

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

EXPERIMENTAL

(Nature of Service)

XT      FX

(Class of Station)

WP9XQT

(Call Sign)

2074-EX-ST-2019

(File Number)

NAME Kepler Communications 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:**

To verify the compatibility of the listed systems with Keplers network by establishing technical link demonstrations.

**Station Locations**

(1) Houston (HARRIS), TX - NL 29-35-55; WL 95-20-48

**Frequency Information**

Houston (HARRIS), TX - NL 29-35-55; WL 95-20-48

| Frequency           | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------------|---------------|---------------------|------------------|---------------------------|
| 14.1875-14.3125 GHz | FX            | 125MG7W<br>40M0G7W  | 105.46 kW (ERP)  | 0.001 %                   |
| 14.1875-14.3125 GHz | FX            | 125MG7W<br>40M0G7W  | 47.11 kW (ERP)   | 0.001 %                   |
| 14.1875-14.3125 GHz | FX            | 125MG7W             | 28.45 kW (ERP)   | 0.001 %                   |

This authorization effective November 20, 2019 and  
will expire 3:00 A.M. EST May 17, 2020

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Frequency Information

Houston (HARRIS), TX - NL 29-35-55; WL 95-20-48

| Frequency           | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------------|---------------|---------------------|------------------|---------------------------|
| 14.1875-14.3125 GHz | FX            | 40M0G7W             | 28.45 kW (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) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) Further requests for extension of the authority granted herein must be filed on Form 442, "Application for New or Modified Radio Station Authorization under Part 5 of FCC Rules - Experimental Radio Service." Future STA requests to extend this authorization will not be considered.
- (4) POINT OF COMMUNICATION: Kepler Communications Inc. (Kepler)'s Ku-band non-geostationarysatellite orbit (NGSO) satellites.
- (5) Operations in the 14.0-14.5 GHz frequency band must be in compliance with the equivalent power flux-density limit (-160 dBW/m<sup>2</sup>/40 kHz) of 47 CFR § 25.208(k) and Article 22.5D of the ITU Radio Regulations.
- (6) Operations in the Ku-band must maintain +5° of avoidance angle theta (exclusion zone) with the GSO arc at all times. As the earth station is tracking Kepler's NGSO satellites, it must automatically cease transmissions at theta <= 5° (within + 5° of the GSO arc).
- (7) The stations are authorized, on a non-protected and non-harmful interference basis, to transmit to the non-geostationary-orbit space stations using the 14.0-14.5 GHz frequency band that are authorized by the Commission. The stations authorized herein must immediately terminate operations upon notification that such operation is causing harmful interference to any other radio system lawfully operating in the 14.0-14.5 GHz frequency band. The stations authorized herein cannot claim protection from harmful interference from any radio system lawfully operating in the 14.0-14.5 frequency band.
- (8) Communications between the authorized stations and Kepler space stations must be in compliance with all existing and future space station coordination agreements reached between the Canada and other administrations, including all coordination agreements reached between the Canada and the United States. In the absence of a coordination agreement, such communications must comport with applicable provisions of the ITU Radio Regulations.

## Special Conditions:

- (9) The licensee shall not operate in the band 14.0-14.2 GHz within 125 km of the NASA TDRSS facilities on: Guam(latitude 13°36'55" N, longitude 144°51'22" E); White Sands, New Mexico (latitude 32°20'59" N, longitude106°36'31" W and latitude 32°32'40" N, longitude 106°36'48" W); Blossom Point, Maryland (latitude 38° 25' 44" N.L. longitude 77° 05' 02" W.L.) unless and until it enters into an agreement with NASA that NTIA has approved. The licensee must conform its operations to the terms of any coordination agreement with NASA.
- (10) This authorization is without prejudice to any determination that the Commission may make regarding pending or future experimental satellite earth station applications.