FCC 312

Schedule B

FEDERAL COMMUNICATIONS COMMISSION

APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS

Technical and Operational Description)

(Place an "X" in one of the blocks below)

☐ License of New Station ☐ Registration of new Domestic Receive-Only Station ☐ Amendment to a Pending Application ☐ Modification of License/Registration ☐ Notification of Minor Modification

B1. Location of Earth Station Site. If temporary-fixed, mobile, or VSAT remote facility, specify area of operation and point of contact. If VSAT hub station, give its location For VSAT networks attach individual Schedule B, Page 1 sheets for each hub station and each remote station. Individually provide the Location, Points of Communications, and Destination Points for each hub and remote station.

B1a. Station Call Sign	B1b. Site identifier (HUB, REMOTE1, etc.)	B1c. Telephone Number	B1j. Geographic Coordinates N/S, Deg. - Min. - Sec. - E/W	B1k. Lat./Lon. Coordinates are:
	USHI01	(808) 929-8069	Lat. 19° 00' 50.3" N Lon. 155° 39' 46.6" W	☐ NAD-27 ☒ NAD-83
B1d. Mailing Street Address of Station or Area of Operation		B1e. Name of Contact Person		
93-1704 South Point Road		Joanne Greet		

B1f. City	B1g. County	B1h. State	B1i. Zip Code	B1l. Site Elevation (AMSL)
Naalehu	Ka'u	HI	96772-0842	378.0 meters

B2. Points of Communications: List the names and orbit locations of all satellites with which this earth station will communicate. The entry "ALSAT" is sufficient to identify the names and locations of all satellite facilities licensed by the U.S. All non-U.S. licensed satellites must be listed individually.

Satellite Name and Orbit Location	Satellite Name and Orbit Location	Satellite Name and Orbit Location
Galileo Constellation (GFOC3 & GFOC4) MEO Orbits		

B3. Destination points for communications using non-U.S. licensed satellites. For each non-U.S. licensed satellite facility identified in section B2 above, specify the destination point(s) (countries) where the services will be provided by this earth station via each non-U.S. license satellite system. Use additional sheets as needed.

Satellite Name	List of Destination Points
Galileo – GFOC3 (MSATNAV-2)	ESA (Non US Spacecraft)
Galileo – GFOC4 (MSATNAV-2)	ESA (Non US Spacecraft)

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)

B4. Earth Station Antenna Facilities: Use additional pages as needed.

(a) Site ID*	(b) Antenna ID**	(c) Quantity	(d) Manufacturer	(e) Model	(f) Antenna Size (meters)	(g) Antenna Gain Transmit and/or Receive (_____dBi at_____GHz)
USHI01	HI-13M	1	Datron	1453	13.0	46.9 dBi at 2.245 GHz
						45.9 dBi at 2.067 GHz

B5. Antenna Heights and Maximum Power Limits: (The corresponding Antenna ID in tables B4 and B5 applies to the same antenna)

(a) Antenna ID**	(b) Antenna Structure Registration No.	Maximum Antenna Height (c) Above Ground Level (meters)	Maximum Antenna Height (d) Above Mean Sea Level (meters)	(e) Building Height Above Ground Level (meters)***	(f) Maximum Antenna Height Above Rooftop (meters)***	(g) Total Input Power at antenna flange (Watts)	(h) Total EIRP for all carriers (dBW)
HI-13M		20.0	398.0			200.0	68.9

Notes: * If this is an application for a VSAT network, identify the site (Item B1b, Schedule B, Page 1) where each antenna is located. Also include this Site-ID on Schedule B, Page 5.
** Identify each antenna in VSAT network or multi-antenna station with a unique identifier, such as HUB, REMOTE1, A1, A2, 10M, 12M, 7M, etc. Use this same antenna ID throughout tables B4, B5, B6, and B7 when referring to the same antenna.
*** Attach sketch of site or exemption, See 47 CFR Part 17.

FEDERAL COMMUNICATIONS COMMISSION

APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)

B6. Frequency Coordination Limits: Use additional pages as needed.

