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File Number: SAT-MPL-20210603-00073



File # SAT-MPL-20210603-00073

Call Sign S2793 Grant Date 10/28/2021
(or other identifier)

Term Dates

From 10/28/2021 To: See conditions

Approved: Merissa L. Velez
Merissa L. Velez
Chief, Satellite Policy Branch

Approved by OMB
3060-0678

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM

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FCC 312 MAIN FORM FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:

Modification of Amazonas-2 market access adding new frequencies

1-8. Legal Name of Applicant

Name:	HISPAMAR SATELITES, S.A.	Phone Number:	+34 917102544
DBA Name:		Fax Number:	
Street:	Praia do Flamengo, 200, 17 andar	E-Mail:	mcgarcia@hispsat.es
City:	Rio de Janeiro	State:	
Country:	Brazil	Zipcode:	-
Attention:	Mrs Cristina Garcia de Miguel		

ATTACHMENT TO GRANT
Hispamar Satélites, S.A.
IBFS File No. SAT-MPL-20210603-00073

IBFS File No(s):	SAT-MPL-20210603-00073	GRANTED – With Conditions  International Bureau Satellite Division
Licensee/Grantee:	Hispamar Satélites, S.A. (Hispamar)	
Call Sign:	S2793	
Satellite Name:	AMAZONAS-2	
Orbital Location: (required station-keeping tolerance)	61° W.L. (± 0.05 degrees)	
Administration:	Brazil ¹	
Nature of Service:	Fixed-Satellite Service (FSS), Direct-to-Home (DTH)	
Scope of Grant:	Modification of the grant of market access for AMAZONAS-2 at the 61.0° W.L. orbital location to include the 10.7-10.95 GHz and 11.2-11.45 GHz (space-to-Earth), and 12.75-13.25 GHz (Earth-to-space) frequency bands.	
Previous Grants:	IBFS File No. SAT-PPL-20090806-00081 (granted Oct. 15, 2009) (addition of AMAZONAS-2 space station, operating at the 61° W.L. orbital location, to the Commission’s permitted list, including for provision of FSS in the 14.0-14.5 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands). IBFS File Nos. SAT-PPL-20100506-00093; SAT-APL-201011209-00257 (granted Dec. 21, 2010, reissued Jan. 7, 2011) (modification of grant of market access to include provision of DTH to, from, or within the United States in the 14.0-14.5 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands).	
Service Area(s):	United States, Brazil, and South America	
Frequencies:	<u>FSS</u> 10.7-10.95 GHz (space-to-Earth) 11.2-11.45 GHz (space-to-Earth) 11.7-12.2 GHz (space-to-Earth) 12.75-13.25 GHz (Earth-to-space) 14.0-14.5 GHz (Earth-to-space) <u>Telemetry, Tracking & Command</u> 13997 MHz (Earth-to-space) 14496 MHz (Earth-to-space) 11703 MHz (space-to-Earth) 12198.25 MHz (space-to-Earth)	
Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with the Federal Communications Commission’s rules not waived herein. This grant is also subject to the following conditions: 1. Hispamar IS GRANTED conditional access to the U.S. market via its space station, AMAZONAS-2, at the 61.0° W.L. orbital location.		

¹ Hispamar indicates that AMAZONAS-2 operates under the French International Telecommunication Union (ITU) filing F-SAT-E-30B-61W.

