

Ka-Band Earth Station – Port St Lucie, FL

Frequency Coordination Report

28 GHz



Prepared on Behalf of
SES Americom

June 12, 2019



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1. Summary of Results

On behalf of SES Americom, Comsearch performed a coordination notice for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Port St Lucie, FL, 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 June 12, 2019.

No objections supported by technical case information² was received from any of the incumbent 28 GHz licensees. Our notification to the incumbents was performed under the assumption that the earth station would be operating on a secondary basis and a contact at SES Americom has been provided in case any concerns may arise in the future.

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Port St Lucie, FL was prior-coordinated by Comsearch. A notification letter and datasheets for this earth station was sent to the following 28 GHz common carrier fixed microwave licensee. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Frontier Southwest Incorporated	Continental US
BellSouth Telecommunications, LLC (AT&T)	Statewide: Florida

A notification letter and datasheets for the Ka-Band earth station in Port St Lucie, FL 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.

² T-Mobile requested information on meeting the filing requirements under rule section 25.136(a)(4) which were addressed.

3. 28 GHz UMFUS Coordination

A Notification letter was sent to the following 28 GHz UMFUS licensees. 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	Channel	Area of Operation
Cellco Partnership (Verizon)	L1, L2	County-Based
T-Mobile License LLC	L1, L2	County-Based
Wireless Distribution Services Inc.	L1, L2	County-Based
Straight Path Spectrum, LLC (Verizon)	L1, L2	County-Based

No objections were received from Cellco Partnership, Wireless Distribution Services Inc. or Straight Path Spectrum, LLC. T-Mobile License LLC objected based on a request to confirm compliance with rule section 25.136(a)(4) which was addressed by the licensee.

4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Port St Lucie, FL. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5662 <http://www.comsearch.com>

Date: 04/19/2019
Job Number:

Administrative Information

Status PROPOSAL
Call Sign
Licensee Code P3210
Licensee Name SES Americom, Inc.

Site Information

PORT ST LUCIE, FL

Venue Name
Latitude (NAD 83) 27° 16' 55.8" N
Longitude (NAD 83) 80° 28' 59.0" W
Climate Zone B
Rain Zone 1
Ground Elevation (AMSL) 7.46 m / 24.5 ft

Link Information

Satellite Type Medium Earth Orbit
Mode TO - Transmit-Only
Modulation Digital
Minimum Elevation Angle 10.0°
Azimuth Range 0.0° to 360°
Antenna Centerline (AGL) 1.83 m / 6.0 ft

Antenna Information

Transmit - FCC32

Manufacturer GetSat/MicroSat
Model 0.2 meter
Gain / Diameter 34.1 dBi / 0.2 m
3-dB / 15-dB Beamwidth 0.90° / 2.10°

Max Available RF Power (dBW/4 kHz) -24.3
(dBW/MHz) -0.3

Maximum EIRP (dBW/4 kHz) 9.8
(dBW/MHz) 33.8

Interference Objectives: Long Term -151.0 dBW/4 kHz 20%
Short Term -128.0 dBW/4 kHz 0.0025%

Frequency Information

Transmit 28.0 GHz

Emission / Frequency Range (MHz) 6M00G7D - 50M0G7D / 27500.0 - 28350.0

Max Great Circle Coordination Distance 100.0 km / 62.1 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

COMSEARCH

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Coordination Values	PORT ST LUCIE, FL
Licensee Name	SES Americom, Inc.
Latitude (NAD 83)	27° 16' 55.8" N
Longitude (NAD 83)	80° 28' 59.0" W
Ground Elevation (AMSL)	7.46 m / 24.5 ft
Antenna Centerline (AGL)	1.83 m / 6.0 ft
Antenna Model	GetSat/MicroSat 0.2 meter
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-24.3 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	94.40	-10.00	100.00
5	0.00	89.40	-10.00	100.00
10	0.00	84.40	-10.00	100.00
15	0.00	79.40	-10.00	100.00
20	0.00	74.40	-10.00	100.00
25	0.00	69.40	-10.00	100.00
30	0.00	64.40	-10.00	100.00
35	0.00	59.40	-10.00	100.00
40	0.00	54.40	-10.00	100.00
45	0.00	49.40	-10.00	100.00
50	0.00	44.40	-10.00	100.00
55	0.00	39.40	-10.00	100.00
60	0.00	34.40	-9.73	100.00
65	0.00	29.40	-8.55	100.00
70	0.00	24.40	-7.22	100.00
75	0.00	19.40	-5.70	100.00
80	0.00	14.40	-3.96	100.00
85	0.00	9.40	-1.92	100.00
90	0.00	4.40	0.51	100.00
95	0.00	0.65	3.39	100.00
100	0.00	5.61	6.52	100.00
105	0.00	10.61	8.69	100.00
110	0.00	15.61	7.83	100.00
115	0.00	20.61	4.81	100.00
120	0.00	25.60	1.91	100.00
125	0.00	30.60	-0.22	100.00
130	0.00	35.60	-1.95	100.00
135	0.00	40.60	-3.40	100.00
140	0.00	45.60	-4.62	100.00
145	0.00	50.60	-5.67	100.00
150	0.00	55.60	-6.54	100.00
155	0.00	60.60	-7.34	100.00
160	0.00	65.60	-7.94	100.00
165	0.00	70.60	-8.36	100.00
170	0.00	75.60	-8.75	100.00
175	0.00	80.60	-9.05	100.00
180	0.00	85.60	-9.16	100.00
185	0.00	90.60	-9.09	100.00

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Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-24.3 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	95.60	-8.93	100.00
195	0.00	100.60	-8.72	100.00
200	0.00	105.60	-8.34	100.00
205	0.00	110.60	-7.77	100.00
210	0.00	115.60	-7.00	100.00
215	0.00	120.60	-6.13	100.00
220	0.00	125.60	-5.13	100.00
225	0.00	130.60	-3.93	100.00
230	0.00	135.60	-2.54	100.00
235	0.00	140.60	-0.85	100.00
240	0.00	145.60	1.26	100.00
245	0.00	150.60	3.89	100.00
250	0.00	155.60	6.38	100.00
255	0.00	160.60	7.12	100.00
260	0.00	165.60	5.49	100.00
265	0.00	170.60	2.85	100.00
270	0.00	175.60	0.23	100.00
275	0.00	179.35	-2.06	100.00
280	0.00	174.39	-4.02	100.00
285	0.00	169.39	-5.72	100.00
290	0.00	164.39	-7.22	100.00
295	0.00	159.40	-8.56	100.00
300	0.00	154.40	-9.75	100.00
305	0.00	149.40	-10.00	100.00
310	0.00	144.40	-10.00	100.00
315	0.00	139.40	-10.00	100.00
320	0.00	134.40	-10.00	100.00
325	0.00	129.40	-10.00	100.00
330	0.00	124.40	-10.00	100.00
335	0.00	119.40	-10.00	100.00
340	0.00	114.40	-10.00	100.00
345	0.00	109.40	-10.00	100.00
350	0.00	104.40	-10.00	100.00
355	0.00	99.40	-10.00	100.00

5. Contact Information

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

Contact person:	Dennis Jimeno
Title:	Engineer III, Telecommunications
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
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