

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

EXPERIMENTAL

(Nature of Service)

WI2XFC

(Call Sign)

XT      FX MO

(Class of Station)

0199-EX-CM-2019

(File Number)

NAME Nokia Solutions and Networks US LLC

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) Irving (DALLAS), TX - NL 32-53-37; WL 96-57-57; MOBILE: Nokia building facility, within 2 km
- (2) Arlington Heights (COOK), IL - NL 42-08-08; WL 87-59-56; MOBILE: Nokia building facility, within 2 km
- (3) Euless (TARRANT), TX - NL 32-51-03; WL 97-04-13; MOBILE: Verizon building facility, within 2 km
- (4) South Plainfield (MIDDLESEX), NJ - NL 40-33-15; WL 74-25-47; MOBILE: Verizon building facility, within 2 km
- (5) Basking Ridge (SOMERSET), NJ - NL 40-43-31; WL 74-32-03; MOBILE: Verizon building facility, within 2 km
- (6) Waltham (MIDDLESEX), MA - NL 42-23-43; WL 71-16-18; MOBILE: Verizon building facility, within 2 km
- (7) Murray Hill (UNION), NJ - NL 40-41-02; WL 74-24-04; MOBILE: Nokia building facility, within 2 km
- (8) Framingham (MIDDLESEX), MA - NL 42-54-20; WL 71-26-30; MOBILE: 6-8 Robert Rd, within 2 km
- (9) Schaumburg (COOK), IL - NL 42-03-26; WL 88-04-29; MOBILE: US Cellular campus, within 2 km
- (10) Schaumburg (COOK), IL - NL 42-03-33; WL 88-04-39; MOBILE: US Cellular campus, within 2 km
- (11) Carrollton, TX - NL 32-56-43; WL 96-54-37; MOBILE: Verizon building facility, within 2 km
- (12) Holmdel (MONMOUTH), NJ - NL 40-23-25; WL 74-11-11; MOBILE: Nokia facility, within 2 km
- (13) Highland Park (MIDDLESEX), NJ - NL 40-29-58; WL 74-25-32; MOBILE: 406 Raritan Ave, within 2 km

This authorization effective August 09, 2019 and  
will expire 3:00 A.M. EST April 01, 2020

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



Station Locations

- (14) New Tork (NEW YORK), NY - NL 40-48-34; WL 73-57-35; MOBILE: Columbia University Facility, within 2 km
- (15) Perry (HOUSTON), GA - NL 32-29-58; WL 83-45-01; MOBILE: Customer location, within 2 km
- (16) New York (NEW YORK), NY - NL 40-49-49; WL 73-04-38; MOBILE: Customer location, within 2 km
- (17) Coppell (DALLAS), TX - NL 32-56-08; WL 96-59-01; MOBILE: Nokia Facility, within 2 km, centered around NL 32-56-08; WL 96-59-01
- (18) Naperville (DU PAGE), IL - NL 41-48-48; WL 88-07-14; MOBILE: Nokia Campus, within 2 km, centered around NL 41-48-48; WL 88-07-14

## Frequency Information

Irving (DALLAS), TX - NL 32-53-37; WL 96-57-57; MOBILE: Nokia building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Arlington Heights (COOK), IL - NL 42-08-08; WL 87-59-56; MOBILE: Nokia building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 800MW7N<br>400MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

## Frequency Information

Euless (TARRANT), TX - NL 32-51-03; WL 97-04-13; MOBILE: Verizon building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7N  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

South Plainfield (MIDDLESEX), NJ - NL 40-33-15; WL 74-25-47; MOBILE: Verizon building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Basking Ridge (SOMERSET), NJ - NL 40-43-31; WL 74-32-03; MOBILE: Verizon building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

## Frequency Information

Waltham (MIDDLESEX), MA - NL 42-23-43; WL 71-16-18; MOBILE: Verizon building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Murray Hill (UNION), NJ - NL 40-41-02; WL 74-24-04; MOBILE: Nokia building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Framingham (MIDDLESEX), MA - NL 42-54-20; WL 71-26-30; MOBILE: 6-8 Robert Rd, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

## Frequency Information

Schaumburg (COOK), IL - NL 42-03-26; WL 88-04-29; MOBILE: US Cellular campus, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Schaumburg (COOK), IL - NL 42-03-33; WL 88-04-39; MOBILE: US Cellular campus, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Carrollton, TX - NL 32-56-43; WL 96-54-37; MOBILE: Verizon building facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7N  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7N  | 47.8 W (ERP)     |                           |

## Frequency Information

Holmdel (MONMOUTH), NJ - NL 40-23-25; WL 74-11-11; MOBILE: Nokia facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 800MW7<br>400MW7W   | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Highland Park (MIDDLESEX), NJ - NL 40-29-58; WL 74-25-32; MOBILE: 406 Raritan Ave, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

New York (NEW YORK), NY - NL 40-48-34; WL 73-57-35; MOBILE: Columbia University Facility, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

## Frequency Information

Perry (HOUSTON), GA - NL 32-29-58; WL 83-45-01; MOBILE: Customer location, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7<br>800MW7W   | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

New York (NEW YORK), NY - NL 40-49-49; WL 73-04-38; MOBILE: Customer location, within 2 km

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

Coppell (DALLAS), TX - NL 32-56-08; WL 96-59-01; MOBILE: Nokia Facility, within 2 km, centered around NL 32-56-08; WL 9

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

## Frequency Information

Naperville (DU PAGE), IL - NL 41-48-48; WL 88-07-14; MOBILE: Nokia Campus, within 2 km, centered around NL 41-48-48; \

| Frequency      | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|----------------|---------------|---------------------|------------------|---------------------------|
| 27.5-28.35 GHz | FX            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |
| 27.5-28.35 GHz | MO            | 400MW7W<br>800MW7W  | 47.8 W (ERP)     |                           |

## 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) Licensee shall coordinate each location with the Fixed Microwave Service licensees in accordance with 47 CFR, Part 101.103(d) prior to commencing the first test operation.
- (4) The stop buzzer contact for this project : Glenn Steitz,  
glenn.steitz@nokia-bell-labs.com  
(973) 214-0028
- (5) Licensee must avoid pointing the transmitting antenna main beam gain within 10 degrees of any point on the geostationary orbital arc while transmitting signals in the 27.5-28.35 GHz band.
- (6) Licensee must coordinate each location with any incumbent Fixed Microwave Service licensees and any auction licensees.