

COMSEARCH**Earth Station Data Sheet**

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

Date: 10/13/2020
Job Number: <PCNJobCode>

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E040368
Licensee Code DENALI
Licensee Name Denali 20020, LLC

Site Information**VERNON VLY, NJ**

Venue Name
Latitude (NAD 83) 41° 12' 10.0" N
Longitude (NAD 83) 74° 31' 39.0" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 225.0 m / 738.2 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 3° W to 143° West Longitude
Azimuth Range 102.4° to 255.4°
Corresponding Elevation Angles 5.1° / 7.4°
Antenna Centerline (AGL) 13.0 m / 42.7 ft

Antenna Information**Receive - FCC32****Transmit - FCC32**

Manufacturer	Viasat	Viasat
Model	8016A	8016A
Gain / Diameter	60.8 dBi / 11.3 m	62.3 dBi / 11.3 m
3-dB / 15-dB Beamwidth	0.50° / 1.00°	1.00° / 2.00°
Max Available RF Power (dBW/4 kHz)	-14.0	-14.0
(dBW/MHz)	10.0	10.0
Maximum EIRP (dBW/4 kHz)	48.3	48.3
(dBW/MHz)	72.3	72.3
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 11.0 GHz****Transmit 14.0 GHz**

Emission / Frequency Range (MHz)	6M00G7W - 36M0G7W / 10950.0 - 11200.0	6M00G7W - 36M0G7W / 13750.0 - 14500.0
	6M00G7W - 36M0G7W / 11450.0 - 12200.0	
Max Great Circle Coordination Distance	688.1 km / 427.5 mi	304.6 km / 189.2 mi
Precipitation Scatter Contour Radius	605.8 km / 376.4 mi	100.0 km / 62.1 mi

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Coordination Values**VERNON VLY, NJ**

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Latitude (NAD 83)	41° 12' 10.0" N				
Longitude (NAD 83)	74° 31' 39.0" W				
Ground Elevation (AMSL)	225.0 m / 738.2 ft				
Antenna Centerline (AGL)	13.0 m / 42.7 ft				
Antenna Model	Viasat 11.3m				
Antenna Mode	Receive 11.0 GHz		Transmit 14.0 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			-14.0 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	3.95	102.41	-10.00	111.14	-10.00	100.00
5	2.77	97.41	-10.00	130.15	-10.00	100.00
10	1.66	92.41	-10.00	156.96	-10.00	100.00
15	0.75	87.42	-10.00	194.55	-10.00	100.00
20	0.79	82.43	-10.00	192.71	-10.00	100.00
25	1.88	77.43	-10.00	150.21	-10.00	100.00
30	1.94	72.44	-10.00	148.38	-10.00	100.00
35	0.98	67.48	-10.00	182.89	-10.00	100.00
40	0.00	62.53	-10.00	231.37	-10.00	115.80
45	0.00	57.56	-10.00	231.37	-10.00	115.80
50	0.00	52.59	-10.00	231.37	-10.00	115.80
55	0.00	47.62	-9.95	231.61	-9.95	115.94
60	0.00	42.66	-8.75	236.91	-8.75	118.92
65	0.00	37.71	-7.41	243.07	-7.41	122.30
70	0.00	32.77	-5.89	250.45	-5.89	126.18
75	0.43	27.78	-4.09	235.94	-4.09	112.63
80	1.32	22.72	-1.91	205.81	-1.91	100.00
85	1.57	17.76	0.76	210.98	0.76	100.00
90	1.57	12.90	4.23	227.72	4.23	100.00
95	1.99	8.05	9.36	243.71	9.36	100.00
100	1.95	3.99	16.99	688.12	16.99	304.57
105	2.13	3.96	17.06	474.90	17.06	201.42
110	2.06	7.61	9.96	245.58	9.96	100.00
115	1.91	11.29	5.68	225.63	5.68	100.00
120	2.26	14.53	2.94	204.42	2.94	100.00
125	2.08	18.06	0.58	200.02	0.58	100.00
130	2.39	21.10	-1.11	185.08	-1.11	100.00
135	2.62	24.06	-2.53	172.18	-2.53	100.00
140	3.26	26.50	-3.58	148.06	-3.58	100.00
145	3.16	29.30	-4.67	145.00	-4.67	100.00
150	3.15	31.78	-5.55	141.02	-5.55	100.00
155	3.62	33.54	-6.14	130.85	-6.14	100.00
160	2.74	36.18	-6.96	143.34	-6.96	100.00
165	2.48	37.92	-7.47	146.87	-7.47	100.00
170	2.27	39.22	-7.84	150.08	-7.84	100.00
175	2.73	39.44	-7.90	139.47	-7.90	100.00
180	2.07	40.32	-8.14	153.73	-8.14	100.00
185	1.87	40.29	-8.13	159.61	-8.13	100.00

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Max Available RF Power			-14.0 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	1.08	40.38	-8.15	187.56	-8.15	100.00
195	0.00	40.25	-8.12	239.79	-8.12	120.51
200	0.00	38.67	-7.68	241.80	-7.68	121.61
205	0.00	36.71	-7.12	244.57	-7.12	123.04
210	0.00	34.42	-6.42	247.88	-6.42	124.82
215	0.00	31.86	-5.58	251.95	-5.58	126.97
220	0.00	29.05	-4.58	256.89	-4.58	129.56
225	0.75	25.48	-3.15	220.93	-3.15	100.00
230	1.55	21.73	-1.43	204.41	-1.43	100.00
235	1.33	18.60	0.26	215.13	0.26	100.00
240	0.72	15.63	2.15	249.32	2.15	114.31
245	1.21	11.78	5.22	243.94	5.22	105.52
250	2.33	7.43	10.23	240.50	10.23	100.00
255	2.93	4.49	15.70	459.21	15.70	191.50
260	5.99	4.78	15.01	205.67	15.01	100.00
265	7.74	9.57	7.47	137.34	7.47	100.00
270	8.30	14.60	2.89	113.90	2.89	100.00
275	8.33	19.59	-0.30	101.66	-0.30	100.00
280	7.95	24.57	-2.76	100.00	-2.76	100.00
285	7.95	29.57	-4.77	100.00	-4.77	100.00
290	7.89	34.57	-6.47	100.00	-6.47	100.00
295	7.56	39.57	-7.93	100.00	-7.93	100.00
300	6.88	44.57	-9.23	100.00	-9.23	100.00
305	6.71	49.57	-10.00	100.00	-10.00	100.00
310	6.80	54.57	-10.00	100.00	-10.00	100.00
315	6.53	59.57	-10.00	100.00	-10.00	100.00
320	5.80	64.58	-10.00	100.00	-10.00	100.00
325	5.20	69.58	-10.00	100.00	-10.00	100.00
330	6.33	74.57	-10.00	100.00	-10.00	100.00
335	7.18	79.57	-10.00	100.00	-10.00	100.00
340	7.24	84.57	-10.00	100.00	-10.00	100.00
345	7.29	89.57	-10.00	100.00	-10.00	100.00
350	6.30	94.57	-10.00	100.00	-10.00	100.00
355	5.13	99.56	-10.00	100.00	-10.00	100.00