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Callsign/Satellite ID:

# APPLICATION FOR EARTH STATION AUTHORIZATIONS FCC Use Only FCC 312 MAIN FORM FOR OFFICIAL USE ONLY

#### APPLICANT INFORMATION

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

Application for Ku-band VMES Blanket Authorization

1–8. Legal Name	of Applicant
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Name: KVH Industries, Inc. **Phone Number:** 401–845–8148

**DBA Fax Number:** 401–845–8116

Name:

Street: 50 Enterprise Center E–Mail: ffeingold@kvh.com

City: Middletown State: RI

Country: USA Zipcode: 02842 -

**Attention:** Ms. Felise Feingold

9–16. Name of Contact Representative

Name: Mr. Carlos Nalda Phone Number: 202–626–6659

Company: Squire, Sanders & Dempsey (US) Fax Number:

LLP

Street: 1201 Pennsylvania Ave., NW E-Mail: carlos.nalda@ssd.com

Suite 500

City: Washington State: DC

Country: USA Zipcode: 20004–

Attention: Mr. Carlos Nalda 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.  a.  a.  a1. Earth Station (N/A) a2. Space Station	<ul> <li>b.</li> <li>b1. Application for License of New Station</li> <li>b2. Application for Registration of New Domestic Receive—Only Station</li> <li>(N/A) b3. Amendment to a Pending Application</li> <li>(N/A) b4. Modification of License or Registration</li> <li>(N/A) b5. Assignment of License or Registration</li> <li>(N/A) b6. Transfer of Control of License or Registration</li> <li>(N/A) b7. Notification of Minor Modification</li> <li>(N/A) b8. Application for License of New Receive—Only Station Using Non—U.S. Licensed Satellite</li> <li>(N/A) b9. Letter of Intent to Use Non—U.S. Licensed Satellite to Provide Service in the United States</li> <li>b10. Other (Please specify)</li> <li>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.</li> <li>b12. Application for Database Entry</li> <li>(N/A) b13. Amendment to a Pending Database Entry Application</li> <li>(N/A) b14. Modifiction of Database Entry</li> </ul>
17c. Is a fee submitted with this application If Yes, complete and attach FCC Form	on? 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).
Ofther(please explain):	rcial educational licensee
17d.  Fee Classification BGV – Fixed Satellite V	SAT System

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

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) VMES	
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
O Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER so facilities:	ervice, see instructions regarding Sec. 214 filings. Choose one. Are these
	o 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:
TYPE OF STATION
25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.
a. Fixed Earth Station
b. Temporary–Fixed Earth Station
c. 12/14 GHz VSAT Network
d. Mobile Earth Station
(N/A) e. Geostationary Space Station
(N/A) f. Non–Geostationary Space Station
g. Other (please specify)VMES network
26. TYPE OF EARTH STATION FACILITY: Choose only one.
Transmit/Receive Transmit-Only Receive-Only N/A
PURPOSE OF MODIFICATION
27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)
Not Applicable

#### ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment 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 Exhibit 3
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aerona aeronautical fixed radio station services are not required to respond to Items 30–34.	utical en route or
29. Is the applicant a foreign government or the representative of any foreign government?	O Yes O No
30. Is the applicant an alien or the representative of an alien?	O Yes O No O N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes O No O N/A
32. Is the applicant a corporation of which more than one–fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	O Yes O No O 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?  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	O Yes O No	
BASIC QUALIFICATIONS  35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?	• Vac	• No
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	<b>⊚</b> Yes	O 140
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	• Yes	No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances.	O Yes	<b>⊚</b> No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	O Yes	<b>⊚</b> No
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	O Yes	<b>⊘</b> No
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.		

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti–Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.	<b>⊘</b> Yes	O No
42a. Does the applicant intend to use a non–U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.	• Yes Exhibit 4	No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued coordinated or is in the process of coordinating the space station?	l, what administr	ation has

43. Description. (Summarize the nature of the application and the services to be provided). not appear in this box, please go to the end of the form to view it in its entirety.)

