

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE**

EXPERIMENTAL
(Nature of Service)

WL2XXO
(Call Sign)

XT MO
(Class of Station)

0331-EX-CN-2021
(File Number)

NAME O3b Limited

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(J) of the Commission's Rules

Station Locations

- (1) MOBILE: Within 3.22 km of coordinates Manassas, VA, within 3.22 km, centered around NL 38-47-46; WL 77-34-36
- (2) MOBILE: Within 3.22 km of coordinates Port St. Lucie, FL, within 3.22 km, centered around NL 27-16-55; WL 80-28-59
- (3) MOBILE: Within 3.22 km of coordinates Port St. Lucie, FL, within 3.22 km, centered around NL 27-16-55; WL 80-28-59
- (4) MOBILE: Within 3.22 km of coordinates Port St. Lucie, FL, within 3.22 km, centered around NL 27-16-55; WL 80-28-59
- (5) MOBILE: Within 3.22 km of coordinates Manassas, VA, within 3.22 km, centered around NL 38-47-46; WL 77-34-36
- (6) MOBILE: Within 3.22 km of coordinates Manassas, VA, within 3.22 km, centered around NL 38-47-46; WL 77-34-36

Frequency Information

MOBILE: Within 3.22 km of coordinates Manassas, VA, within 3.22 km, centered around NL 38-47-46; WL 77-34-36

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-30000 MHz	MO	3M07G7W	8 W (ERP)	0.00003 %

This authorization effective August 06, 2021 and
will expire 3:00 A.M. EST August 01, 2023

**FEDERAL
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COMMISSION**



Frequency Information

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Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-30000 MHz	MO	50M0G7D	25 W (ERP)	0.00003 %

MOBILE: Within 3.22 km of coordinates Port St. Lucie, FL, within 3.22 km, centered around NL 27-16-55; WL 80-28-59

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-30000 MHz	MO	54M0G7W	20 W (ERP)	0.0015 %

MOBILE: Within 3.22 km of coordinates Manassas, VA, within 3.22 km, centered around NL 38-47-46; WL 77-34-36

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-30000 MHz	MO	50M0G7D	25 W (ERP)	0.00003 %

Frequency Information

MOBILE: Within 3.22 km of coordinates Manassas, VA, within 3.22 km, centered around NL 38-47-46; WL 77-34-36

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-30000 MHz	MO	54M0G7W	20 W (ERP)	0.0015 %

Special Conditions:

- (1) The occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.
- (3) This is for experimental purpose only and does not permit commercial service or market access.
- (4) Experimental licensee must secure consents from the Upper Microwave Flexible Use Service licensees in each corresponding proposed area prior to commencing the experimental operations.
- (5) Experimental licensee must coordinate with Fixed Microwave Service licensees in each corresponding proposed venue in accordance with 47 C.F.R, Part 101.103(d) prior to operation in the proposed frequency bands.
- (6) Licensee is authorized to conduct on-the-ground tests of one 2m GetSat Microsat, one 2m GetSat Nanosat H, and one 1.2m Intellian X130D earth stations for fixed and short-range mobile operations within 3.22 km of Port St. Lucie, FL (NL 27-16-55; WL 80-28-59) and Manassas, VA (NL 38-47-46; WL77-34-36) in the 27.5-29.1 and 29.5-30 GHz (Earth-to-space) frequency bands via O3b Limited's O3b NGSO satellites.
- (7) POINT OF COMMUNICATION: O3b Limited's O3b Ka-band non-geostationary- orbit (NGSO) satellites (S2935).
- (8) Operations in the 27.5-28.6 GHz and 29.5-30 GHz frequency bands must be compliance with the equivalent power flux-density limit (-162 dBW/m²/40 kHz) of Article Article 22, Section II, and Resolution 76 of the ITU Radio Regulations.
- (9) The authorized earth station at Manassas, VA must not transmit signals until O3b NGSO satellites in view at an elevation angle of at least 24 degrees.
- (10) The authorized earth station at PortSt. Lucie, FL must not transmit signals until O3b NGSO satellites in view at an elevation angle of at least 19 degrees.

Special Conditions:

- (11) The angular separation/avoidance angle (exclusion zone) between the O3b orbit and the GSO orbit, as seen from earth station at PortSt. Lucie, FL and Manassas, VA shall not be less than that required by the O3b satellite system license. As the earth station is tracking O3b's NGSO satellites, it must not radiate within the avoidance angle (exclusion zone) of the GSO arc.
- (12) Licensee is not authorized to conduct on-the-ground tests in the 29.1-29.5 GHz (MSS FL) mobile satellite service (MSS) feeder link frequency band.
- (13) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.