(a) Antenna ID*	(b) Frequency Limits (MHz)	(c) Range of Satellite Arc Eastern Limit**	(d) Range of Satellite Arc Western Limit**	(e) Antenna Elevation Angle Eastern Limit	(f) Antenna Elevation Angle Western Limit	(g) Earth Station Azimuth Angle Eastern Limit	(h) Earth Station Azimuth Angle Western Limit	(i) Maximum EIRP Density toward the Horizon (dBW/4kHz)
HI-13M	2228.094	0.0° W.L.	360.0° W.L.	5.0°	5.0°			
HI-13M	2234.232	0.0° W.L.	360.0° W.L.	5.0°	5.0°			
HI-13M	2225.025	0.0° W.L.	360.0° W.L.	5.0°	5.0°			
HI-13M	2051.703	0.0° W.L.	360.0° W.L.	5.0°	5.0°			9.6
HI-13M	2057.355	0.0° W.L.	360.0° W.L.	5.0°	5.0°			9.6
HI-13M	2048.887	0.0° W.L.	360.0° W.L.	5.0°	5.0°			9.6

Notes: * Provide the ANTENNA-ID from table B4 to identify the antenna to which each frequency band and orbital arc range is associated.
** If operating with geostationary satellites, give the orbital arc limits and the associated elevation and azimuth angles. If operating with non-geostationary satellites, give the notation "NON-GEO" for the satellite arc and give the minimum operational elevation angle and the maximum azimuth angle range.

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)

B7. Particulars of Operation (Full particulars are required for each r.f. carrier): Use additional pages as needed.

(a) Antenna ID*	(b) Frequency Limits (MHz)	(c) T/R Mode **	(d) Antenna Polarization (H,V,L,R)	(e) Emission Designator	(f) Maximum EIRP per Carrier (dBW)	(g) Maximum EIRP Density per Carrier (dBW/4kHz)	(h) Description of Modulation and Services
HI-13M	2228.094	R	L, R	510KG2D			20 kbps data is PSK modulated into a 255 kHz subcarrier with 100 kHz tone
HI-13M	2234.232	R	L, R	510KG2D			20 kbps data is PSK modulated into a 255 kHz subcarrier with 100 kHz tone
HI-13M	2225.025	R	L, R	510KG2D			20 kbps data is PSK modulated into a 255 kHz subcarrier with 100 kHz tone (EMERGENCY USE ONLY)
HI-13M	2051.703	T	L, R	200KG2D	68.0	51.0	2 kbps data PSK modulated onto an 8 kHz subcarrier with 100 kHz major ranging tones
HI-13M	2057.355	T	L, R	200KG2D	68.0	51.0	2 kbps data PSK modulated onto an 8 kHz subcarrier with 100 kHz major ranging tones
HI-13M	2048.887	T	L, R	200KG2D	68.0	51.0	2 kbps data PSK modulated onto an 8 kHz subcarrier with 100 kHz major ranging tones (EMERGENCY USE ONLY)

Notes: * Provide the ANTENNA-ID from table B4 to identify the antenna to which each frequency band and emission is associated. For VSAT networks, include frequencies and emissions for all HUB and REMOTE units.

** Indicate whether the earth station transmits or receives in each frequency band.

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS
FCC Form 312 - Schedule B: (Technical and Operational Description)

If VSAT Network, provide the SITE-ID (Item B1b) of the station that B8-B13 are in response to (HUB, REMOTE1, etc.): _____

B8. 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 measurements? If NO, provide as an exhibit, a technical analysis showing compliance with two-degree spacing policy.	☐ **YES**	☐ **NO**	**N/A**
B9. 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 measurement?	☒ **YES**	☐ **NO**	
B10. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	☒ **YES**	☐ **NO**	

Remote Control Point Location:

B10a. Street Address: 417 Caredean Drive Suite A			
B10b. City: Horsham	B10c. County: Montgomery	B10.d. State/Country: PA	B10e. Zip Code: 19044
B10f. Telephone Number: 215-328-9130	B10g. Call Sign of Control Station (if appropriate):		

B11. Is frequency coordination required? If YES, attach a frequency coordination report as an exhibit.	☒ **YES**	☐ **NO**	
B12. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as an exhibit.	☐ **YES**	☒ **NO**	
B13. FAA Notification - (See 47 CFT Part 17and 47 CFT 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 CFT PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION**	☐ **YES**	☒ **NO**	