

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

EXPERIMENTAL

(Nature of Service)

WS9XOG

(Call Sign)

XT MO

(Class of Station)

1249-EX-ST-2021

(File Number)

NAME Xwing Inc

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:

Grant of the instant request for STA for the 2.2GHz., 2.3GHz and 2.4GHz bands would serve the public interest by enabling Xwing to experiment with hardware and software solutions to support

Station Locations

- (1) MOBILE: Bentonville, AR (KVBT) Maximum Alt 10,000ft AGL, within 80 km, centered around NL 36-20-43; WL 94-13-10
- (2) MOBILE: Bentonville, AR (KVBT), within 4.8 km, centered around NL 36-20-43; WL 94-13-10

Frequency Information

MOBILE: Bentonville, AR (KVBT) Maximum Alt 10,000ft AGL, within 80 km, centered around NL 36-20-43; WL 94-13-10

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2200-2300 MHz	MO	20M0D7W	50 W (ERP)	0.002 %
		20M0D7W		
		20M0D7W		
		20M0D7W		
2360-2395 MHz	MO	20M0D7W	50 W (ERP)	0.002 %

This authorization effective August 23, 2021 and
will expire 3:00 A.M. EST December 01, 2021

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Bentonville, AR (KVBT) Maximum Alt 10,000ft AGL, within 80 km, centered around NL 36-20-43; WL 94-13-10

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2360-2395 MHz	MO	20M0D7W 20M0D7W 20M0D7W	50 W (ERP)	0.002 %
2402-2478 MHz	MO	20M0D7W 20M0D7W 20M0D7W 20M0D7W	50 W (ERP)	0.002 %

MOBILE: Bentonville, AR (KVBT), within 4.8 km, centered around NL 36-20-43; WL 94-13-10

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2200-2300 MHz	MO	20M0D7W 20M0D7W 20M0D7W 20M0D7W	122 W (ERP)	0.002 %
2360-2395 MHz	MO	20M0D7W 20M0D7W 20M0D7W 20M0D7W	122 W (ERP)	0.002 %
2402-2478 MHz	MO	20M0D7W 20M0D7W 20M0D7W 20M0D7W	122 W (ERP)	0.002 %

Special Conditions:

- (1) This frequency assignment in one of the bands 1435-1525, 2310-2320 and 2345-2390 MHz was coordinated prior to its authorization with AFMO CONUS, Ft. Sam Houston, TX, who also coordinated it, as appropriate, with the Aerospace and Flight Test Radio Coordinating Council. Use of this frequency under the authority of this assignment is subject to such further coordination with AFMO CONUS, Ft. Sam Houston, TX, as necessary to ensure compatibility with existing uses.
- (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) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (4) Operation is subject to prior coordination with the local Society of Broadcast Engineers, Inc. (SBE) frequency coordinator. Consult the list at <http://sbe.org/wp-content/uploads/freqcoor.pdf> to find the appropriate coordinator.
- (5) Prior to commencing any operations in Aeronautical and Fixed frequencies (2360-2395 MHz), WTB/Mobility Division recommends that the applicant coordinate with the Aerospace and Flight Test Radio Coordinating Council (AFTRCC).
- (6) Experimental license must coordinate with the local Society of Broadcast Engineers frequency coordinator in each proposed area prior to operation in the frequencies from 2450 MHz to 2478 MHz.
- (7) Experimental license 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 frequency range from 2450 MHz to 2478 MHz.
- (8) Xwing Inc requires providing the stop buzzer POC to Air Force (Email: jimmy.nguyen@us.af.mil) prior to operating in the 2200-2300 MHz band.
- (9) All operations are on a non-interference basis to authorized federal users, and long term or multiple location use of the requested frequency bands may not be possible. Xwing, Inc should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee will be subject to immediate shut down.
- (10) Xwing Inc must notch out the following:
 - a. 2227 MHz (+/- 3 MHz)
- (11) Xwing, Inc must pre-coordinate airborne use of this system in the band 2200-2290 MHz with agencies owning earth stations listed in Section 8.3.15 of the NTIA Manual whenever the system operates from an airborne platform within 880 km of such stations (the predetermined coordination distance specified in Appendix 7 of the ITU Radio Regulations (Table 10)). Xwing, Inc should be aware of the difficulty of coordinating assignments in the band 2200-2290 MHz when the necessary bandwidth exceeds 5 megahertz.

Special Conditions:

- (12) Xwing, Inc shall not introduce high-density mobile systems in the band 2200-2290 MHz in accordance with Footnote 5.391 to the National Table of Frequency Allocations.
- (13) All mobile operations in the 2200-2290 MHz band are limited to line-of-sight operations only.
- (14) The 2290-2300 MHz frequency band shall not be used for airborne operation.
- (15) FAA concurrence of this STA is based upon the understanding that all Detect and Avoid (DAA) processing is onboard the aircraft, which is manned. Regarding use of 2.4 GHz to support platform is contingent upon the proper development of the C-band (5030-5091 MHz) link to accommodate a fused C2/DAA/Weather/Voice capability, with a separate link for video and the platform having TCAS, ADS-B in, and airborne radar onboard with relevant tracks downloaded via the link.