & Time Filed: Aug 19 2016 5:08:48:530PM

File Number: SES-MFS-20160819-00730

| 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:

Application to Modify Existing Ku-band ESAA Blanket License, Call Sign E100089

| Legal Name of Ap | pplicant | | |
|------------------|--------------------------------|---------------|-----------------------------|
| Name: | Panasonic Avionics Corporation | Phone Number: | 949-672-2364 |
| DBA Name: | | Fax Number: | |
| Street: | 26200 Enterprise Way | E–Mail: | mark.defazio@panasonic.aero |
| City: | Lake Forest | State: | CA |
| Country: | USA | Zipcode: | 92630 – |
| Attention: | Mark DeFazio | | |

9–16. Name of Contact Representative

Name: Carlos M. Nalda Phone Number: 571–332–5626

Company: LMI Advisors **Fax Number:**

Street: 8601 James Creek Drive E-Mail: cnalda@lmiadvisors.com

City: Springfield State: VA

Country: USA Zipcode: 22152–

Attention: Mr. Carlos Nalda **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

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

b 13. 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 | on? 159. If No, indicate reason for fee exemption (s | ee 47 C.F.R.Section 1.1114). | | |
|--|---|---|--|--|
| Governmental Entity Noncommercial educational licensee | | | | |
| Other(please explain): | | | | |
| 17d. | | | | |
| Fee Classification CGB – Mobile Satellite | Earth Stations | | | |
| 18. If this filing is in reference to an existing station, enter: | 19. If this filing is an amendment to a pending a modification please enter only the file number: | pplication enter both fields, if this filing is a | | |
| (a) Call sign of station: E100089 | (a) Date pending application was filed: | (b) File number: | | |
| L10000) | | SESMFS2015060900349 | | |
| | | | | |

TYPE OF SERVICE

| 20. NATURE OF SERVICE: This filing is for an authorization to provide | e or use the following type(s) of service(s): Select all that apply: |
|--|---|
| a. Fixed Satellite | |
| b. Mobile Satellite | |
| c. Radiodetermination Satellite | |
| d. Earth Exploration Satellite | |
| e. Direct to Home Fixed Satellite | |
| f. Digital Audio Radio Service | |
| g. Other (please specify) | |
| | |
| 21. STATUS: Choose the button next to the applicable status. Choose | 22. If earth station applicant, check all that apply. |
| only one. | Using U.S. licensed satellites |
| Common Carrier Non–Common Carrier | Using Non–U.S. licensed satellites |
| 23. If applicant is providing INTERNATIONAL COMMON CARRIER s facilities: | service, see instructions regarding Sec. 214 filings. Choose one. Are these |
| O Connected to a Public Switched Network O Not connected to a | Public Switched Network N/A |
| 24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all a | pplicable 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 addition | nal 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) ESAA |
| |
| 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 & mp; countries) |
| j — authorization to change Points of Communication (satellites & mp; countries) |
| 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. | ~ | Tech | nical | Арр | endi | IX |
|---|-------|--------|-------|-------|------|-----|
| 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 en | rou | te or | | |
| 29. Is the applicant a foreign government or the representative of any foreign government? | ٥ | Yes | • | No | | |
| 30. Is the applicant an alien or the representative of an alien? | 0 | Yes | 0 | No | • | N/A |
| 31. Is the applicant a corporation organized under the laws of any foreign government? | 0 | Yes | 0 | No | • | N/A |
| 32. Is the applicant a corporation of which more than one—fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? | | Yes | 0 | No | • | N/A |

O Yes No

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

| 33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one–fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? | O Yes O | No 👩 N/A |
|--|--------------|----------|
| 34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote. | | |
| BASIC QUALIFICATIONS | | |
| 35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents. | o Yes | No |
| 36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances. | O Yes | No |

| 37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances. | • Yes | ⊚ No |
|--|-------|-------------|
| 38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances | • 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 | ⊘ 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 | O 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 | /hat administr | 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.)

Panasonic seeks Commission authority to modify its existing ESAA license by adding the SPA terminal to the license and adding the Telstar 12V as an authorized point of communication for its previously licensed PPA terminal.

