

Ka-Band Earth Station – Westlake, TX

Frequency Coordination Report

28 GHz



Prepared on Behalf of
O3B LIMITED

October 9, 2020



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1. Summary of Results

On behalf of O3B LIMITED, Comsearch performed a 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 temporary Ka-Band earth station in Westlake, TX, which will transmit at 28 GHz¹. Prior-notification letters 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 September 27, 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 temporary Ka-Band earth station in Westlake, TX was prior-coordinated by Comsearch. A notification letter and datasheets 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 letter and datasheets for the temporary Ka-Band earth station in Westlake, TX 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 – 28.35 GHz portion of the Ka-Band.

3. 28 GHz UMFUS Coordination

There were four 28 GHz UMFUS licensees identified within the coordination distance of the proposed temporary 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
Chickasaw Nation	Market-Based
T-Mobile	Market-Based
Verizon	Market-Based
Windstream	Market-Based

No objections were received from the UMFUS incumbents.

4. Earth Station Coordination Data

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

Job Number:		200918COMSGE03	
Administrative Information			
Status	ENGINEER PROPOSAL		
Call Sign			
Licensee Code	03BLIM		
Licensee Name	O3B Limited		
Site Information			
Venue Name	WESTLAKE, TX		
Latitude (NAD 83)	32° 58' 48.0" N		
Longitude (NAD 83)	97° 10' 12.0" W		
Climate Zone	A		
Rain Zone	2		
Ground Elevation (AMSL)	181.77 m / 596.4 ft		
Link Information			
Satellite Type	Medium Earth Orbit		
Mode	TR - Transmit-Receive		
Modulation	Digital		
Minimum Elevation Angle	24.0°		
Azimuth Range	0.0° to 360°		
Antenna Centerline (AGL)	189.89 m / 623.0 ft		
Antenna Information		Receive - FCC32	Transmit - FCC32
Manufacturer		AVL	AVL
Model		2470	2470
Gain / Diameter		51.0 dBi / 2.4 m	54.5 dBi / 2.4 m
3-dB / 15-dB Beamwidth		0.14° / 0.32°	0.23° / 0.60°
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)		-31.3 -7.3
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)		23.2 47.2
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%
	Short Term	-146.0 dBW/MHz	0.01%
			-151.0 dBW/4 kHz 20%
			-128.0 dBW/4 kHz 0.0025%
Frequency Information		Receive 18.0 GHz	Transmit 28.0 GHz
Emission / Frequency Range (MHz)		216MG7D / 17852.0 - 18068.0 216MG7D / 18372.0 - 18588.0	216MG7D / 27652.0 - 27868.0 216MG7D / 28172.0 - 28388.0
Max Great Circle Coordination Distance		125.0 km / 77.7 mi	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius		100.0 km / 62.1 mi	100.0 km / 62.1 mi

Coordination Values	WESTLAKE, TX		
Licensee Name	O3B Limited		
Latitude (NAD 83)	32° 58' 48.0" N		
Longitude (NAD 83)	97° 10' 12.0" W		
Ground Elevation (AMSL)	181.77 m / 596.4 ft		
Antenna Centerline (AGL)	189.89 m / 623.0 ft		
Antenna Model	AVL 2.4 meter		
Antenna Mode	Receive 18.0 GHz Transmit 28.0 GHz		
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz 20%
Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-31.3 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	86.21	-1.88	125.00	-1.88	100.00
5	0.00	81.37	-1.88	125.00	-1.88	100.00
10	0.00	76.53	-1.88	125.00	-1.88	100.00
15	0.00	71.70	-1.88	125.00	-1.88	100.00
20	0.00	66.88	-1.88	125.00	-1.88	100.00
25	0.00	62.08	-1.88	125.00	-1.88	100.00
30	0.00	57.29	-1.88	125.00	-1.88	100.00
35	0.00	52.53	-1.88	125.00	-1.88	100.00
40	0.00	47.80	-1.88	125.00	-1.88	100.00
45	0.00	43.12	-1.88	125.00	-1.88	100.00
50	0.00	38.50	-1.88	125.00	-1.88	100.00
55	0.00	33.97	-1.88	125.00	-1.88	100.00
60	0.00	29.56	-1.88	125.00	-1.88	100.00
65	0.00	25.36	-1.88	125.00	-1.88	100.00
70	0.00	21.48	-1.88	125.00	-1.88	100.00
75	0.00	18.13	-1.88	125.00	-1.88	100.00
80	0.00	15.64	-1.88	125.00	-1.88	100.00
85	0.00	14.47	-1.88	125.00	-1.88	100.00
90	0.00	14.94	-1.88	125.00	-1.88	100.00
95	0.00	16.91	-1.88	125.00	-1.88	100.00
100	0.00	19.94	-1.88	125.00	-1.88	100.00
105	0.00	23.63	-1.88	125.00	-1.88	100.00
110	0.00	27.71	-1.88	125.00	-1.88	100.00
115	0.00	32.04	-1.88	125.00	-1.88	100.00
120	0.00	36.52	-1.88	125.00	-1.88	100.00
125	0.00	41.10	-1.88	125.00	-1.88	100.00
130	0.00	45.76	-1.88	125.00	-1.88	100.00
135	0.00	50.47	-1.88	125.00	-1.88	100.00
140	0.00	55.22	-1.88	125.00	-1.88	100.00
145	0.00	60.00	-1.88	125.00	-1.88	100.00
150	0.00	64.80	-1.88	125.00	-1.88	100.00
155	0.00	69.61	-1.88	125.00	-1.88	100.00
160	0.00	74.44	-1.88	125.00	-1.88	100.00
165	0.00	79.27	-1.88	125.00	-1.88	100.00
170	0.00	84.11	-1.88	125.00	-1.88	100.00
175	0.00	88.95	-1.88	125.00	-1.88	100.00
180	0.00	93.79	-1.88	125.00	-1.88	100.00
185	0.00	98.63	-1.88	125.00	-1.88	100.00

