

# COMSEARCH

## Earth Station Data Sheet

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

Date: 07/17/2013  
Job Number: <PCNJobCode>

### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign <PCNCallSign>  
Licensee Code  
Licensee Name DOME PRODUCTIONS

### Site Information BUFFALO, NY

Venue Name  
Latitude (NAD 83) 42° 46' 16.6" N  
Longitude (NAD 83) 78° 47' 17.6" W  
Climate Zone A  
Rain Zone 2  
Ground Elevation (AMSL) 232.56 m / 763.0 ft

### Link Information

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 91° W to 91° West Longitude  
Azimuth Range 197.7° to 197.7°  
Corresponding Elevation Angles 39.1° / 39.1°  
Antenna Centerline (AGL) 3.66 m / 12.0 ft

### Antenna Information

	<b>Receive - FCC32</b>	<b>Transmit - FCC32</b>
Manufacturer	General Dynamics	General Dynamics
Model	C180M	C180M
Gain / Diameter	44.7 dBi / 1.8 m	45.9 dBi / 1.8 m
3-dB / 15-dB Beamwidth	0.93° / 1.95°	0.83° / 1.74°
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)	-16.5 7.5
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)	29.4 53.4
Interference Objectives:	Long Term Short Term	-156.0 dBW/MHz 20% -146.0 dBW/MHz 0.01%
		-151.0 dBW/4 kHz 20% -128.0 dBW/4 kHz 0.0025%

### Frequency Information

	<b>Receive 12.0 GHz</b>	<b>Transmit 14.0 GHz</b>
Emission / Frequency Range (MHz)	4M00G7D - 36M0G7D / 11700.0 - 12200.0	4M00G7D - 36M0G7D / 14000.0 - 14500.0
Max Great Circle Coordination Distance	236.9 km / 147.2 mi	115.0 km / 71.5 mi
Precipitation Scatter Contour Radius	473.5 km / 294.2 mi	100.0 km / 62.1 mi

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**Coordination Values****BUFFALO, NY**

Licensee Name	DOME PRODUCTIONS		
Latitude (NAD 83)	42° 46' 16.6" N		
Longitude (NAD 83)	78° 47' 17.6" W		
Ground Elevation (AMSL)	232.56 m / 763.0 ft		
Antenna Centerline (AGL)	3.66 m / 12.0 ft		
Antenna Model	General Dynamics, 1.8 Meter		
Antenna Mode	Receive 12.0 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	-16.5 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 12.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	137.68	-10.00	227.19	-10.00	109.66
5	0.00	139.21	-10.00	227.19	-10.00	109.66
10	0.00	140.27	-10.00	227.19	-10.00	109.66
15	0.00	140.82	-10.00	227.19	-10.00	109.66
20	0.00	140.84	-10.00	227.19	-10.00	109.66
25	0.00	140.32	-10.00	227.19	-10.00	109.66
30	0.00	139.30	-10.00	227.19	-10.00	109.66
35	0.00	137.80	-10.00	227.19	-10.00	109.66
40	0.00	135.87	-10.00	227.19	-10.00	109.66
45	0.00	133.58	-10.00	227.19	-10.00	109.66
50	0.00	130.97	-10.00	227.19	-10.00	109.66
55	0.00	128.10	-10.00	227.19	-10.00	109.66
60	0.00	125.01	-10.00	227.19	-10.00	109.66
65	0.00	121.73	-10.00	227.19	-10.00	109.66
70	0.20	118.40	-10.00	227.18	-10.00	109.65
75	0.30	114.88	-10.00	217.92	-10.00	102.29
80	0.21	111.19	-10.00	225.89	-10.00	108.65
85	0.30	107.48	-10.00	217.94	-10.00	102.30
90	0.38	103.70	-10.00	210.09	-10.00	100.00
95	0.44	99.87	-10.00	204.91	-10.00	100.00
100	0.53	95.99	-10.00	201.37	-10.00	100.00
105	0.49	92.09	-10.00	203.56	-10.00	100.00
110	0.69	88.18	-10.00	193.17	-10.00	100.00
115	0.62	84.27	-10.00	196.68	-10.00	100.00
120	0.57	80.39	-10.00	199.31	-10.00	100.00
125	0.76	76.49	-10.00	189.72	-10.00	100.00
130	0.87	72.64	-10.00	183.90	-10.00	100.00
135	0.95	68.84	-10.00	179.70	-10.00	100.00
140	1.01	65.11	-10.00	176.71	-10.00	100.00
145	0.97	61.51	-10.00	178.56	-10.00	100.00
150	0.92	58.05	-10.00	181.66	-10.00	100.00
155	0.87	54.73	-10.00	184.38	-10.00	100.00
160	0.62	51.72	-10.00	196.88	-10.00	100.00
165	0.78	48.67	-10.00	188.82	-10.00	100.00
170	0.60	46.13	-9.60	199.36	-9.60	100.00
175	0.44	43.91	-9.06	209.12	-9.06	100.00
180	0.40	41.97	-8.57	214.33	-8.57	100.00
185	0.33	40.48	-8.18	222.12	-8.18	103.75

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Antenna Mode	Receive 12.0 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	-16.5 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 12.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.28	39.46	-7.90	228.13	-7.90	108.25
195	0.24	38.94	-7.76	232.94	-7.76	111.86
200	0.00	39.16	-7.82	236.95	-7.82	115.01
205	0.00	39.68	-7.96	236.29	-7.96	114.66
210	0.00	40.70	-8.24	235.02	-8.24	113.97
215	0.00	42.20	-8.63	233.24	-8.63	113.00
220	0.00	44.13	-9.12	231.07	-9.12	111.82
225	0.00	46.42	-9.67	228.64	-9.67	110.47
230	0.00	49.03	-10.00	227.19	-10.00	109.66
235	0.00	51.90	-10.00	227.19	-10.00	109.66
240	0.00	54.99	-10.00	227.19	-10.00	109.66
245	0.00	58.27	-10.00	227.19	-10.00	109.66
250	0.00	61.69	-10.00	227.19	-10.00	109.66
255	0.00	65.23	-10.00	227.19	-10.00	109.66
260	0.00	68.88	-10.00	227.19	-10.00	109.66
265	0.00	72.59	-10.00	227.19	-10.00	109.66
270	0.00	76.37	-10.00	227.19	-10.00	109.66
275	0.00	80.20	-10.00	227.19	-10.00	109.66
280	0.00	84.05	-10.00	227.19	-10.00	109.66
285	0.00	87.92	-10.00	227.19	-10.00	109.66
290	0.00	91.80	-10.00	227.19	-10.00	109.66
295	0.00	95.68	-10.00	227.19	-10.00	109.66
300	0.00	99.53	-10.00	227.19	-10.00	109.66
305	0.00	103.36	-10.00	227.19	-10.00	109.66
310	0.00	107.14	-10.00	227.19	-10.00	109.66
315	0.00	110.87	-10.00	227.19	-10.00	109.66
320	0.00	114.52	-10.00	227.19	-10.00	109.66
325	0.00	118.07	-10.00	227.19	-10.00	109.66
330	0.00	121.50	-10.00	227.19	-10.00	109.66
335	0.00	124.79	-10.00	227.19	-10.00	109.66
340	0.00	127.89	-10.00	227.19	-10.00	109.66
345	0.00	130.78	-10.00	227.19	-10.00	109.66
350	0.00	133.41	-10.00	227.19	-10.00	109.66
355	0.00	135.73	-10.00	227.19	-10.00	109.66