File # 0469-EX-CN-2017

University of North Carolina at Wilmington Center for Marine Science SOCON Project

FOR REFERENCE ONLY

As required by the Commission, the following technical parameters are provided for SeaHawk-1 and SeaHawk-2 communications with an earth station operated outside the United States, its territories and possessions as well as earth stations licensed to an entity other than the University of North Carolina at Wilmington Center for Marine Science ("UNCW/CMS").

The SeaHawk satellites are authorized to access the Clyde Space TT&C ground station in Glasgow, Scotland. Clyde Space has contracted with KSAT in Svalbard, Norway for access to the SeaHawk satellites for launch and early commissioning, as well as emergency backup and maintenance. UNCW/CMS will maintain the same operational constraints of its FCC license in which UNCW maintains operational control of the satellite.

Transmit Frequency: **VHF @ 149.95 MHz**		
State (XSC)	XSC = Norway	
City Name (XAL)	XAL = Longyearbyen	
Latitude (DDMMSS)	Lat = 78.229735	
Longitude (DDDMMSS)	Lon = 15.4080958	
Antenna Polarization (XAP)	XAP = T	POLARIZATIONS: H = HORIZONTAL, T = RIGHT AND LEFT HAND CIRCULAR,
Antenna Azimuth (XAZ)	XAZ = V03	THE EARTH STATION Transmitter ANTENNA AZIMUTH (XAZ), THE MINIMUMANGLE OF ELEVATION, V00 TO V90, EXAMPLE, XAZ01 V00
Antenna Dimensions (XAD)	ANTENNA GAIN 11.2 dBi , BEAMWIDTH 52 degrees , AZIMUTHAL RANGE 0 – 360 , THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 490 m THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 3m XAD = yagi ~ 3m long	EXAMPLE ASSUMING NONGEOSTATIONARY, XAD01 16G030B000-360A00357H006
Satellite Receive Specifications **VHF @ 149.95 MHz**		
Polarization (RAP)	RAP = R	POLARIZATION: R= RIGHT HAND CIRCULAR,
Azimuth (RAZ)	RAZ = V00	STATIONRECEIVERANTENNAAZIMUTH(XAZ), THE MINIMUMANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Dimension (RAD)	ANTENNA GAIN 0.0 dB BEAMWIDTH 30 degrees RAD = 00G030B _____	(NTIAformat(RAD), EXAMPLE, RAD0116G030B)
Type of satellite (State = SP) City = G/No	Type = NO	Nongeostationary

Earth Station Data (Receiver) **UHF @ 400.75 MHz**		
State (RSC)	RSC = NORWAY	
City Name (RAL)	RAL = LONGYEARBYEN	
Latitude (DDMMSS)	Lat = 78.229735	
Longitude (DDDMMSS)	Lon = 15.4080958	
Antenna Polarization (RAP)	RAP = T	POLARIZATIONS INCLUDE : H = HORIZONTAL, V = VERTICAL, S = HORIZONTAL AND VERTICAL, L = LEFT HAND CIRCULAR, R = RIGHT HAND CIRCULAR, T = RIGHT AND LEFT HAND CIRCULAR, J = LINEAR POLARIZATION
Antenna Azimuth (RAZ)	RAZ =	THE EARTH STATION RECEIVER ANTENNA AZIMUTH (RAZ), THE MINIMUM ANGLE OF ELEVATION, V00 TO V90, EXAMPLE, RAZ01 V00
Antenna Dimensions (RAD)	ANTENNA GAIN 16.2 _, BEAMWIDTH 30 , AZIMUTHAL RANGE 0 - 360 , THE SITE ELEVATION ABOVE MEAN SEA LEVEL IN METERS 290 m THE ANTENNA HEIGHT ABOVE TERRAIN IN METERS 3 m RAD = yagi ~3m long	EXAMPLE ASSUMING NONGEOSTATIONARY, RAD01 16G030B000-360A00357H006
FCC notes: 1. Use S-Note S945. 2. REM AGN, Cubesat, (insert name)		