Coordination Values	WESTLAKE, TX		
Licensee Name	O3B Limited		
Latitude (NAD 83)	32° 58' 48.0" N		
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Ground Elevation (AMSL)	181.77 m / 596.4 ft		
Antenna Centerline (AGL)	189.89 m / 623.0 ft		
Antenna Model	AVL 2.4 meter		
Antenna Mode	Receive 18.0 GHz Transmit 28.0 GHz		
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz 20%
Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-31.3 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	103.47	-1.88	125.00	-1.88	100.00
195	0.00	108.30	-1.88	125.00	-1.88	100.00
200	0.00	113.12	-1.88	125.00	-1.88	100.00
205	0.00	117.92	-1.88	125.00	-1.88	100.00
210	0.00	122.71	-1.88	125.00	-1.88	100.00
215	0.00	127.47	-1.88	125.00	-1.88	100.00
220	0.00	132.20	-1.88	125.00	-1.88	100.00
225	0.00	136.88	-1.88	125.00	-1.88	100.00
230	0.00	141.50	-1.88	125.00	-1.88	100.00
235	0.00	146.03	-1.88	125.00	-1.88	100.00
240	0.00	150.44	-1.88	125.00	-1.88	100.00
245	0.00	154.64	-1.88	125.00	-1.88	100.00
250	0.00	158.52	-1.88	125.00	-1.88	100.00
255	0.00	161.87	-1.88	125.00	-1.88	100.00
260	0.00	164.36	-1.88	125.00	-1.88	100.00
265	0.00	165.53	-1.88	125.00	-1.88	100.00
270	0.00	165.06	-1.88	125.00	-1.88	100.00
275	0.00	163.09	-1.88	125.00	-1.88	100.00
280	0.00	160.06	-1.88	125.00	-1.88	100.00
285	0.00	156.37	-1.88	125.00	-1.88	100.00
290	0.00	152.29	-1.88	125.00	-1.88	100.00
295	0.00	147.96	-1.88	125.00	-1.88	100.00
300	0.00	143.48	-1.88	125.00	-1.88	100.00
305	0.00	138.90	-1.88	125.00	-1.88	100.00
310	0.00	134.24	-1.88	125.00	-1.88	100.00
315	0.00	129.53	-1.88	125.00	-1.88	100.00
320	0.00	124.78	-1.88	125.00	-1.88	100.00
325	0.00	120.00	-1.88	125.00	-1.88	100.00
330	0.00	115.20	-1.88	125.00	-1.88	100.00
335	0.00	110.39	-1.88	125.00	-1.88	100.00
340	0.00	105.56	-1.88	125.00	-1.88	100.00
345	0.00	100.73	-1.88	125.00	-1.88	100.00
350	0.00	95.89	-1.88	125.00	-1.88	100.00
355	0.00	91.05	-1.88	125.00	-1.88	100.00

5. Contact Information

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

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