Narrative Statement

| 43a. Geographic Service Rule Certification By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25. | ● A |
|--|------------|
| By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements. | O B |
| By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached. | o c |

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

| 44. Applicant is a (an): (Choose the button next to ap | plicable response.) | |
|--|---|--|
| O Individual | | |
| Unincorporated Association | | |
| O Partnership | | |
| © Corporation | | |
| Governmental Entity | | |
| Other (please specify) | | |
| _ | | |
| | | |
| | | |
| 45. Name of Person Signing | 46. Title of Person Signing | |
| Mark DeFazio | Manager, GCS Regulatory and Business Operations | |

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 St | ation Site | | | | | | |
|-------------------------------|---------------------------|------------------------|--------------|-----|--|--|--|
| E1: Site Identifier: | PPA | E5. Call Sign: | E100089 | | | | |
| E2: Contact Name | Mission Control Center | E6. Phone Number: | 425-415-9800 | | | | |
| E3. Street: | 26200 Enterprise Way | E7. City: | Lake Forest | | | | |
| | | E8. County: | Orange | | | | |
| E4. State | CA | E9. Zip Code | 92630 | | | | |
| E10. Area of Operat | tion: | U.S. and International | | | | | |
| E11. Latitude: | 0 °0 '0.0 " | | | | | | |
| E12. Longitude: | 0 °0 '0.0 " | | | | | | |
| E13. Lat/Lon Coordinates are: | | O NAD-27 | O NAD-83 | N/A | | | |
| E14. Site Elevation (AMSL): | | 0.0 meters | | | | | |

| E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two–degree spacing policy. | O Yes | ⊚ 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? | posed antenna(s) comply with the antenna | O Yes | O No | ⊚ N/A |
|---|---|-------|------|--------------|
| E17. Is the facility operated by remote control? If YES, provide the loca point. | ation and telephone number of the control | Yes | ٥ | 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 recoordination 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 FAA 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: OTHER OTHER If you selected OTHER, please e | enter the following: | | | |
| E21. Common Name: | E22. ITU Name: | | | |
| E23. Orbit Location: | E24. Country: USA | | | |
| | | | | |
| Satellite Name: OTHER OTHER If you selected OTHER, please e | enter the following: | | | |

| E21. Common Name: TELSTAR 12V (S2933) | E22. ITU Name: |
|---------------------------------------|-------------------|
| E23. Orbit Location: 15 W.L. | E24. Country: USA |

POINTS OF COMMUNICATION (Destination Points)

| E25. Site Identifier: PPA | |
|---------------------------------------|-------------------|
| E26. Common Name: TELSTAR 12V (S2933) | E27. Country: USA |

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) | |
|---------|--------------------|---------------|----------------------|---------|--|---|--|
| PPA | PPA | 2000 | Panasonic | Aura LE | 0.89 | 37.0 dBi at 14.250 | |

| Id | Diameter | | , , | Height Above Ground Level | Input Power at | E39. Maximum Antenna Height Above Rooftop (meters) | EIRP for al |
|-----|----------|-----|-----|------------------------------|----------------|---|-------------|
| PPA | 0.0/0.0 | 0.0 | 0.0 | 0.0 | 16.0 | 0.0 | 48.0 |

FREQUENCY

| | E43/44. Frequency Bands (MHz) | E45. T/R Mode | | | E48. Maximum EIRP per Carrier (dBW) | E49. Maximum ERIP Density per Carrier (dBW/4kHz) |
|-----|-------------------------------------|---------------------|----------------------------|----------|---|---|
| PPA | 10950 12200 | R | Horizontal and Vertical | 1M20KG7D | 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 |
|----------------------------|----------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
| PSK | | | | | | |
| PPA | 10950 12200 | R | Horizontal and Vertical | 54M0KG7D | 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 |
| PSK | | | | | | |
| PPA | 14000 14500 | Т | Horizontal and Vertical | 500KG7D | 36.6 | 16.42 |
| 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 |
| BPSK, Spre | ead Spectrum | | | | | |
| PPA | 14000 14500 | Т | Horizontal and Vertical | 9M00KG7D | 48.0 | 15.27 |

