

Ka-Band Earth Station – Frankfort, IN

Frequency Coordination Report

28 GHz



Prepared on Behalf of
ViaSat, Inc.

February 27, 2021



Table of Contents

1. Summary of Results	- 8 -
2. 28 GHz Common Carrier and LTTS Coordination	- 8 -
3. 28 GHz UMFUS Coordination	- 9 -
4. Earth Station Coordination Data	- 10 -
5. Contact Information	- 11 -

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 Frankfort-IN, 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 18, 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 Frankfort, IN 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
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 Frankfort, IN 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.

¹ The proposed earth station will operate in the 27.5 – 29.1 GHz & 29.5 – 30.0 GHz portion of the Ka-Band.

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
Aries Wireless LLC	Market Based
T-Mobile License LLC	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 Frankfort, IN. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

Date:	11/18/2020		
Job Number:	201118COMSNR13		
Administrative Information			
Status	ENGINEER PROPOSAL		
Call Sign			
Licensee Code	VIASAT		
Licensee Name	ViaSat, Inc		
Site Information			
FRANKFORT, IN			
Venue Name			
Latitude (NAD 83)	40° 13' 58.8" N		
Longitude (NAD 83)	86° 39' 21.8" W		
Climate Zone	A		
Rain Zone	2		
Ground Elevation (AMSL)	255.5 m / 838.3 ft		
Link Information			
Satellite Type	Geostationary		
Mode	TO - Transmit-Only		
Modulation	Digital		
Satellite Arc	78° W to 91° West Longitude		
Azimuth Range	166.7° to 186.7°		
Corresponding Elevation Angles	42.6° / 43.2°		
Antenna Centerline (AGL)	1.2 m / 3.9 ft		
Antenna Information			
Transmit - VES000			
Manufacturer	VIASAT INC.		
Model	13138XX		
Gain / Diameter	52.0 dBi / 1.8 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			
Transmit 28.0 GHz			
Emission / Frequency Range (MHz)	464MG7D / 27500.0 - 29500.0		
Coordination Distance	3 km / 1.86 mi		

5. Contact Information

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

Contact person:	Naveen Raghavan
Title:	Engineering Manager
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
Telephone:	703-726-5648
Email:	nraghavan@Comsearch.com
Web site:	www.comsearch.com