Date & Time Filed: Aug 6 2018 10:28:59:786AM File Number: SES-AMD-INTR2018-04560

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:

Amendment of License Modification to Add SCMS Sites

		icant		
Nam	e: I	Ligado Networks Subsidiary LLC	Phone Number:	703–390–2700
DBA Nam			Fax Number:	
Stree	e <b>t:</b> 1	10802 Parkridge Blvd	E–Mail:	compliance@ligado.com
City	: 1	Reston	State:	VA
Cou	ntry:	USA	Zipcode:	20191 –
Atte	ntion: 1	Beth Creary		

9–16. Name of Contact Representative

Name: John P. Janka Phone Number: 202–637–2200

**Company:** Latham & Watkins LLP **Fax Number:** 202–637–2201

Street: 555 Eleventh Street, NW E-Mail: john.janka@lw.com

**Suite 1000** 

City: Washington State: DC

Country: USA Zipcode: 20004–

Attention: Mr. John P. Janka 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

**a** b3. Amendment to a Pending Application

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

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

**b**7. Notification of Minor Modification

(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite

(N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States

(N/A) b10. Other (Please specify)

(N/A) b11. Application for Earth Station to Access a Non–U.S.satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States

(N/A) b12. Application for Database Entry

b13. Amendment to a Pending Database Entry Application

b14. Modification of Database Entry

17c. Is a fee submitted with this application of the submitted with the	159. If No, indicate reason for fee exemption (se	ee 47 C.F.R.Section 1.1114).
Other(please explain):		
17d.		
Fee Classification CGX – Fixed Satellite Station	Transmit/Receive Earth	
18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending apmodification please enter only the file number:	oplication enter both fields, if this filing is a
(a) Call sign of station:	(a) Date pending application was filed:	(b) File number:
E100051	03/07/2018	SESMOD2018030700196

## TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provid	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 stacilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
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 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: 1525 Frequency Upper: 1660.5	(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 & Double
j — authorization to change Points of Communication (satellites & tountries)
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**

under the laws of a foreign country?

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.		Exhil	oit B			
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeror aeronautical fixed radio station services are not required to respond to Items 30–34.	nautic	al en	rout	te or		
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	•	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	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		Yes		No	— ⊛	N/A

O Yes No

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

aliens or their representatives or by a foreign government or representative thereof or by any corporation organized

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
	Exhibit C	
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.	<b>O</b> Yes	No

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

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti–Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.	e 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 D	O 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? Canada	l, what administr	ation has

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

By this application, Ligado Networks seeks authority to modify its existing remote earth station license to add new remote earth stations at Kapolei, Hawaii and Napa, California (the original application covered the Kalopei, Hawaii site only; the amended application covers both sites). See Exhibit E for additional information.

Exhibit E

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

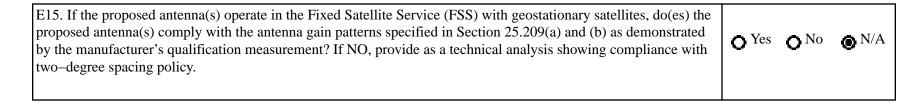
### **CERTIFICATION**

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

o Individual	
Unincorporated Association	
O Partnership	
O Corporation	
Governmental Entity	
Other (please specify)	
45. Name of Person Signing	46. Title of Person Signing
45. Name of Person Signing Beth Creary	46. Title of Person Signing Vice President & Assistant General Counsel
1 1	

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

Location of Earth S	tation Site				
E1: Site Identifier:	SCMS 10	E5. Call Sign:	E100051		
E2: Contact Name	Jim Thorpe	E6. Phone Number:	613-742-0000		
E3. Street:	91–340 Farrington Highway	E7. City:	Kapolei		
		E8. County:	Honolulu		
E4. State	HI	E9. Zip Code	96707		
E10. Area of Opera	tion:	N/A			
E11. Latitude:	21 °20 '9.0 "N				
E12. Longitude:	158 °5 '19.0 "W				
E13. Lat/Lon Coord	dinates are:	O NAD-27	<b>●</b> NAD-83	O N/A	
E14. Site Elevation	(AMSL):	47.0 meters			



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 coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(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.				No
POINTS OF COMMUNICATION		!		
Satellite Name: MSAT-1   MSAT-1   107.5 If you selected OTHER,	please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: SKYTERRA 1   SKYTERRA 1   101.3 W.L. If you s	elected OTHER, please enter the following:			1