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.)

| BPSK, | Spread | Spectrum |
|-------|--------|----------|
|-------|--------|----------|

FREQUENCY COORDINATION

| E28. Antenna Id | E51. Satellite Orbit Type | E52/53. Frequency Limits(MHz) | E54/55. Range of Satellite Arc Eastern/West ern 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) |
|--------------------|------------------------------|-------------------------------------|---|--|--|---|--|---|
| PPA | Geostationary | 10700 12750 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Geostationary | 10950 11200 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Geostationary | 10950 11700 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Geostationary | 10950 12200 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Geostationary | 10950 12500 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Geostationary | 11450 12750 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Geostationary | 11700 12220 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Geostati | onary 12250 12750 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
|----------|----------------------|-------------|-----|-----|-----|-----|-----|
| Geostati | onary 12500 12750 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Geostati | onary 14000 14500 | 172.0/177.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

REMOTE CONTROL POINT LOCATION

| E61. Call Sign N/A NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed. | | E66. Phone Number 1–425–415–9800 | | |
|--|-----------------------|----------------------------------|-------------------------------------|------------------------|
| E62. Street Address 26200 Enterprise Way | | | | |
| E63. City Lake Forest | E68. County Orange | | E67/68. State/Country CA/ USA | E64. Zip Code 92630 |

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: | SPA | E5. Call Sign: | E100089 | | |
| E2: Contact Name | Mission Control Center | E6. Phone Number: | 425-415-9800 | | |
| E3. Street: | 26200 Enterprise Way | E7. City: | Lake Forest | | |
| | | E8. County: | Orange | | |
| E4. State | CA | E9. Zip Code | 92630 | | |
| E10. Area of Operat | tion: | U.S. and Internation | nal | | |
| E11. Latitude: | 0 °0 '0.0 " | | | | |
| E12. Longitude: | 0 °0 '0.0 " | | | | |
| E13. Lat/Lon Coord | linates are: | O NAD-27 | O NAD-83 | N/A | |
| E14. Site Elevation | (AMSL): | 0.0 meters | | | |

| E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two–degree spacing policy. | O Yes | ⊚ 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 | O No | ● N/A |

| E17. Is the facility operated by remote control? If YES, provide the loc point. | ation and telephone number of the control | ● Yes • No | | |
|---|---|----------------|--|--|
| E18. Is frequency coordination required? If YES, attach a frequency co | ordination report as | O Yes O No | | |
| E19. Is coordination with another country required? If YES, attach the coordination contours as | name of the country(ies) and plot of | • 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 | Yes No | | |
| POINTS OF COMMUNICATION | | | | |
| Satellite Name: Superbird C2 Superbird C2 144 E.L. If you selected | d 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 of | enter the following: | | | |
| E21. Common Name: YAMAL 300K | E22. ITU Name: NSS-19 | | | |
| E23. Orbit Location: 183 E.L. | E24. Country: Netherlands | | | |
| Satellite Name: INTELSAT 14 (S2785) INTELSAT 14 (S2785) 45.0 | W.L. If you selected OTHER, please enter | the following: | | |

| E21. Common Name: | E22. ITU Name: | | | | |
|---|--|--|--|--|--|
| E23. Orbit Location: | E24. Country: | | | | |
| | | | | | |
| Satellite Name: APSTAR 6 APSTAR VI 226 W.L. If you selected C | 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 e | nter the following: | | | | |
| E21. Common Name: IS-15 (S2789) | E22. ITU Name: | | | | |
| E23. Orbit Location: 85 E.L. | E24. Country: USA | | | | |
| | | | | | |
| Satellite Name: OTHER OTHER If you selected OTHER, please e | nter the following: | | | | |
| E21. Common Name: TELSTAR 12V (S2933) | E22. ITU Name: | | | | |
| E23. Orbit Location: 15 W.L. | E24. Country: USA | | | | |
| Satellite Name: EUTELSAT 172A(S2610) EUTELSAT172A(S2610) | 172 E. L. If you selected OTHER, please enter the following: | | | | |
| E21. Common Name: | E22. ITU Name: | | | | |
| E23. Orbit Location: | E24. Country: | | | | |
| Satellite Name: INTELSAT 29e (S2913) INTELSAT 29E 50.0 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 e | nter the following: | | | | |

