

## SATELLITE EARTH STATION AUTHORIZATIONS

### FCC Form 312 - Schedule B:(Technical and Operational Description)

Location of Earth Station Site E1: Site Identifier: O3b Thirty-Ship Waiver E2: Contact Name: O3b Network Operations Center E3: Street: Maritime earth stations operating in U.S. waters on foreign vessels	E5. Call Sign: E6. Phone Number: 703-366-1500 E7. City: E8. County: E9. Zip Code:
E4. State E10. Area of Operation: See Narrative, mobile operations E11. Latitude: 0-0-0 E12. Longitude: 0-0-0 E13. Lat/Lon Coordinates are: E14. Site Elevation (AMSL): 0 meters	<div style="display: flex; justify-content: space-around; align-items: center;"> <input type="radio"/> NAD-27                 <input checked="" type="radio"/> NAD-83             </div> <div style="text-align: right; margin-top: 10px;">N/A</div>
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 a technical analysis showing compliance with two-degree spacing policy.	<div style="display: flex; justify-content: space-between;"> <input type="radio"/> Yes                 <input type="radio"/> No             </div> <div style="text-align: right; margin-top: 5px;">N/A</div>
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?	<div style="display: flex; justify-content: space-between;"> <input checked="" type="radio"/> Yes                 <input type="radio"/> No             </div> <div style="text-align: right; margin-top: 5px;">N/A</div>
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<div style="display: flex; justify-content: space-between;"> <input type="radio"/> Yes                 <input checked="" type="radio"/> No             </div>
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<div style="display: flex; justify-content: space-between;"> <input checked="" type="radio"/> Yes                 <input type="radio"/> No             </div>
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	<div style="display: flex; justify-content: space-between;"> <input type="radio"/> Yes                 <input checked="" type="radio"/> No             </div>
<b>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.</b>	<div style="display: flex; justify-content: space-between;"> <input type="radio"/> Yes                 <input checked="" type="radio"/> No             </div>
<b>POINTS OF COMMUNICATION</b>	
Satellite Name:     Eq. If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location: O3b Constellation	E24. Country:
<b>POINTS OF COMMUNICATION (Destination Points)</b>	
E25. Site Identifier:	

E26. Common Name:	E27. Country:
-------------------	---------------

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna Gain Transmit and/or Receive (___dBi at ___GHz)
O3b 30-ship Waiver	Orb 2.2	90	Orbit Communications	AL-7107-Ka	2.2m	2.2m: 48.5 dBi at 18.3 & 52.5 dBi at 28.3

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)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for all carriers (dBW)
Orbit 2.2	2.2/2.2	0	30	0	40	0	67.9

**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)
Orb 2.2	17800-18600	R	Left and Right Circular	216MG7D	0.0	0.0
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	17800-18600	R	Left and Right Circular	108MG7D	0.0	0.0
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	17800-18600	R	Left and Right Circular	49M2G7D	0.0	0.0
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	17800-18600	R	Left and Right Circular	24M0G7D	0.0	0.0
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	27600-28400	T	Left and Right Circular	216MG7D	67.9	20.6
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	27600-28400	T	Left and Right Circular	108MG7D	67.9	23.6
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	27600-28400	T	Left and Right Circular	49M2G7D	67.9	27.0
E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link						
Orb 2.2	27600-28400	T	Left and Right Circular	24M0G7D	67.9	30.1

E50. Modulation and Services Various Modulations up to 32APSK; Digital Data Link

**FREQUENCY COORDINATION**

<b>E28. Antenna Id</b>	<b>E51. Satellite Orbit Type</b>	<b>E52/53. Frequency Limits(MHz)</b>	<b>E54/55. Range of Satellite Arc E/W Limit</b>	<b>E56. Earth Station Azimuth Angle Eastern Limit</b>	<b>E57. Antenna Elevation Angle Eastern Limit</b>	<b>E58. Earth Station Azimuth Angle Western Limit</b>	<b>E59. Antenna Elevation Angle Western Limit</b>	<b>E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)</b>
Orb 2.2	Non-Geostationary	17800-18600	Non-GEO	100	10	260	10	0.0
Orb 2.2	Non-Geostationary	27600-28400	Non-GEO	100	10	260	10	-14.8

**REMOTE CONTROL POINT LOCATION**

E61. Call Sign				E65. Phone Number			
<p><b>NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.</b></p>							
E62. Street Address							
E63. City			E67. County			E64/68. State/Country	E66. Zip Code