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

Satellite Name: MSAT-2 (AMSC-1)   MSAT-2   103.3 W.L. If y	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></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
SCMS 10	C1	1	Cobham	FPA21- 16R/1127	0.89	20.8 dBi at 1.5	
SCMS 10	C1	1	Cobham	FPA21- 16R/1127	0.89	22.2 dBi at 1.6	

Id	Diameter		, ,	Height Above Ground Level	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
C1	0.89/0.89	3.0	50.0	0.0	0.27	0.0	16.5

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)
C1	1626.5 1660.5	Т	Right Hand Circular	N0N	16.5	16.5
E50. Modulation entirety.)  Unmodulate		ne complete descrip	nion does not appear ir	i mis box, piease go	to the end of the form	to view it in its
C1	1525 1559	R	Right Hand Circular	5K00G9W	0.0	0.0
E50. Modulation entirety.)	and Services (If the property of the property	ne complete descrip	tion does not appear ir	this box, please go	to the end of the form	to view it in its
200 200	XIDI GAILICI					
C1	1626.5 1660.5	Т	Right Hand Circular	5K00G9W	16.5	16.5

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.)

4800 bps QPSK carrier

# FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle		E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
C1	Geostationary	1525 1559	101.0/107.5	103.2	22.3	106.6	28.6	0.0
	Geostationary	1626.5 1660.5	101.0/107.5	103.2	22.3	106.6	28.6	0.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign  NOTE: Please enter the callsign of the contro callsign for which this application is being filed.	E66. Phone Number 877–277–2360			
E62. Street Address 10802 Parkridge Boulevard				
E63. City Reston	E68. County Fairfax		E67/68. State/Country VA/ USA	E64. Zip Code 20191

### 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:	SCMS 11	E5. Call Sign:	E100051			
E2: Contact Name	Jim Thorpe	E6. Phone Number:	613-742-0000			
E3. Street:	961 Anselmo Court	E7. City:	Napa			
		E8. County:	Napa			
E4. State	CA	E9. Zip Code	94558			
E10. Area of Operat	cion:	N/A				
E11. Latitude:	38 °14 '42.0 "N					
E12. Longitude:	122 °16 '47.0 "W					
E13. Lat/Lon Coord	linates are:	<b>○</b> NAD-27	● NAD-83	O N/A		
E14. Site Elevation	(AMSL):	9.0 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	oposed antenna(s) comply with the antenna	O Yes	O No	● N/A
E17. Is the facility operated by remote control? If YES, provide the loc point.	ation and telephone number of the control	Yes	٥	No
E18. Is frequency coordination required? If YES, attach a frequency co	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(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.				No
POINTS OF COMMUNICATION		ļ		
Satellite Name: MSAT-1   MSAT-1   107.5 If you selected OTHER,	please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: MSAT-2 (AMSC-1)   MSAT-2   103.3 W.L. If you	selected OTHER, please enter the following:			

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

Satellite Name: SKYTERRA 1   SKYTERRA 1   101.3 W.L. If	f 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></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)	
SCMS 11	C1	1	Cobham	FPA-16R/1127	0.89	20.8 dBi at 1.5	
SCMS 11	C1	1	Cobham	FPA-16R/1127	0.89	22.2 dBi at 1.6	

Id	Diameter		, ,	Height Above Ground Level	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
C1	0.89/0.89	2.8	11.8	0.0	0.27	0.0	16.5

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)
C1	1626.5 1660.5	Т	Right Hand Circular	N0N	16.5	16.5
E50. Modulation entirety.)  Unmodulate		ne complete descrip	otion does not appear in	this box, please go	to the end of the form	to view it in its
C1	1525 1559	R	Right Hand Circular	5K00G9W	0.0	0.0
E50. Modulation entirety.)  4800 bps	n and Services (If the property of the propert	he complete descrip	otion does not appear in	n this box, please go	to the end of the form	to view it in its
C1	1626.5 1660.5	Т	Right Hand Circular	5K00G9W	16.5	16.5

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.)

4800 bps QPSK carrier

# FREQUENCY COORDINATION

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C1	Geostationary	1525 1559	101.0/107.5	147.7	40.5	156.8	43.1	0.0
	Geostationary	1626.5 1660.5	101.0/107.5	147.7	40.5	156.8	43.1	0.0

## REMOTE CONTROL POINT LOCATION

E61. Call Sign  NOTE: Please enter the callsign of the contro callsign for which this application is being filed.	E66. Phone Number 877–277–2360			
E62. Street Address 10802 Parkridge Boulevard				
E63. City Reston	E68. County Fairfax		E67/68. State/Country VA/ USA	E64. Zip Code 20191

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