

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

EXPERIMENTAL

(Nature of Service)

WL2XOD

(Call Sign)

XT FX MO

(Class of Station)

0127-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) MANASSAS, VA - NL 38-47-46; WL 77-34-36; MOBILE: , within 1.6 km, centered around NL 38-47-46; WL 77-34-36
- (2) Palmdale (LOS ANGELES), CA - NL 34-33-45; WL 117-40-41
- (3) Port St Lucie (ST LUCIE), FL - NL 27-16-55; WL 80-28-59

Frequency Information

MANASSAS, VA - NL 38-47-46; WL 77-34-36; MOBILE: , within 1.6 km, centered around NL 38-47-46; WL 77-34-36

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-31000 MHz	FX	20M0G7W	20 W (ERP)	0.03 %

Palmdale (LOS ANGELES), CA - NL 34-33-45; WL 117-40-41

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-31000 MHz	FX	20M0G7W	20 W (ERP)	0.03 %

This authorization effective March 18, 2021 and
will expire 3:00 A.M. EST April 01, 2023

FEDERAL
COMMUNICATIONS
COMMISSION



Frequency Information

Port St Lucie (ST LUCIE), FL - NL 27-16-55; WL 80-28-59

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
27500-31000 MHz	FX	20M0G7W	20 W (ERP)	0.03 %

Special Conditions:

- (1) In lieu of frequency tolerance, 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) O3b Limited shall secure consents from the Upper Microwave Flexible Use Service licensees in each proposed area prior to accessing to the frequencies from 27.5 GHz to 28.35 GHz
- (4) O3b Limited shall coordinate with Fixed Microwave Service licensees in the proposed areas in accordance with 47 C.F.R, Part 101.103(d) prior to commencing experimental operations.
- (5) Licensee is not authorized to conduct on-the-ground tests in the 30-31 GHz band.
- (6) Licensee is authorized to conduct on-the-ground tests of two 0.3 m earth stations (Viasat G-12 terminals) for fixed and short-range mobile operations at and within 1.60 km around its testing facilities in Manassas, VA, Port St. Lucie, FL, and Grey Butte Airfield, CA.
- (7) The 0.3 m earth station is authorized to operate EIRP up to 49.3 dBW (Maximum) and EIRP density up to 12.30 dBW/4KHZ (Maximum) for the emission designator 20M0G7W
- (8) Point of communications: O3b's non-geostationary orbit space stations (NGSO) satellite constellation (Call Sign S2935)
- (9) The angular separation between the O3b orbit and the GSO orbit, as seen from Port St. Lucie, FL- NL 27-16-55; WL 80-28-59, Manassas, VA- NL 38-47-46; WL 77-34-36, and Palmdale, CA- NL 34-33-45; WL 117-40-41 shall not be less than that required by the O3b satellite system license.
- (10) The Power levels (EIRP and EIRP density) transmitting from the 0.3 m experimental stations in the 27.5-30 GHz Ka-band must not exceed the power levels (EIRP and EIRP density) authorized and operated by the Ka-band Blanket earth stations (BES), Mobile earth stations (MES), and Temporary Fixed Earth Stations (TFE). For operation above/exceeding the power levels, O3b Limited must coordinate with satellite operators authorized in Section D (point of communications) of Ka-band GSO BES, MES, and TFE's licenses prior to operations.

Special Conditions:

- (11) Prior to commencing any operations in the 27.5-30 GHz frequency band, experimental licensee must notify EXISTING licensees of Ka-band BES and TFE. The notice must include the name and contact information of the stop buzzer personnel that will be available to cease operations in the event of reported interference. The notification should include the testing parameters (specific location(s), antenna gain(s), antenna height(s), antenna orientation, EIRP, EIRP density) and day and times of each test.

Please notify the following existing licensees:

GSO BES Call Sign: E120071, E100143, E120026

Frequency band(s): 28350 – 29100 and 29500 – 30000 MHz

Licensee: ViaSat, Inc.

Phone Number: 760-476-2583

E-Mail: daryl.hunter@viasat.com

Attention: Mr Daryl T Hunter

GSO BES Call Sign: E050033

Frequency band(s): 29500- 30000 MHz

Licensee: ViaSat, Inc.

Phone Number: 760-476-2583

E-Mail: daryl.hunter@viasat.com

Attention: Mr Daryl T Hunter

GSO Blanket Terminals (BES) Call Sign: E060445

Frequency band(s): 29250- 29500 and 29500- 30000 MHz

Licensee: HNS License Sub, LLC

Phone Number: 301-428-5893

E-Mail: jennifer.manner@echostar.com

Attention: Jennifer A. Manner

GSO TEMPORARY-FIXED (TFE) Call Sign: E120092

Frequency band(s): 28350 – 29100 and 29500 – 30000 MHz

Licensee: ViaSat, Inc.

Phone Number: 760-476-2583

E-Mail: daryl.hunter@viasat.com

Attention: Mr. Daryl T Hunter

GSO TEMPORARY-FIXED (TFE) Call Sign: E150097

Frequency band(s): 29500 – 30000 MHz

Licensee: ISAT US Inc.

Phone Number: 202-248-5150

E-Mail: brennan.price@inmarsat.com

Attention: Brennan Price

- (12) Experimental station shall use the minimum power level necessary to establish communications links to minimize potential interference to licensed users.
- (13) This authorization SUPERSEDES the previous issued authorization with the same call sign and file number to include existing licensees.