| E21. Common Name: EUTELSAT 115WB | E22. ITU Name: | | | | |
|--|---|--|--|--|--|
| E23. Orbit Location: 114.9 W.L. | E24. Country: Mexico | | | | |
| | • | | | | |
| Satellite Name: OTHER OTHER If you selected OTHER, please en | nter the following: | | | | |
| E21. Common Name: NSS-6 | E22. ITU Name: NSS-9 | | | | |
| E23. Orbit Location: 95 E.L. | E24. Country: Netherlands | | | | |
| | | | | | |
| Satellite Name: OTHER OTHER If you selected OTHER, please en | nter the following: | | | | |
| E21. Common Name: EUTELSAT 70B | E22. ITU Name: EUTELSAT 3–70.5E | | | | |
| E23. Orbit Location: 70.5 E.L. | E24. Country: France | | | | |
| | • | | | | |
| Satellite Name: TELSTAR 11N (S2357) USASAT26A 37.5 W.L. If | you selected OTHER, please enter the following: | | | | |
| E21. Common Name: | E22. ITU Name: | | | | |
| E23. Orbit Location: | E24. Country: | | | | |
| | | | | | |
| Satellite Name: Eutelsat 10A (W2A) Eutelsat 10A 10.0 E.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 en | nter the following: | | | | |
| E21. Common Name: APSTAR 7 E22. ITU Name: | | | | | |
| E23. Orbit Location: 76.5 E.L. E24. Country: USA | | | | | |
| | | | | | |
| Satellite Name: OTHER OTHER If you selected OTHER, please enter the following: | | | | | |

| E21. Common Name: ANIK-G1 | E22. ITU Name: | | |
|---|--|--|--|
| E23. Orbit Location: 107.3 W.L. | E24. Country: Canada | | |
| | | | |
| Satellite Name: EUTELSAT 117 (S2873) SATMEX-8 116.8 W.L. | f 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 en | ter the following: | | |
| E21. Common Name: ASIASAT 5 | E22. ITU Name: | | |
| E23. Orbit Location: 100.5 E.L. | E24. Country: USA | | |
| | | | |
| Satellite Name: ESTRELA DO SUL 2 ESTRELA DO SUL 2 63 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 en | ter the following: | | |
| E21. Common Name: YAMAL 401 | E22. ITU Name: EXPRESS-7C | | |
| E23. Orbit Location: 90 E.L. | E24. Country: Russia | | |
| | | | |
| Satellite Name: JCSAT 5A JCSAT – 5A 132 E.L. If you selected OT | HER, please enter the following: | | |
| E21. Common Name: | E22. ITU Name: | | |
| E23. Orbit Location: E24. Country: | | | |
| POINTS OF COMMUNICATION (Destination Points) | | | |
| E25. Site Identifier: SPA | | | |

| E26. Common Name: | E27. Country: USA |
|---------------------------|-------------------|
| | |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| E25. Site Identifier: SPA | |
| | DOT G |
| E26. Common Name: | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| | |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| | |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E23. SHE IdeHuller, SFA | |

| E26. Common Name: | E27. Country: USA |
|----------------------------------|-------------------|
| | |
| E25. Site Identifier: SPA | |
| E26. Common Name: | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: ANIK–G1 | E27. Country: USA |
| | |
| E25. Site Identifier: SPA | |
| E26. Common Name: APSTAR 7 | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: ASIASAT 5 | E27. Country: USA |
| | |
| E25. Site Identifier: SPA | |
| E26. Common Name: EUTELSAT 115WB | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: EUTELSAT 70B | E27. Country: USA |
| E25. Site Identifier: SPA | |
| E26. Common Name: IS-15 (S2789) | E27. Country: USA |
| | |
| E25. Site Identifier: SPA | |

