

1. Satellite coverage (Narrow Beam(NB) or Earth Coverage(EC))

Narrow Beam

2. Receive antenna gain

<i>Model Number</i>	<i>Antenna Size (meters)</i>	<i>Receive Antenna Gain (dBi)</i>			
		<i>C-Band @ 4 GHz</i>	<i>X-Band @ 7.25 GHz</i>	<i>Ku-Band @ 11 GHz</i>	<i>Ka-Band @ 20.2 GHz</i>
<i>3.9M OE-593\F</i>	3.9	42.0	47.2	50.8	56.1
<i>2.4 M AN/USC-60A</i>	2.4	37.8	43.0	46.6	51.9
<i>1.2 M GCS-1512eK-040</i>	1.2	31.8	37.0	40.6	45.9
<i>1.6 M GCS-1516eK-040</i>	1.6	34.3	39.5	43.1	48.4
<i>2.0 M GCS-1520eK-040</i>	2.0	36.2	41.4	45.0	50.3
<i>2.4 M GCS-1524eK-040</i>	2.4	37.8	43.0	46.6	51.9
<i>Vertex 2.4M Flyaway ANTSC-179</i>	2.4	37.8	43.0	46.6	51.9

3. Beamwidth of receive antenna (0-360 degrees)

<i>Model Number</i>	<i>Antenna Size (meters)</i>	<i>Width of Beam at 1/2 Power point (degrees)</i>			
		<i>C-Band @ 4 GHz</i>	<i>X-Band @ 7.25 GHz</i>	<i>Ku-Band @ 11 GHz</i>	<i>Ka-Band @ 20.2 GHz</i>
<i>3.9M OE-593\F</i>	3.9	1.35	0.74	0.49	0.27
<i>2.4 M AN/USC-60A</i>	2.4	2.19	1.20	0.80	0.43
<i>1.2 M GCS-1512eK-040</i>	1.2	4.38	2.41	1.59	0.87
<i>1.6 M GCS-1516eK-040</i>	1.6	3.28	1.81	1.19	0.65
<i>2.0 M GCS-1520eK-040</i>	2.0	2.63	1.44	0.95	0.52
<i>2.4 M GCS-1524eK-040</i>	2.4	2.19	1.20	0.80	0.43
<i>Vertex 2.4M Flyaway ANTSC-179</i>	2.4	2.19	1.20	0.80	0.43

Please provide the following information with respect the transceiver ground-station antenna(s):

1. Transmit antenna gain (dbi)

<i>Model Number</i>	<i>Antenna Size (meters)</i>	<i>Transmit Antenna Gain (dBi)</i>			
		<i>C-Band @ 6 GHz</i>	<i>X-Band @ 8 GHz</i>	<i>Ku-Band @ 14 GHz</i>	<i>Ka-Band @ 30 GHz</i>
<i>3.9M OE-593\F</i>	3.9	45.6	48.1	52.9	59.5
<i>2.4 M AN/USC-60A</i>	2.4	41.3	43.8	48.7	55.3
<i>1.2 M GCS-1512eK-040</i>	1.2	35.3	37.8	42.7	49.3
<i>1.6 M GCS-1516eK-040</i>	1.6	37.8	40.3	45.2	51.8
<i>2.0 M GCS-1520eK-040</i>	2.0	39.8	42.3	47.1	53.7
<i>2.4 M GCS-1524eK-040</i>	2.4	41.3	43.8	48.7	55.3
<i>Vertex 2.4M Flyaway ANTSC-179</i>	2.4	41.3	43.8	48.7	55.3

2. Beamwidth of transmit antenna at the half-power points (0-360 degrees)

Model Number	Antenna Size (meters)	Width of Beam at 1/2 Power point (degrees)			
		C-Band @ 6 GHz	X-Band @ 8 GHz	Ku-Band @ 14 GHz	Ka-Band @ 30 GHz
3.9M OE-593\F	3.9	0.90	0.67	0.38	0.18
2.4 M AN/USC-60A	2.4	1.46	1.09	0.63	0.29
1.2 M GCS-1512eK-040	1.2	2.92	2.19	1.25	0.58
1.6 M GCS-1516eK-040	1.6	2.19	1.64	0.94	0.44
2.0 M GCS-1520eK-040	2.0	1.75	1.31	0.75	0.35
2.4 M GCS-1524eK-040	2.4	1.46	1.09	0.63	0.29
Vertex 2.4M Flyaway ANTSC-179	2.4	1.46	1.09	0.63	0.29

3. Transmit antenna azimuth (0-90 degrees)

Model Number	Antenna Size (meters)	Transmit Antenna Azimuth Pointing Angle (degrees North)			
		C-Band	X-Band	Ku-Band	Ka-Band
		G-28 (89W)	WGS-3 (12W)	Amazonas 2 (61 W)	WGS-3 (12W)
3.9M OE-593\F	3.9	203.40	109.70	161.60	109.70
2.4 M AN/USC-60A	2.4				
1.2 M GCS-1512eK-040	1.2				
1.6 M GCS-1516eK-040	1.6				
2.0 M GCS-1520eK-040	2.0				
2.4 M GCS-1524eK-040	2.4				
Vertex 2.4M Flyaway ANTSC-179	2.4				

Model Number	Antenna Size (meters)	Transmit Antenna Elevation Pointing Angle, Above Local Horizon (degrees)			
		C-Band	X-Band	Ku-Band	Ka-Band
		G-28 (89W)	WGS-3 (12W)	Amazonas 2 (61 W)	WGS-3 (12W)
3.9M OE-593\F	3.9	40.10	12.80	41.10	12.80
2.4 M AN/USC-60A	2.4				
1.2 M GCS-1512eK-040	1.2				
1.6 M GCS-1516eK-040	1.6				
2.0 M GCS-1520eK-040	2.0				
2.4 M GCS-1524eK-040	2.4				
Vertex 2.4M Flyaway ANTSC-179	2.4				

4. Elevation of transmit antenna MSL (in meters):

The Antenna elevation placement is 47 meters above mean sea level (at 40° 48.533' North Lat, 73° 16.087' West Long.)

5. Elevation of transmit antenna AGL (in meters):

The antenna elevation placement is 2.0 meters above ground level.