Ka-Band Earth Station – Nelson Township, MI Frequency Coordination Report 28 GHz



Prepared on Behalf of ViaSat, Inc.

February 25, 2021





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1. Summary of Results

On behalf of ViaSat. Inc., Comsearch issued coordination notice under Section 25.203(c) and Section 25.136(a)(4) of the FCC's rules for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Nelson Township-MI, which will transmit at 28 GHz¹. Prior-notification emails were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on December 19, 2020.

No objections were received from any of the incumbent 28 GHz licensees.

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Nelson Township, MI was prior-coordinated by Comsearch. A notification email, datasheet and Google Earth file showing the area around the site outside which the -77.6 dBm/m2 per MHz threshold value is not exceeded for this earth station were sent to the following 28 GHz common carrier fixed microwave licensees. These licensees are authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis or local basis.

Licensee	Authorized Geographic Area
AT&T	Statewide: MI
Frontier	Nationwide

A notification email, datasheet and Google Earth file showing the area around the site outside which the -77.6 dBm/m2 per MHz threshold value is not exceeded for the Ka-Band earth station in Nelson Township, MI were also sent to the following 28 GHz local television transmission licensee. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Information Super Station, LLC	Continental US

No objections were received from the common carrier or local television transmission service incumbents.

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 $^{^{1}}$ The proposed earth station will operate in the 27.5 – 29.1 GHz & 29.5 – 30.0 GHz portion of the KaBand.



3. 28 GHz UMFUS Coordination

Two 28 GHz UMFUS licensees were identified within the coordination distance of the proposed earth station. The proposed earth station will operate on frequencies that overlap Channel L1 & L2 of the UMFUS service. The total frequency allocation for Channels L1 & L2 of the UMFUS spectrum appears below.

Channel: L1 27.500 - 27.925 GHz

L2 27.925 - 28.350 GHz

Licensee	Authorized Geographic Area	
Cellco Partnership	Market Based	
Broadband One North, Inc.	Market Based	

No objections were received from the UMFUS incumbents within coordination distance.



4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Nelson Township, MI. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

Date:					
Administrative Information Status					
Status	Job Number: 20		19COMSNR19		
Call Sign Licensee Code Licensee Name ViaSat, Inc					
Licensee Code Licensee Name ViaSat Licensee Name ViaSat, Inc Site Information		ENG	ENGINEER PROPOSAL		
Site Information NELSON TOWNSHIP, MI			AT		
Venue Name Latitude (NAD 83) 43° 17' 35.6" N Longitude (NAD 83) 85° 32' 17.6" W Climate Zone A Rain Zone 2 Ground Elevation (AMSL) 278.53 m / 913.8 ft Link Information Satellite Type Satellite Type Geostationary Mode TO - Transmit-Only Modulation Digital Satellite Arc 78° W to 91" West Longitude Azimuth Range 198.1° to 187.9° Corresponding Elevation Angles 39.5° / 39.8° Antenna Centerine (AGL) 39.5° / 39.8° Antenna Information Transmit - VES001 Manufacturer VASATINC. Model 13001XX Gain / Diameter 52.6 dBi / 2.4 m 3-0.8 / 15-dB Beamwidth 0.40° / 0.80° Max Available RF Power (dBW/4 kHz) 42.5 (dBW/MHz) -18.5 Maximum EIRP (dBW/MHz) -18.5 Interference Objectives: Long Term -141.0 dBW/4 kHz 20% Frequency Information Transmit 28.0 GHz	Licensee Name	ViaSa	aSat, Inc		
Latitude (NAD 83)		NEL	SON TOWNSHIP, MI		
Longitude (NAD 83)	TOTAL TAILING	43° 1	7' 35 6" N		
Rain Zone 2 278.53 m / 913.8 ft					
Corrowal Elevation (AMSL) 278.53 m / 913.8 ft					
Link Information Satellite Type Geostationary Mode TO - Transmit-Only Modulation Digital Satellite Arc 78° W to 91° West Longitude 169.1° to 187.9° Corresponding Elevation Angles 39.5° / 39.8° Antenna Centerline (AGL) 1.5 m / 4.9 ft Antenna Information Manufacturer VASATINC. Model 13001XX Gain / Diameter 52.6 dBi / 2.4 m 3-dB / 15-dB Beamwidth 0.40° / 0.80° Max Available RF Power (dBW/4 kHz) 42.5 (dBW/MHz) -18.5 Maximum EIRP (dBW/4 kHz) 9.5 (dBW/MHz) 33.5 Interference Objectives: Long Term -141.0 dBW/4 kHz 20% Short Term -118.0 dBW/4 kHz 0.0025% Frequency Information Emission / Frequency Range (MHz) Transmit 28.0 GHz 464MG7D / 27500.0 - 29500.0	Traini Zonio	_			
Satellite Type					
Modulation Digital 78					
Satellite Arc 78° W to 91° West Longitude 169.1° to 187.9° 39.5° / 39.8° Antenna Centerline (AGL) 1.5 m / 4.9 ft					
Azimuth Range					
Corresponding Elevation Angles 39.5° / 39.8° Antenna Centerline (AGL) 1.5 m / 4.9 ft					
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Manufacturer VIASAT INC. Model 13001XX Gain / Diameter 52.6 dBi / 2.4 m 3-dB / 15-dB Beamwidth 0.40° / 0.80° Max Available RF Power (dBW/4 kHz) 42.5 (dBW/MHz) -18.5 Maximum EIRP (dBW/4 kHz) 9.5 (dBW/MHz) 33.5 Interference Objectives: Long Term Short Term -141.0 dBW/4 kHz 20% -118.0 dBW/4 kHz 0.0025% Frequency Information Emission / Frequency Range (MHz) Transmit 28.0 GHz 464MG7D / 27500.0 - 29500.0					
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Sain / Diameter S2.6 dBi / 2.4 m O.40° / 0.80°					
3-dB / 15-dB Beamwidth					
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(dBW/MHz) 33.5 Interference Objectives: Long Term Short Term -141.0 dBW/4 kHz 20% -118.0 dBW/4 kHz 0.0025% Frequency Information Emission / Frequency Range (MHz) Transmit 28.0 GHz 464MG7D / 27500.0 - 29500.0		(dBW/MHz)	-18.5		
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Short Term -118.0 dBW/4 kHz 0.0025% Frequency Information Transmit 28.0 GHz Emission / Frequency Range (MHz) 464MG7D / 27500.0 - 29500.0					
Frequency Information Transmit 28.0 GHz Emission / Frequency Range (MHz) 464MG7D / 27500.0 - 29500.0	Interference Objectives:				
Emission / Frequency Range (MHz) 464MG7D / 27500.0 - 29500.0					
Coordination Distance 0.4 km / 0.25 mi	Emission / Frequency Range (MHz)		404MG/U / 2/300.0 - 24500.0		
0.7 KH / 0.25 HI	Coordination Distance		0.4 km / 0.25 mi		
	Coordination Distance		0.4 KH / 0.23 HI		



5. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

Contact person: Naveen Raghavan
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Company: Comsearch

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