(If the complete description does

Application for Authorization to provide Vehicle Mounted Earth Station (VMES)services in the Ku-band using U.S. based hub earth stations, call signs E010236 (Kapolei, HI), E030131 (Carlsbad, CA)and E040267 (Miami, Fl). Two VMES terminal types, the V7 and V3, are detailed in the 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.	<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 <sub>B</sub>
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
	Exhibit 1

#### **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.

Individual			
Unincorporated Association			
Partnership			
Corporation			
Governmental Entity			
Other (please specify)			
45. Name of Person Signing Felise Feingold	uts	46. Title of Person Signing Vice President and General Counsel	
47. Please supply any need attachmen	1		
47. Please supply any need attachmen Attachment 1: Exhibit 2	Attachment 2:	Attachment 3	3:
	1	Attachment 3	3:

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

Location of Earth Station Site

E1: Site Identifier: VMES E5. Call Sign:

E2: Contact Name Robert Bourget E6. Phone 401–847–3327

Number:

E3. Street: 50 Enterprise E7. City: Middletown

Center

E8. County: Newport

E4. State RI E9. Zip Code 02842

E10. Area of Operation: CONUS, Alaska, Hawaii and U.S. territories and possessions

E11. Latitude: 0 °0 '0.0 "

E12. Longitude: 0 °0 '0.0 "

E13. Lat/Lon Coordinates are: NAD-27 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	o 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?	O Yes	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<b>⊚</b> Ye	s o	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	O Ye	s 🔞	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	O Ye	s 🔞	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	O Ye	s 🔞	No
POINTS OF COMMUNICATION			
Satellite Name: AMC 21   AMC 21   125 W.L. If you selected OTHER, please enter the following:			

E21. Common N	lame:			E22. ITU Name:				
E23. Orbit Locat	tion:			E24. Co	ountry:			
				•				
Satellite Nam	e:ALSAT   ALL AUTH	IORIZED U.S.   AL	SAT If you	u selected	l OTHER, please en	ter the following:		
E21. Common N	Jame:			E22. IT	U Name:			
E23. Orbit Locat	tion:			E24. Co	ountry:			
				•				
Satellite Nam	ne:AMC-15   AMC-15	105 W.L. If you	selected OT	HER, ple	ase enter the follow	ing:		
E21. Common N	Jame:			E22. IT	U Name:			
E23. Orbit Location:					ountry:			
Satellite Nam	ne:GE-23   GE-23   172	2 E. L. If you sele	ected OTHER	R, please	enter the following:			
E21. Common N	Jame:			E22. ITU Name:				
E23. Orbit Locat	tion:			E24. Country:				
POINTS OF	COMMUNICATION	V (Destination Poin	nts)					
E25. Site Identifi	ier:							
E26. Common N	lame:			E27. Country:				
ANTENNA				1				
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufac	cturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna GainTransmint and/or Recieve (dBi atGHz)	
VMES	VMES1	125	KVH Ind	lustries	Tracphon V7	0.6	35.5 dBi at 11.95	

				37.4 dBi at 14.25
VMES2		Tracphon V3	0.37	31.6 dBi at 11.95
				33.3 dBi at 14.25

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)		E40. Total EIRP for al carriers  (dBW)
VMES1	0.6/0.6	0.6	0.6	2.0	4.0	2.0	42.4
VMES2	0.37/0.37	0.4	0.4	2.0	3.0	2.0	38.021

## FREQUENCY

	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)		EIRP per Carrier	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
VMES1	10950 11200	R	Horizontal and Vertical	27M0G7D	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.)

_					
Spread S	Spectrum	CRMA	Outbound	Data	Services

VMES1	11450 11700	R	Horizontal and Vertical	27M0G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descript	ion does not appear	in this box, please	go to the end of t	the form to view it in its
Spread Spe	ectrum CRMA Out	bound Data Se:	rvices			
VMES1	11700 12200	R	Horizontal and Vertical	18M0G7D	0.0	0.0
Spread Spe	ectrum CRMA Out	:bound Data Se:	rvices			
VMES1	11700 12200	R	Horizontal and Vertical	27M0G7D	0.0	0.0
E50. Modulation entirety.)				in this box, please	go to the end of t	the form to view it in its
Spread Spe	ectrum CRMA Out	bound Data Se:	rvices			

