

RADIO STATION AUTHORIZATION

Name: Hawaii Pacific Teleport, L.P.

Call Sign: E010236

Authorization Type: Modification of License

File Number: SES-MOD-20160826-00834

Non Common Carrier

Grant date:

12/19/2016

Expiration Date:

12/20/2017



Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

# Site ID	Site ID Address		Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)		
1) KAPOLEI	91-340 FARRINGTON HIGH KAPOLEI, HONOLULU, HI 96707	21°20'10.2"N	158°5'18.0"W	36.58	83		

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning December 20, 2002 (3 AM Eastern Standard Time) and ending December 20, 2017 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is December 19, 2017 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands. The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

,				Max EIRP	Max EIRP Density		Special Provisions	
Frequency # (MHz)	Polarization Code	Emission	Tx/Rx Mode	/Carrier (dBW)	/Carrier (dBW/4kHz)	Associated Antenna	(Refer to Section H)	Modulation/ Services
1) 14000.0000-14500.0000	H,V	36M0G7W	Tx	74.10	34.60	1	d'	Compressed Digital Video, audio, data
2) 14000.0000-14500.0000	H,V	4M00G7W	Tx	64.70	34.70	1		Compressed Digital Video, audio, data
3) 11700.0000-12200.0000	H,V	36M0G7W	Rx			1		Compressed Digital Video, audio, data
4) 11700.0000-12200.0000	H,V	4M00G7W	Rx			1		Compressed Digital Video, audio, data
5) 14000.0000-14500.0000	н, V	36M0G7W	Tx	85.14	45.60	2		Digital traffic, Various FEC, data rates, modulation
6) 14000.0000-14500.0000	H,V	51K2G7W	Tx	56.67	45.60	2		Digital traffic, Various FEC, data rates, modulation



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	#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	EIRP /Carrier (dBW)	Density /Carrier (dBW/4kHz)	Associated Antenna	Provisions (Refer to Section H)	Modulation/ Services	
	7) 11	700.0000-12200.0000	H,V	36M0G7W	Rx			2		Digital traffic, FEC, data modulation	Various rates,
	8) 117	00.0000-12200.0000	H, V	51K2G7W	Rx			2		Digital traffic, FEC, data modulation	Various rates,
	9) 114	50.0000-11700.0000	н, V	36M0G7W	Rx			2		Digital traffic, FEC, data modulation	Various rates,
	10) 114	50.0000-11700.0000	н, V	51K2G7W	Rx			2		Digital traffic, FEC, data modulation	Various rates,
	11) 140	00.0000-14500.0000	н, V	36M0G7W	Tx	74.14	34.60	HPT07-24		Digital Data, Vari 3/4, 1/2 Etc. Vari QPSK, Etc.	
	12) 140	00.0000-14500.0000	H,V	1M00G7W	Tx	64.70	34.70	HPT07-24		Digital Data, Vari 3/4, 1/2 Etc. Vari QPSK, Etc.	
	13) 117	00.0000-12200.0000	н, V	86M0G7W	Rx			HPT07-24		Digital Data, Vari 3/4, 1/2 Etc. Vari QPSK, Etc.	
	14) 115	00.0000-12200.0000	H,V	MOOG7W	Rx			HPT07-24		Digital Data, Vari 3/4, 1/2 Etc. Vari QPSK, Etc.	
	15) 140	00.0000-14500.0000	H,V	6MOG7W	Tx	85.14	45.60	HPT11-81K		Digital Data, Vari 3/4, 1/2 Etc. Vari QPSK, Etc.	
	16) 140	00.0000-14500.0000	H,V 5	1K2G7W	Tx	56.67	45.60	HPT11-81K		Digital Data, Vari 3/4, 1/2 Etc. Vari QPSK, Etc.	
	17) 114	50.0000-11700.0000	H,V 3	6M0G7W	Rx			HPT11-81K		Digital Data, Vari 3/4, 1/2 Etc. Vario QPSK, Etc.	
	18) 114	50.0000-11700.0000	H,V 5	1K2G7W	Rx			HPT11-81K		Digital Data, Vari 3/4, 1/2 Etc. Vario QPSK, Etc.	
	19) 109	50.0000-11200.0000	H,V 3	6M0G7W	Rx			HPT11-81K		Digital Data, Vari 3/4, 1/2 Etc. Vario QPSK, Etc.	



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.

The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	n Emission	Tx/Rx Mode	EIRP /Carrier (dBW)	Associated Antenna	Provisions (Refer to Section H)	Modulation/ Services	
20) 109	950.0000-11200.0000	H,V	51K2G7W	Rx		HPT11-81K	٠	Digital Data, 3/4, 1/2 Etc.	

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East West Limit Limit	Elevation (Degrees) East West Limit Limit	Azimuth (Degrees) East West Limit Limit	Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
1)	11700.0000-12200.0000	83.0W-194.0W	05.2-42.6	095.5-243.3		1
2)	14000.0000-14500.0000	83.0W-194.0W	05.2-42.6	095.5-243.3	-3.45	1
3)	10950.0000-11200.0000	188.0W-188.0W	48.0-48.0	237.7-237.7	1	HPT11-81K
4)	11450.0000-11700.0000	188.0W-188.0W	48.0-48.0	237.7-237.7	1	HPT11-81K
5)	14000.0000-14500.0000	188.0W-188.0W	48.0-48.0	237.7-237.7	1	HPT11-81K
6)	11700.0000-12200.0000	83.0W-194.0W	05.2-42.6	095.5-243.3	I	HPT07-24
7)	14000.0000-14500.0000	83.0W-194.0W	05.2-42.6	095.5-243.3	0.43	HPT07-24
8)	14000.0000-14500.0000	154.0E-154.0E	31.2-31.2	251.8-251.8	:	2
9)	14000.0000-14500.0000	154.0E-154.0E	31.2-31.2	251.8-251.8	:	2
10)	11450.0000-11700.0000	154.0E-154.0E	31.2-31.2	251.8-251.8	:	2