| E26. Common N | Name: NSS-6 | | | E27. Country: | USA | | |
|-------------------|-------------------------------------|-----------------------|----------------------|---|--|---|------------|
| E25. Site Identif | fier: SPA | | | | | | |
| E26. Common N | Name: TELSTAR 1 | 2V (S2933) | | E27. Country: | USA | | |
| E25. Site Identif | fier: SPA | | | | | | |
| E26. Common N | Name: YAMAL 300 |)K | | E27. Country: | USA | | |
| E25. Site Identif | fier: SPA | | | | | | |
| E26. Common N | Name: YAMAL 401 | | | E27. Country: | ntry: USA | | |
| 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) | |
| SPA | SPA | 1000 | Panasonic | SPA | 0.949 | 35.0 dBi at 14.250 | |
| E28. Antenna | E33/34. | E35. Above | E36. Above Sea | E37 Ruilding | E38. Total | E39. Maximum | E40. Total |
| Id | Diameter Minor/Major (meters) | Ground Level (meters) | Level(meters) | E37. Building Height Above Ground Level (meters) | Input Power at antenna flange (Watts) | Antenna Height Above Rooftop (meters) | |
| SPA | 0.0/0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 45.0 |

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) |
|----------------------------|-------------------------------------|---------------------|---|-----------------------------|---|---|
| SPA | 14000 14500 | Т | Horizontal and Vertical | 500KG7D | 45.0 | 24.82 |
| entirety.) QPSK, 8PSI | K, 16APSK | | | | | |
| SPA | 10700 12750 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) | n and Services (If the | he complete descrip | tion does not appear in | this box, please go | to the end of the form | to view it in its |
| QPSK, 8PSF | K, 16APSK | | | | | |
| SPA | 10700 12750 | R | Horizontal and Vertical | 36M0KG7D | 0.0 | 0.0 |

| E50. Modulation | 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 | | | |
|----------------------------|--|-------------------------|----------------------------|------------------------|-----------------------|-------------------|--|--|--|
| entirety.) | | | | | | | | | |
| QPSK, 8PSF | K, 16APSK | | | | | | | | |
| SPA | 10950 11200 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 | | | |
| entirety.) | 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.) QPSK, 8PSK, 16APSK | | | | | | | | |
| SPA | 10950 11200 | R | Horizontal and Vertical | 54M0KG7D | 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 | | | |
| QPSK, 8PSF | K, 16APSK | | | | | | | | |
| SPA | 10950 11700 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 | | | |

| E50. Modulation entirety.) | n 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 |
|--|------------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
| QPSK, 8PSI | K, 16APSK | | | | | |
| SPA | 10950 11700 | R | Horizontal and Vertical | 54M0KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSE | ` | ne complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| SPA | 10950 12500 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSE | | ne complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| SPA | 10950 12500 | R | Horizontal and Vertical | 54M0KG7D | 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 |
|--|----------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
| QPSK, 8PSK | I, 16APSK | | | | | |
| SPA | 11450 11700 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSK | | ne complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| | | | | | | |
| SPA | 11450 11700 | R | Horizontal and Vertical | 54M0KG7D | 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 |
| QPSK, 8PSK | I, 16APSK | | | | | |
| SPA | 11450 11950 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |

| 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 |
|--|----------------------|------------------------|----------------------------|------------------------|-----------------------|-------------------|
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 11450 11950 | R | Horizontal and Vertical | 54M0KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSK | <u> </u> | e complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| | | | | | | |
| SPA | 11450 12200 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |
| 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 |
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 11450 12200 | R | Horizontal and Vertical | 27M0KG7D | 0.0 | 0.0 |

| 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 |
|----------------------------|----------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 11450 12200 | R | Horizontal and Vertical | 54M0KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) | <u> </u> | ne complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 11450 12750 | R | Horizontal and Vertical | 1M20KG7D | 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 |
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 11450 12750 | R | Horizontal and Vertical | 36M0KG7D | 0.0 | 0.0 |