VMES1	11700 12200	R	Horizontal and Vertical	36M0G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear i	in this box, please g	o to the end of t	he form to view it in its
Spread Spe	ctrum CRMA Out	bound Data Ser	vices			
VMES1	14000 14500	Т	Horizontal and Vertical	18M0G7D	42.4	5.89
	<del>-</del>	Spectrum (DSSS)	<del>-</del>	_		hod called Code
VMES1	14000 14500	Т	Horizontal and Vertical	27M0G7D	42.4	4.13
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear i	n this box, please g	o to the end of t	he form to view it in its
	<del>-</del>	Spectrum (DSSS) CRMA) to access	_	_		hod called Code

VMES1	14000 145000	Т	Horizontal and Vertical	36M0G7D	42.4	2.86
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear	in this box, please go	to the end of th	ne form to view it in its
	=	Spectrum (DSSS)	_	_		od called Code
VMES2	10950 11200	R	Horizontal and Vertical	27M0G7D	0.0	0.0
Spread Spe	ctrum CRMA Out	bound Data Ser	vices			
VMES2	11450 11700	R	Horizontal and Vertical	27M0G7D	0.0	0.0
E50. Modulation entirety.)  Spread Spe		ne complete description		n this box, please go	to the end of th	ne form to view it in its

VMES2	11700 12200	R	Horizontal and Vertical	18M0G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descripti	ion does not appear	in this box, please	go to the end of t	the form to view it in its
Spread Spe	ectrum CRMA Out	:bound Data Sei	rvices			
VMES2	11700 12200	R	Horizontal and Vertical	27M0G7D	0.0	0.0
Spread Spe	ectrum CRMA Out	:bound Data Sei	rvices			
VMES2	11700 12200	R	Horizontal and Vertical	36M0G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descripti	ion does not appear	in this box, please	go to the end of t	the form to view it in its
Spread Spe	ectrum CRMA Out	:bound Data Sei	rvices			

VMES2	14000 14500	Т	Horizontal and Vertical	18M0G7D	38.021	1.49
E50. Modu	llation and Services	(If the complete de	escription does not appear	in this box, please	go to the end of th	e form to view it in its
1		<del>-</del>	DSSS) Technique us ccess the satellit	_		od called Code
VMES2	14000 14500	Т	Horizontal and Vertical	27M0G7D	42.4	4.11
		_	DSSS) Technique us ccess the satellit	_		od called Code
VMES2	14000 14500	Т	Horizontal and Vertical	36M0G7D	38.021	-1.52
entirety.) Direct		ad Spectrum (	escription does not appear  DSSS) Technique us  ccess the satellit	sing a random	n access meth	

# FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W 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)
VMES1	Geostationary	10950 11200	172.0/ 172.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	11450 11700	172.0/ 172.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	11700 12200	60.0/ 172.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	11700 12200	105.0/ 105.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	11700 12200	125.0/ 125.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	14000 14500	60.0/ 172.0	0.0	5.0	0.0	5.0	-19.9
	Geostationary	14000 14500	105.0/ 105.0	0.0	5.0	0.0	5.0	-19.9
	Geostationary	14000 14500	125.0/ 125.0	0.0	5.0	0.0	5.0	-19.9
	Geostationary	14000 14500	172.0/ 172.0	0.0	5.0	0.0	5.0	-19.9
VMES2	Geostationary	10950 11200	172.0/ 172.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	11450 11700	172.0/ 172.0	0.0	5.0	0.0	5.0	0.0

Geostationary	11700 12200	60.0/ 172.0	0.0	5.0	0.0	5.0	0.0
Geostationary	11700 12200	105.0/ 105.0	0.0	5.0	0.0	5.0	0.0
Geostationary	11700 12200	125.0/ 125.0	0.0	5.0	0.0	5.0	0.0
Geostationary	14000 14500	60.0/ 172.0	0.0	5.0	0.0	5.0	-20.7
Geostationary	14000 14500	105.0/ 105.0	0.0	5.0	0.0	5.0	-20.7
Geostationary	14000 14500	125.0/ 125.0	0.0	5.0	0.0	5.0	-20.7
Geostationary	14000 14500	172.0/ 172.0	0.0	5.0	0.0	5.0	-20.7

### REMOTE CONTROL POINT LOCATION

E61. Call Sign E030131 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E65. Phone Number 760–476–2583		
E62. Street Address 6155 El Camino Real				
E63. City Carlsbad	E67. County San Diego		E64/68. State/Country CA/ USA	E66. Zip Code 92009

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