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) KAPOLEI to Permitted Space Station List
- 2) KAPOLEI to JCSAT-1B @ 210 degrees W.L. (150 E.L.) (SES-LIC-20010904-01637)
- 3) KAPOLEI to EUTELSAT 172A (S2610) @ 172 degrees E.L. (formerly GE-23) (U.S.-licensed)
- 4) KAPOLEI to JCSAT-2B (M174163) @ 154 degrees E.L. (Japan-licensed)



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E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Mod	el number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
KAPOLEI	1	1	2.4	PRODELIN		2.4	36.58	3.4 AGL/ 40 AMSL	
Ма	ax Gains(s): aximum total inpo aximum aggregate	ıt power	at antenn			11.95 350.00 74.10	00 GHz		
KAPOLEI	2	1	8.1	VERTEX RSI		KPK	36.58	9 AGL/ 45.58 AMSL	
Ма	ax Gains(s):	58.0 7000 GHz		11.9500 GHz	59.7 dBi @	14.25	00 GHz	58.0 dBi @	
	ximum total inpu ximum aggregate	-		. .		350.00 85.14			
KAPOLEI	HPT07-24	1	2.4	VERTEX RSI		2.4	36.58	3 AGL/ 39.58 AMSL	
Ma	ux Gains(s): uximum total inpu uximum aggregate		at antenna	a flange (Watts)		14.25 312.00 74.14	00 GHz		
KAPOLEI	HPT11-81K	1	8.1	VERTEX RSI		KPK	36.58	9 AGL/ 45.58 AMSL	
Ma	x Gains(s): ximum total inpu ximum aggregate		at antenna	a flange (Watts)		14.250 350.00 85.14	00 GHz		

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 385 --- The use of the band 10.7-11.7 GHz (Space-to-Earth) and 12.75-13.25 GHz (Earth-to-Space) by the fixed-satellite service in the geostationary satellite orbit shall be limited to international systems, i.e. other than domestic systems. (NG52)
 - 448 --- Licensee may be required to coordinate pursuant to C.F.R. Section 25.203(g) with the FCC Field Office in Waipahu, HI, if the earth station ERP values are exceeded.



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H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
 - 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
 - 2325 --- Antennas and all antenna supporting structures used under this authorization shall not exceed 20 feet in height.
 - 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
 - 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
 - 5015 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and that the station is operational including the date of commencement of service and will remain operational during the license period unless the license is submitted for cancellation.
 - 5208 --- The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling, or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.
 - 5885 --- This authorization does not authorize Licensee to provide any Direct-to-Home ("DTH"), Direct Broadcast Satellite ("DBS") service or Digital Audio Radio Service ("DARS") to, from, or within the United States via a non-U.S.-licensed satellite.
 - 5886 --- Communications between earth station and the JCSAT 1B satellite shall be in compliance with the satellite coordination agreements reached between Japan and other administrations.

FCC Form 488



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H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 5887 --- Licensee is restricted to the transmission of only digital carriers to the JCSAT 1B satellite and may transmit only within the 14.0-14.5 GHz band.
 - 5888 --- Licensee is restricted to receive only digital carriers from the JCSAT 1B satellite and may receive only within the 11.7-12.2 GHz band.
- 90094 --- The licensee must maintain a U.S. point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein.
- 90341 --- The applicant's request for a waiver of Section 25.283(c) of the Commission's rules, 47 C.F.R. § 25.283(c), is granted. Section 25.283(c) specifies that space stations must discharge all stored energy sources at end-of-life of the space station. JCSAT-2B is a Space Systems/Loral 1300 model spacecraft that was launched on May 6, 2016. Applicant states that JCSAT-2B's two identical interconnected helium tanks will be vented as a part of the retirement procedures for this spacecraft, but a pressure regulator will prevent complete expulsion of the helium in the tanks by cutting off the flow of helium after the 400 psia minimum inlet pressure of the regulator is reached. Applicant states that the helium tanks will retain a total mass of approximately 440 grams of helium at end of life, with each tank volume being 49 liters. We grant a waiver of the Section 25.283(c) with respect this de minimis inert gas.
- 90356 --- This authorization is limited to antenna ID 2, Vertex RSI model 8.1m KPK to communicate with JCSAT-2B at orbital location 154 degrees E.L. in the 14.0-14.5 GHz (Earth-to-space) frequency band and 11.7-12.2 GHz (space-to-Earth) frequency band.
- 90357 --- Transmissions between the Hawaii Pacific Teleport, L.P. Kapolei, Hawaii earth station, Call Sign E010236, and the JCSAT-2B space station, at the 154° E.L. orbital location, are limited to the provision of gateway services in the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands. This authorization is limited to the earth station call sign E010236 and does not permit JCSAT-2B to operate with any other earth station in the United States.
- 90358 --- Communications between the Kapolei, Hawaii earth station (Call Sign E010236) and the JCSAT-2B space station shall comply with all coordination agreements reached between Japan and other Administrations.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R.§ 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station does not meet each required construction deadline by the required date of completion unless, before such date(s), a specific application is timely filed to request an extension of the construction deadline(s), supported with good cause why that failure to construct by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.

FCC Form 488