| E50. Modulation entirety.) | and Services (If the | ne complete description | on does not appear ir | n this box, please go t | o the end of the form | to view it in its | |
|--|---|-------------------------|----------------------------|-------------------------|-----------------------|-------------------|--|
| QPSK, 8PSK | I, 16APSK | | | | | | |
| SPA | 11450 12750 | R | Horizontal and Vertical | 54M0KG7D | 0.0 | 0.0 | |
| entirety.) | 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.) QPSK, 8PSK, 16APSK | | | | | | |
| SPA | 11700 12200 | R | Horizontal and Vertical | 1M20KG7D | 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.) QPSK, 8PSK, 16APSK | | | | | | | |
| SPA | 11700 12200 | R | Horizontal and Vertical | 36M0KG7D | 0.0 | 0.0 | |

| 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 |
|--|----------------------|------------------------|----------------------------|------------------------|-----------------------|-------------------|
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 11700 12200 | R | Horizontal and Vertical | 54M0KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSK | <u> </u> | e complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| ~ , | , | | | | | |
| SPA | 12200 12750 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |
| 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 |
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 12200 12750 | R | Horizontal and Vertical | 36M0KG7D | 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 |
|--|----------------------|-------------------------|----------------------------|------------------------|-----------------------|-------------------|
| QPSK, 8PSK | , 16APSK | | | | | |
| SPA | 12250 12750 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSK | | ne complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| SPA | 12250 12750 | R | Horizontal and Vertical | 54M0KG7D | 0.0 | 0.0 |
| E50. Modulation entirety.) QPSK, 8PSK | | ne complete description | on does not appear in | this box, please go to | o the end of the form | to view it in its |
| SPA | 12500 12750 | R | Horizontal and Vertical | 1M20KG7D | 0.0 | 0.0 |

| E50. Modulation entirety.) | and Services (If the | ne complete descripti | on does not appear in | n this box, please go | to the end of the form | to view it in its | |
|--|---|-----------------------|----------------------------|-----------------------|------------------------|-------------------|--|
| QPSK, 8PSK | I, 16APSK | | | | | | |
| SPA | 12500 12750 | R | Horizontal and Vertical | 36M0KG7D | 0.0 | 0.0 | |
| entirety.) | 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.) QPSK, 8PSK, 16APSK | | | | | | |
| SPA | 12500 12750 | R | Horizontal and Vertical | 54M0KG7D | 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.) QPSK, 8PSK, 16APSK | | | | | | | |
| SPA | 14000 14500 | Т | Horizontal and Vertical | 9M00KG7D | 45.0 | 12.27 | |

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.)

QPSK, 8PSK, 16APSK

FREQUENCY COORDINATION

| E28. Antenna Id | E51. Satellite Orbit Type | E52/53. Frequency Limits(MHz) | E54/55. Range of Satellite Arc Eastern/West ern 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) |
|--------------------|------------------------------|-------------------------------------|---|--|--|---|--|---|
| SPA | Geostationary | 10700 12750 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| | Geostationary | 10950 11200 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| | Geostationary | 10950 11700 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| | Geostationary | 10950 12500 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| | Geostationary | 11450 11700 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| | Geostationary | 11450 11950 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| | Geostationary | 11450 12200 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |

| Geostationary | 11450 12750 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
|---------------|----------------|-------------|-----|-----|-------|-----|--------|
| Geostationary | 11700 12200 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| Geostationary | 12200 12750 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| Geostationary | 12250 12750 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| Geostationary | 12500 12750 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | 0.0 |
| Geostationary | 14000 14500 | 172.0/177.0 | 0.0 | 5.0 | 360.0 | 5.0 | -3.686 |

REMOTE CONTROL POINT LOCATION

| E61. Call Sign N/A NOTE: Please enter the callsign of the contro callsign for which this application is being filed. | E66. Phone Number 1–425–415–9800 | | | |
|--|----------------------------------|--|-------------------------------------|------------------------|
| E62. Street Address 26200 Enterprise Way | | | | |
| E63. City Lake Forest | E68. County Orange | | E67/68. State/Country CA/ USA | E64. Zip Code 92630 |

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