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2. Communications between U.S.-licensed earth stations and the AMAZONAS-2 space station shall comply with all existing and future space station coordination agreements reached between Brazil and other Administrations.
3. Hispamar must maintain the AMAZONAS-2 space station at the 61.0° W.L. orbital location with an east/west longitudinal station-keeping tolerance of ± 0.05 degrees of the 61.0° W.L. orbital location.
4. Operation of AMAZONAS-2 must be in accordance with the power flux density requirements of 47 CFR § 25.208 of the Commission's rules.
5. The operations of AMAZONAS-2 and associated earth stations in the Ku-band must comport with the applicable uplink and downlink limits in 47 CFR § 25.140(a)(3) of the Commission's rules, unless Hispamar coordinates any non-conforming operations with the operations of U.S.-licensed geostationary orbit space stations within 6 degrees of the 61.0° W.L. orbital location.
6. Operations of the AMAZONAS-2 space station in the 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth), and 12.75-13.25 (Earth-to-space) frequency bands are subject to footnote 5.441 to the United States Table of Frequency Allocations, 47 CFR § 2.106, footnote 5.441, which states that operations in these bands shall be in accordance with the provisions of Appendix 30B.
7. Operations of the AMAZONAS-2 space station in the 10.7-10.95 GHz (space-to-Earth) and 11.2-11.45 GHz (space-to-Earth) frequency bands are subject to footnote US211 to the United States Table of Frequency Allocations, 47 CFR § 2.106, footnote US211, which urges applicants for airborne or space station assignments to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference, consistent with footnote US74.
8. Operations in the 11.7-12.2 GHz (space-to-Earth) frequency band are subject to application of the provisions of No. 9.14 for coordination with stations of terrestrial services in Regions 1, 2 and 3. *See* footnote 5.488 to the United States Table of Frequency Allocations, 47 CFR § 2.106, footnote 5.488.
9. When operating in the 11.7-12.2 GHz frequency band, protection from harmful interference shall be afforded to transmissions from space stations not in conformance with ITU Radio Regulation No. 5.488 only if the operations of such space stations impose no unacceptable constraints on operations or orbit locations of space stations in conformance with No. 5.488. *See* footnote NG143 to the United States Table of Frequency Allocations, 47 CFR § 2.106, footnote NG143.
10. When operating in the 14.47-14.5 GHz (Earth-to-space) frequencies, Hispamar is urged to take all practicable steps to protect the radio astronomy service from harmful interference. *See* footnote US342 to the United States Table of Frequency Allocations, 47 CFR § 2.106, footnote US342.
11. Hispamar's request for waiver of footnote NG52 of the U.S. Table of Frequency Allocations, 47 CFR § 2.106, NG52, to use the 10.7-10.95 GHz and 11.2-11.45 GHz (space-to-Earth) frequency bands to offer domestic services on an unprotected, non-harmful interference basis in the United States is granted, as conditioned. Hispamar has agreed to accept any level of interference from fixed stations, and operators of fixed station operators will not be required to coordinate their station operations with Hispamar's earth stations. Under the circumstances we determine that no additional coordination burden is placed upon fixed station operators and their ability to expand service in the future would not be restricted in any manner. This waiver is granted subject to the following conditions:
 - a. Hispamar's space-to-Earth transmissions in the 10.7-10.95 GHz and 11.2-11.45 GHz frequency bands are to be conducted without interference protection from fixed stations to earth stations receiving these transmissions. This applies to fixed stations to which frequencies in the 10.7-10.95 GHz and 11.2-11.45 GHz bands have either been already assigned, or to which frequencies in the 10.7-10.95 GHz and 11.2-11.45 GHz bands may be assigned at a later date.

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- b. Hispamar must inform its customers, in writing, including end-users receiving service from resellers accessing capacity on the AMAZONAS-2 space station, that domestic service in the 10.7-10.95 GHz and 11.2-11.45 GHz frequency bands is being provided on an unprotected basis, and that the potential exists that future licensed fixed stations may cause harmful interference to unprotected receive earth stations in the 10.7-10.95 GHz and 11.2-11.45 GHz frequency bands.
 - c. Hispamar must terminate operations in the 10.7-10.95 GHz and 11.2-11.45 GHz frequency bands upon notification that its operations are causing interference to fixed stations operating in this band, and must immediately inform the Commission, in writing, of such an event.
12. Hispamar's request for waiver of footnote NG52 of the United States Table of Allocations, 47 CFR § 2.106, to use the 12.75-13.25 GHz (Earth-to-space) frequency band to offer domestic services on an unprotected, non-interference basis in the United States is granted in part, deferred in part. We condition this waiver by requiring AMAZONAS-2 to operate in this band on an unprotected, non-interference basis in the United States and its territories, and that operations within the United States and its territories must be limited to up to two gateway earth stations in this band.² As such, we find that waiver does not undermine the purpose of the rule. At this time we decline to grant waiver for any further operations with earth stations in the United States in this frequency band.³
13. Hispamar's request for a partial waiver of section 25.210(f) of the Commission's rules, 47 CFR § 25.210(f) is granted. Section 25.210(f) requires that FSS space stations employ full frequency re-use either through orthogonal polarization in the same beam and/or the use of spatially independent beams. The purpose of the rule is to ensure that space stations maximize the use of spectrum. Hispamar states that AMAZONAS-2 was not designed to utilize orthogonal polarizations or spatially isolated beams due to capacity constraints. Hispamar states that in the sub-band 13.0-13.25 GHz only the horizontal polarization is operative, and in the 11.2-11.45 GHz band only the vertical polarization is operative. Given the AMAZONAS-2 design constraints and that this partial waiver would apply only to these limited segments of the total frequencies requested for use, we conclude that this partial waiver would not undermine the purpose of Section 25.210(f).
14. Partial waiver of Section 25.283(c) of the Commission's rules, 47 C.F.R. 25.283(c) was previously granted for operations of AMAZONAS-2.⁴ We find that waiver is no longer required, consistent with the updated version of section 25.283(c), which became effective in 2016.⁵ Section 25.283(c) specifies that space stations must discharge stored energy sources at end-of-life of the space station. AMAZONAS-2 is an EADS Astrium E3000 series satellite, which does not completely discharge all stored energy at end of life. At the completion of mission, upon disposal of the spacecraft, the chemical propulsion tanks will be depleted. A helium pressurant tank, however, will retain a total mass of 1.258 kg of helium with a volume of 0.18 cubic liters at end of life. We find this to be a de minimis amount of helium, an inert gas, and therefore conclude that AMAZONAS-2 can satisfy section 25.283(c), as updated.
15. This grant of market access will terminate in the event that the AMAZONAS-2 space station is relocated from the 61.0° W.L. orbital location or ceases to operate. In either case, AMAZONAS-2 will be removed

