

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

EXPERIMENTAL

(Nature of Service)

WM2XDW

(Call Sign)

XT MO

(Class of Station)

0837-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 1.6 km, centered around NL 35-58-01; WL 84-13-45

Frequency Information

MOBILE: , within 1.6 km, centered around NL 35-58-01; WL 84-13-45

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
28600-30000 MHz	MO	202MG7D	20 W (ERP)	0.03 %

Special Conditions:

- (1) 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.
- (2) Experimental licensee must coordinate with the Fixed Microwave Service licensees in the proposed venue in accordance with 47 C.F.R, Part 101.103(d) prior to operation in the requested band.
- (3) Licensee is authorized to conduct on-the-ground tests of one 906 x 238.76mm (35.7 x 9.4") Honeywell MCX antenna (earth station) in the 28.6-30 GHz (Earth-to-space) frequency band via O3b Limited's O3b NGSO satellites.
- (4) POINT OF COMMUNICATION: O3b Limited's O3b Ka-band non-geostationary- orbit (NGSO) satellites (S2935).

This authorization effective December 16, 2021 and
will expire 3:00 A.M. EST January 01, 2024

**FEDERAL
COMMUNICATIONS
COMMISSION**



Special Conditions:

- (5) Operations in the 29.5-30 GHz frequency band 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.
- (6) Operations in the 29.25-30 GHz frequency band must comply with the following:
- a. At the minimum elevation angle of 10 degrees from earth station to the GSO satellite:
- () The authorized earth station must not transmit signals until O3b NGSO satellites in view at an elevation angle of at least 10 degrees.
- () As the earth station is tracking O3b's NGSO satellites, it must not radiate within $\pm 12.3^\circ$ of the GSO arc.
- | | | | |
|--------------|------------|-----------|-----------------|
| () off-axis | Emission | Maximum | Maximum |
| Antenna Gain | designator | EIRP | EIRP density |
| 4.75 dBi | 202MG7D | 30.54 dBW | -16.49 dBW/4kHz |
- b. At center of pass
- () The authorized earth station must not transmit signals until O3b NGSO satellites in view at an elevation angle of at least 34.8 degrees.
- () As the earth station is tracking O3b's NGSO satellites, it must not radiate within $\pm 15.8^\circ$ of the GSO arc.
- | | | | |
|--------------|------------|-----------|----------------|
| () off-axis | Emission | Maximum | Maximum |
| Antenna Gain | designator | EIRP | EIRP density |
| 2 dBi | 202MG7D | 27.83 dBW | -19.2 dBW/4kHz |
- (7) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (8) This is for experimental purpose only and does not permit commercial service or market access.