

COMSEARCH**Earth Station Data Sheet**

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

Date: 10/01/2020

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E9494
Licensee Code DENALI
Licensee Name Denali 20020, LLC

Site Information VERNON VLY, NJ

Venue Name
Latitude (NAD 83) 41° 12' 10.3" N
Longitude (NAD 83) 74° 31' 37.6" 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 Analog and Digital
Satellite Arc 42° W to 139° West Longitude
Azimuth Range 135.9° to 252.5°
Corresponding Elevation Angles 32.0° / 10.4°
Antenna Centerline (AGL) 6.1 m / 20.0 ft

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

Manufacturer	TIW	TIW
Model	9 meter	9 meter
Gain / Diameter	59.1 dBi / 9.0 m	60.4 dBi / 9.0 m
3-dB / 15-dB Beamwidth	0.40° / 0.80°	0.34° / 0.68°
Max Available RF Power (dBW/4 kHz)	-14.0	-14.0
(dBW/MHz)	10.0	10.0
Maximum EIRP (dBW/4 kHz)	46.4	46.4
(dBW/MHz)	70.4	70.4
Interference Objectives:	Long Term	-155.0 dBW/MHz 20%
	Short Term	-145.0 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)	54M0G7W / 10950.0 - 11200.0	54M0G7W / 14000.0 - 14500.0
	54M0G7W / 11450.0 - 12200.0	36M0G7W / 14000.0 - 14500.0
	36M0G7W / 10950.0 - 11200.0	300KF3F / 14000.0 - 14500.0
	36M0G7W / 11450.0 - 12200.0	
	300KF3W / 10950.0 - 11200.0	
	300KF3W / 11450.0 - 12200.0	
Max Great Circle Coordination Distance	283.6 km / 176.2 mi	130.2 km / 80.9 mi
Precipitation Scatter Contour Radius	526.6 km / 327.2 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' 10.3" N

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Ground Elevation (AMSL) 225.0 m / 738.2 ft

Antenna Centerline (AGL) 6.1 m / 20.0 ft

Antenna Model TIW 9 meter

Antenna Mode Receive 11.0 GHz

Interference Objectives: Long Term -155.0 dBW/MHz 20% Transmit 14.0 GHz -151.0 dBW/4 kHz 20%

Short Term -145.0 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	3.93	107.35	-10.00	108.07	-10.00	100.00
5	2.64	112.25	-10.00	130.31	-10.00	100.00
10	1.71	117.13	-10.00	150.64	-10.00	100.00
15	0.79	116.08	-10.00	188.28	-10.00	100.00
20	0.95	112.00	-10.00	179.44	-10.00	100.00
25	1.94	108.01	-10.00	143.78	-10.00	100.00
30	2.27	103.79	-10.00	136.22	-10.00	100.00
35	1.11	99.36	-10.00	173.17	-10.00	100.00
40	0.00	95.03	-10.00	227.06	-10.00	115.80
45	0.00	90.79	-10.00	227.06	-10.00	115.80
50	0.00	86.55	-10.00	227.06	-10.00	115.80
55	0.00	82.32	-10.00	227.06	-10.00	115.80
60	0.00	78.10	-10.00	227.06	-10.00	115.80
65	0.00	73.92	-10.00	227.06	-10.00	115.80
70	0.00	69.77	-10.00	227.06	-10.00	115.80
75	0.49	65.53	-10.00	203.63	-10.00	100.00
80	1.39	61.18	-10.00	160.80	-10.00	100.00
85	1.66	57.05	-10.00	152.05	-10.00	100.00
90	1.65	53.12	-10.00	152.46	-10.00	100.00
95	2.06	49.11	-10.00	140.90	-10.00	100.00
100	2.04	45.45	-9.44	143.76	-9.44	100.00
105	2.23	41.88	-8.55	143.12	-8.55	100.00
110	2.16	38.74	-7.70	148.81	-7.70	100.00
115	2.02	36.00	-6.91	156.01	-6.91	100.00
120	2.34	33.33	-6.07	152.22	-6.07	100.00
125	2.14	31.63	-5.50	160.18	-5.50	100.00
130	2.42	30.12	-4.97	155.77	-4.97	100.00
135	2.73	29.29	-4.67	149.86	-4.67	100.00
140	3.30	28.96	-4.55	137.89	-4.55	100.00
145	3.33	29.96	-4.91	135.79	-4.91	100.00
150	3.22	31.77	-5.55	135.21	-5.55	100.00
155	3.77	33.41	-6.10	124.70	-6.10	100.00
160	2.90	36.04	-6.92	135.95	-6.92	100.00
165	2.54	37.86	-7.45	141.02	-7.45	100.00
170	2.34	39.15	-7.82	143.90	-7.82	100.00
175	2.80	39.36	-7.88	133.90	-7.88	100.00
180	2.20	40.18	-8.10	145.85	-8.10	100.00
185	1.93	40.22	-8.11	152.71	-8.11	100.00

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Antenna Mode	Receive 11.0 GHz		Transmit 14.0 GHz		
Interference Objectives: Long Term	-155.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%	
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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	1.21	40.25	-8.12	178.91	-8.12	100.00
195	0.00	40.25	-8.12	235.26	-8.12	120.51
200	0.00	38.67	-7.68	237.22	-7.68	121.61
205	0.00	36.71	-7.12	239.79	-7.12	123.04
210	0.00	34.42	-6.42	243.03	-6.42	124.82
215	0.00	31.86	-5.58	247.12	-5.58	126.97
220	0.00	29.05	-4.58	251.96	-4.58	129.56
225	0.77	25.46	-3.15	215.40	-3.15	100.00
230	1.61	21.69	-1.40	198.51	-1.40	100.00
235	1.55	18.45	0.35	205.38	0.35	100.00
240	0.94	15.47	2.26	232.81	2.26	105.12
245	1.51	11.60	5.39	230.13	5.39	100.00
250	3.01	7.78	9.73	216.92	9.73	100.00
255	4.00	6.83	11.15	283.61	11.15	130.22
260	5.50	8.90	8.26	169.08	8.26	100.00
265	8.28	12.64	4.46	116.33	4.46	100.00
270	8.93	17.52	0.91	100.00	0.91	100.00
275	9.49	22.48	-1.80	100.00	-1.80	100.00
280	10.09	27.47	-3.97	100.00	-3.97	100.00
285	8.92	32.49	-5.79	100.00	-5.79	100.00
290	8.53	37.50	-7.35	100.00	-7.35	100.00
295	8.32	42.50	-8.71	100.00	-8.71	100.00
300	8.22	47.50	-9.92	100.00	-9.92	100.00
305	7.86	52.51	-10.00	100.00	-10.00	100.00
310	7.47	57.51	-10.00	100.00	-10.00	100.00
315	6.68	62.53	-10.00	100.00	-10.00	100.00
320	5.92	67.54	-10.00	100.00	-10.00	100.00
325	6.43	72.51	-10.00	100.00	-10.00	100.00
330	7.45	77.48	-10.00	100.00	-10.00	100.00
335	7.73	82.47	-10.00	100.00	-10.00	100.00
340	8.36	87.47	-10.00	100.00	-10.00	100.00
345	7.35	92.46	-10.00	100.00	-10.00	100.00
350	6.04	97.44	-10.00	100.00	-10.00	100.00
355	4.94	102.41	-10.00	100.00	-10.00	100.00