

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

EXPERIMENTAL

(Nature of Service)

XT FX

(Class of Station)

WQ9XME

(Call Sign)

0684-EX-ST-2020

(File Number)

NAME Raytheon Technologies

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:

Raytheon Company is requesting bands of frequencies within the 2-30 MHz range to conduct a company-funded research and development program.

Station Locations

(1) Portsmouth (NEWPORT), RI - NL 41-34-23; WL 71-16-30

Frequency Information

Portsmouth (NEWPORT), RI - NL 41-34-23; WL 71-16-30

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2-4.9 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
5.1-5.9 MHz	FX	800KQ3N 10K0P0N	250 mW (ERP)	0.01 %
6.2-7.2 MHz	FX	10K0P0N	250 mW (ERP)	0.01 %

This authorization effective May 15, 2020 and
will expire 3:00 A.M. EST November 16, 2020

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Portsmouth (NEWPORT), RI - NL 41-34-23; WL 71-16-30

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
6.2-7.2 MHz	FX	1M00Q3N	250 mW (ERP)	0.01 %
7.45-9.4 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
10.1-11.6 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
12.1-13.57 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
13.87-14.9 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
15.8-17.48 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
17.9-18.9 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
19.02-19.9 MHz	FX	10K0P0N 880KQ3N	250 mW (ERP)	0.01 %
20.1-21.45 MHz	FX	1M00Q3N	250 mW (ERP)	0.01 %

Frequency Information

Portsmouth (NEWPORT), RI - NL 41-34-23; WL 71-16-30

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
20.1-21.45 MHz	FX	10K0P0N	250 mW (ERP)	0.01 %
21.85-24.9 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %
25.1-25.67 MHz	FX	570KQ3N 10K0P0N	250 mW (ERP)	0.01 %
26.1-30 MHz	FX	10K0P0N 1M00Q3N	250 mW (ERP)	0.01 %

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) Operation is not permitted in the following bands:
 - 5.9-6.2 MHz
 - 7.2-7.45 MHz
 - 9.4-9.9 MHz
 - 11.6-12.1 MHz
 - 13.57-13.87 MHz
 - 15.1MHz-15.8 MHz
 - 17.480-17.9 MHz
 - 18.9-19.02 MHz
 - 21.450-21.85 MHz
 - 25.670-26.1 MHz
- (4) Operation in 25.011-30 MHz band 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.

Special Conditions:

- (5) Provide a stop buzzer POC to the following US Coast Guard POC's:
- Stanford Beard Stanford.M.Beard@uscg.mil
 - Ronald Blackmore Ronald.Blackmore@uscg.mil
 - Jennifer Corzo Jennifer.Y.Corzo@uscg.mil
- (6) No later than 72 hours prior to testing, Raytheon Technologies must coordinate with Navy and Marine Corps Spectrum Management Office Management Office ATLANTIC(NMCSO LANT) to mitigate harmful interference to Navy operations. Raytheon Technologies must provide Stop buzzer POC name and number. Raytheon Technologies must comply with any and all restrictions that may be levied by Navy.
- * Navy and Marine Corps Spectrum Management Office management Office ATLANTIC(NMCSO LANT), nmcsolant_frequency_action@navy.mil, (757)-444-4780

Special Conditions:

(7) The following frequencies must be notched:

2576.4 kHz (+/-3kHz)
2850 – 3025 kHz
3054.4 kHz (+/-1.4kHz)
3057.4 kHz (+/-1.4kHz)
3120.4 kHz (+/-1.4kHz)
3123.4 kHz (+/-1.4kHz)
3400 – 3500 kHz
4126.4 kHz (+/-1.4kHz)
4177.5 kHz (+/-1.4kHz)
4207.5 kHz (+/-1.4kHz)
4525.4 kHz (+/-3kHz)
4572.5 kHz (+/-1.4kHz)
4576.4 kHz (+/-1.4kHz)
4650 – 4700 kHz
4731.4 kHz (+/-1.4kHz)
4734.4 kHz (+/-1.4kHz)
4821 kHz (+/-1.4kHz)
5107 kHz (+/-1.5kHz)
5108 kHz (+/-1.4kHz)
5108.5 kHz (+/-1.5kHz)
5110 kHz (+/-1.5kHz)
5215.5 kHz (+/-1.5kHz)
5217 kHz (+/-1.5kHz)
5221.5 kHz (+/-1.5kHz)
5223 kHz (+/-1.5kHz)
5224.5 kHz (+/-1.5kHz)
5264.5 kHz (+/-1.5kHz)
5266 kHz (+/-1.5kHz)
5267.5 kHz (+/-1.5kHz)
5270.5 kHz (+/-1.5kHz)
5272 kHz (+/-1.5kHz)
5418 kHz (+/-1.5kHz)
5419.5 kHz (+/-1.5kHz)
5421 kHz (+/-1.5kHz)
5450 – 5680 kHz
5681.4 kHz (+/-1.4kHz)
5694.4 kHz (+/-1.4kHz)
5697.4 kHz (+/-1.4kHz)
5700.4 kHz (+/-1.4kHz)
5885 kHz (+/-1.4kHz)
5931 kHz (+/-1.5kHz)
5934 kHz (+/-1.5kHz)
5941 kHz (+/-1.5kHz)
5942.5 kHz (+/-1.5kHz)
5943.5 kHz (+/-1.4kHz)
5944 kHz (+/-1.5kHz)
6216.4 kHz (+/-1.4kHz)
6268 kHz (+/-1.4kHz)
6312 kHz (+/-1.4kHz)
6502.4 kHz (+/-1.4kHz)
6525 – 6685 kHz

