

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

XT FX MO

(Class of Station)

W12XSR

(Call Sign)

2051-EX-ST-2018

(File Number)

NAME Harris Corporation

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

The STA will allow Harris to perform S-band space-ground communications with the HSAT-1 cubesat.

Station Locations

- (1) Palm Bay, FL - NL 28-01-35; WL 80-36-18
- (2) MOBILE: Non-geostationary, Low Earth Orbit Space Station

Frequency Information

Palm Bay, FL - NL 28-01-35; WL 80-36-18

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2096 MHz	FX	1M25G1D	13.335 kW (ERP)	0.002 %

This authorization effective March 05, 2019 and
will expire 3:00 A.M. EST June 01, 2019

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Non-geostationary, Low Earth Orbit Space Station

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2247 MHz	MO	2M00G1D	9.89 W (ERP)	0.002 %

Special Conditions:

- (1) 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.
- (2) 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.
- (3) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at https://www.sbe.org/sections/freq_local.php to find the appropriate coordinator.
- (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) All HSAT-1 CubeSat downlink transmissions on frequencies of 2247.5 MHz shall be limited to periods of time when the Harris Ground Terminal at Palm Bay, Florida is within line-of-sight of the HSAT-1 CubeSat.
- (6) Due to potential harmful interference to naval activities, Harris Corporation's RF operations plan shall be submitted, at least 60 days prior to planned launch date, to the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Mr. James Moneyhon (540) 653-3477, or james.moneyhon@navy.mil, for assessment.

Special Conditions:

- (7) In order to mitigate the potential for interference with these naval activities, four blackout zones (BOZs) shall be assumed as follows: (1) 1500 nautical mile radius centered at 22N160W; (2) 1500 nautical mile radius centered at 33.25N119.57W; (3) 1500 nautical mile radius centered at 4.11N175.2W; and (4) 1500 nautical mile radius centered at 57.46N152.38W. These BOZs shall be implemented, unless otherwise coordinated and agreed to by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD). In addition, Harris Corporation must also comply with any and all restrictions that may be levied by NSWCDD.
- (8) Harris Corporation should be aware that the band 2200-2290 MHz is allocated for federal operations and is a highly congested band. Non-federal use is on a case-by-case basis. Harris Corporation should have no expectations of automatic approval in this band in future submissions.