² See, e.g., IBFS File Nos. SAT-MOD-20200805-00091 and SAT-MOD-20160916-00091.

³ See AMAZONAS-2 Additional Information, IBFS File No. SAT-MPL-20210603-00073 (filed Oct. 4, 2021) (stating that at this time, Hispamar deems it "highly probable" that AMAZONAS-2 will operate with gateway earth stations in this frequency band, but that this will depend on potential clients and their services, and that the number of U.S. earth stations to be used for operations in this frequency band has yet to be determined).

⁴ See IBFS File No. SAT-PPL-20100506-00093, Attachment to Grant (granted Dec. 21, 2010).

⁵ See 47 CFR § 25.283(c).

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from the Permitted List. If Hispamar wishes to provide service to the U.S. using another space station, it must file a new application to have that space station placed on the Permitted List.

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action Date:	October 28, 2021
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Term Dates	From: October 28, 2021	To: see conditions
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Approved:



Merissa L. Velez,
Chief, Satellite Policy Branch

9-16. Name of Contact Representative

Name:	HISPAMAR SATELITES, S.A.	Phone Number:	+34 917102544
Company:		Fax Number:	
Street:	Praia do Flamengo, 200, 17 andar	E-Mail:	mcgarcia@hispasat.es
City:	Rio de Janeiro	State:	
Country:	Brazil	Zipcode:	-
Attention:		Relationship:	

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- ☐ 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): Modification of existing market access	
17d. Fee Classification	
18. If this filing is in reference to an existing station, enter: (a) Call sign of station: S2793	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) Date pending application was filed: (b) File number: SATPPL2009080600081

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply: ☒ a. Fixed Satellite ☐ b. Mobile Satellite ☐ c. Radiodetermination Satellite ☐ d. Earth Exploration Satellite ☐ e. Direct to Home Fixed Satellite ☐ f. Digital Audio Radio Service ☐ g. Other (please specify)		
21. STATUS: Choose the button next to the applicable status. Choose only one. ☐ Common Carrier ☒ Non-Common Carrier	22. If earth station applicant, check all that apply. ☐ Using U.S. licensed satellites ☐ Using Non-U.S. licensed satellites	
23. If applicant is providing 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)

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 & countries)
- ☐ 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
- ☐ 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

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?

☒ Yes ☐ 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.

Ama 2 Exhibit A

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

waiver requests

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 explanation of circumstances.

☐ 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 explanation 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 exhibit, 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.	

Ama 2 Exhibit B

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 ☐ No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.

☒ Yes ☐ No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station? Brazil

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.)

Hispamar Satellites respectfully requests that the Commission issues a declaratory ruling adding the new frequencies included in this application

Narrative

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.

☐ 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.

☐ 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 applicable response.)

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

45. Name of Person Signing
Cristina Garcia de Miguel

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46. Title of Person Signing
Manager of OSR and Regulation

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).

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