

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

EXPERIMENTAL
(Nature of Service)

XT MO
(Class of Station)

WQ2XNL
(Call Sign)

0517-EX-CN-2026
(File Number)

NAME Aethero Space Inc

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: 510 km altitude, NGSO
- (2) MOBILE: 510 km altitude, NGSO
- (3) MOBILE: 510 km altitude, NGSO

Frequency Information

MOBILE: 510 km altitude, NGSO

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2250 MHz	MO	2M00G1D	3.85 W (ERP)	0.001 %

MOBILE: 510 km altitude, NGSO

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
8125 MHz	MO	170MG1D	110.92 W (ERP)	0.001 %

This authorization effective July 23, 2026 and
will expire 3:00 A.M. ET August 01, 2028

FEDERAL
COMMUNICATIONS
COMMISSION



Frequency Information

MOBILE: 510 km altitude, NGSO

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2230 MHz	MO	250KG1D	0.48 W (ERP)	0.001 %

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) Prior to equipment authorization or a determination of compliance, the device must be accompanied by a conspicuous notice worded as follows: "This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained."
- (3) Following launch of the satellite, the licensee must notify the FCC through electronic submission to the license file, of the status of the satellite (transmissions commenced, etc.), not later than 7 days after commencement or expected commencement of transmissions, and of termination of transmissions, not later than three months after such termination.
- (4) Upon receipt of a conjunction warning from the JSpOC or other source, the licensee must review the warning and take all possible steps to assess and, if necessary, to mitigate collision risk, including, but not limited to: contacting the operator of any active spacecraft involved in such warning; sharing ephemeris data and other appropriate operational information with any such operator; modifying spacecraft attitude and/or operations.
- (5) The licensee shall provide the Commission with all information required for the Advance Publication, Coordination and Notification of frequency assignments pursuant to the International Radio Regulations. This includes the preparation of draft materials, to be provided to the Commission prior to submission to the International Telecommunication Union. The authorized operations require notification of frequency assignments pursuant to Article 11 of the ITU Radio Regulations. Licensee shall provide the FCC, not later than 30 days after a frequency assignment is brought into use, the documents required for notification (including SpaceCap Notification MDB file) of such frequency assignments. The licensee shall also prepare materials for informing the ITU that a frequency assignments has been brought into use, or that its use has been suspended or permanently discontinued.
- (6) This authorization is for experimental purposes only and does not permit commercial, operational, or revenue-generating services of any kind. The experimental licensee is strictly prohibited from charging fees, receiving compensation, or deriving any direct or indirect financial benefit from activities conducted under this grant. Should the licensee engage in any prohibited commercial or revenue-generating activity, all transmissions conducted under this authorization must cease immediately.

Special Conditions:

- (7) OPERATIONS OF SPACE STATION/S THAT COMMUNICATE/S TO ASSOCIATED GROUND STATION/S OUTSIDE OF THE USP REQUIRE AETHERO SPACE INC. TO INITIATE AND COMPLETE THE ADVANCE PUBLICATION, COORDINATION, DUE DILIGENCE, AND NOTIFICATION PROCESS FOR THESE SPACE STATIONS AND OBTAINS AUTHORIZATION FROM APPROPRIATE ADMINISTRATION/S WHERE THE FOREIGN GROUND STATION/S IS/ARE LOCATED.
- (8) Transmissions from foreign earth stations to the Titan satellite must obtain the appropriate regulatory license from the respective foreign administrations prior to operations.
- (9) All operations are on a strict non-interference basis to authorized federal users. Numerous factors such as future federal space missions brought-into-use after granting this authorization may prohibit its extension or renewal. This authorization expires on 1 October 2028.
- (10) Operations must be strictly limited to time durations when the Titan spacecraft is visible to one of its earth station locations listed below:
 - a. Deadhorse, AK (no S-band downlinks in 2200-2290 MHz)
 - b. Boden, Sweden
 - c. Pretoria, South Africa
 - d. Punta Arenas, Chile
- (11) Aethero Space must ensure that Titan transmissions centered at 8125 MHz are ceased and no earth station receive operations are permitted when any of the following conditions occur:
 - a. the conjunction angle formed by the location 64° 53' 00" N 147° 30' 00" W (angle vertex), the Titan spacecraft, and any of the following spacecraft is less than or equal to three (3) degrees: Aura (NORAD ID: 28376), Aqua (NORAD ID: 27424), ICESat-2 (NORAD ID: 43613), Landsat-8 (NORAD ID: 39084), Landsat-9 (NORAD ID: 49260), OCO-2 (NORAD ID: 40059), and SMAP (NORAD ID: 40376), and Terra (NORAD ID: 25994).
 - b. the conjunction angle formed by the location 25° 53' 09" S, 027° 42' 18" E (angle vertex), the Titan spacecraft, and the SWOT (NORAD ID: 54754) spacecraft is less than or equal to three (3) degrees.
 - c. the conjunction angle formed by the location 67° 53' 24" N, 021° 04' 12" E (angle vertex), the Titan spacecraft, and the SWOT (NORAD ID: 54754) spacecraft is less than or equal to three (3) degrees.

Special Conditions:

- (12) This license does not directly authorize any Earth-to-space transmissions in the 2025-2110 MHz band. However, for the purposes of accessing electromagnetic compatibility with Federal systems, Aethero Space specified uplinks with fixed center frequencies of 2030 and 2080 MHz and respective emission bandwidths of 0.25 and 2 MHz; there must be no deviation from use of these center frequency and bandwidth combinations. Additionally, Aethero Space must ensure that the following technical limitations are implemented at their supporting earth stations:
- a. Earth-to-space transmissions centered at 2030 MHz must be ceased when the International Space Station (ISS, NORAD ID: 25544) is within ten (10) degrees of the earth station antenna boresight. This limitation applies to all earth stations.
 - b. Earth-to-space transmissions centered at 2030 MHz must be ceased when any of the TDRS-3, -5 through -8, and -11 through -13 satellites (NORAD IDs: 19548, 21639, 22314, 23613, 26388, 39070, 39504, and 42915) are within five (5) degrees of the earth station antenna boresight. This limitation only applies to earth stations that have visibility to these geosynchronous satellites.
 - c. Earth-to-space transmissions centered at 2030 MHz must be ceased during NASA Artemis missions when the Orion spacecraft is within horizon-to-horizon view of the earth station location. This limitation applies to all earth stations.
 - d. Earth-to-space transmissions centered at 2080 MHz must be ceased when the Compton Spectrometer and Imager (COSI, NORAD ID: TBD, Expected Launch in Mid-2027) is within five (5) degrees of the earth station antenna boresight. This limitation applies to all earth stations.
- (13) Prior to launch, experimental licensee must file a modification to update orbital parameters, submit required documentation, and receive final approval.
- (14) Stop Buzzer Information

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