Special
6710.4 kHz (+/-1.4kHz)
6743.4 kHz (+/-1.4kHz)
6961 kHz (+/-1.5kHz)
7419.5 kHz (+/-1.4kHz)
7439 kHz (+/-1.5kHz)
7577 kHz (+/-1.5kHz)
7617 kHz (+/-1.5kHz)
7626 kHz (+/-1.5kHz)
7630.5 kHz (+/-1.4kHz)
7669.5 kHz (+/-1.4kHz)
7736 kHz (+/-1.4kHz)
7743 kHz (+/-1.4kHz)
7747 kHz (+/-1.4kHz)
7754.5 kHz (+/-1.5kHz)
7775 kHz (+/-1.4kHz)
7793 kHz (+/-1.4kHz)
7821 kHz (+/-1.4kHz)
7845 kHz (+/-1.5kHz)
7884 kHz (+/-1.5kHz)
7909 kHz (+/-1.5kHz)
8292.4 kHz (+/-1.4kHz)
8414.5 kHz (+/-1.4kHz)
8459 kHz (+/-1.5kHz)
8503.9 kHz (+/-1.5kHz)
8682 kHz (+/-1.5kHz)
8765.4 kHz (+/-1.4kHz)
8815 – 8965 kHz
8981.4 kHz (+/-1.4kHz)
8984.4 kHz (+/-1.4kHz)
9035.4 kHz (+/-1.4kHz)
9038.4 kHz (+/-1.4kHz)
9110 kHz (+/-1.5kHz)
9169 kHz (+/-1.5kHz)
9291 kHz (+/-1.5kHz)
9332 kHz (+/-1.5kHz)
10215.4kHz (+/-3kHz)
10297.5 kHz (+/-1.5kHz)
10338.5 kHz (+/-1.5kHz)
10354.5 kHz (+/-1.5kHz)
10378 kHz (+/-1.5kHz)
10675 kHz (+/-1.5kHz)
10759 kHz (+/-1.5kHz)
10774 kHz (+/-1.4kHz)
10788 kHz (+/-1.5kHz)
10810 kHz (+/-1.4kHz)
10891 kHz (+/-1.4kHz)
10918 kHz (+/-1.4kHz)
10929.5 kHz (+/-1.5kHz)
10935.5 kHz (+/-1.5kHz)
11024 kHz (+/-1.5kHz)
11045 kHz (+/-1.5kHz)
11157.5 kHz (+/-1.5kHz)
11197.4 kHz (+/-1.4kHz)

Specific
11200.4 kHz (+/-1.4kHz)
11203.4 kHz (+/-1.4kHz)
11275 – 11400 kHz
12081.5 kHz (+/-1.4kHz)
12291.4 kHz (+/-1.4kHz)
12520 kHz (+/-1.4kHz)
12577 kHz (+/-1.4kHz)
13219.4 kHz (+/-1.4kHz)
13222.4 kHz (+/-1.4kHz)
13260 – 13360 kHz
13434 kHz (+/-1.4kHz)
13545.4 kHz (+/-3kHz)
13493 kHz (+/-1.4kHz)
13496 kHz (+/-1.4kHz)
14428.5 kHz (+/-1.4kHz)
14461 kHz (+/-1.4kHz)
15640.5 kHz (+/-1.4kHz)
16027.5 kHz (+/-1.4kHz)
16421.4 kHz (+/-1.4kHz)
16695 kHz (+/-1.4kHz)
16804.5 kHz (+/-1.4kHz)
17900 – 17970 kHz
17989.4 kHz (+/-1.4kHz)
18186.5 kHz (+/-1.4kHz)
20015.4 kHz (+/-3kHz)
20137 kHz (+/-1.4kHz)
20247.5 kHz (+/-1.4kHz)
20330 kHz (+/-1.4kHz)
20843 kHz (+/-1.4kHz)
20882.5 kHz (+/-1.4kHz)
20985 kHz (+/-1.4kHz)
21924 – 22000 kHz
23074 kHz (+/-1.4kHz)
23077 kHz (+/-1.4kHz)
23091 kHz (+/-1.4kHz)
23094 kHz (+/-1.4kHz)
23840.5 kHz (+/-1.4kHz)
24228.5 kHz (+/-1.4kHz)
24793.5 kHz (+/-1.4kHz)
26582.5 kHz (+/-1.4kHz)
26600.4 kHz (+/-1.4kHz)
26640.5 kHz (+/-1.4kHz)
26790.4 kHz (+/-1.4kHz)
27490.4 kHz (+/-1.4kHz)
27590.5 kHz (+/-1.4kHz)