

SkyPilot Networks Inc.

SkyConnector Patch Antenna

SPN – 500-00248-01 - 5.15 to 5.35 GHz

Antenna Patterns

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1.0 SkyConnector Azimuth Pattern

The SkyConnector unit employs a panel antenna structure. The antenna azimuth beam width is approximately 30 degrees with the mean gain across the beam width at 16.5 dBi. The data and plot of antenna pattern in the azimuth direction is given in Table 1 and Figure 1 respectively.

Azimuth [Degs]	Gain [dBi]	Azimuth [Degs]	Gain [dBi]	Azimuth [Degs]	Gain [dBi]	Azimuth [Degs]	Gain [dBi]
0	16.5	90	-7.2	180	-26.2	270	-5.9
5	16.2	95	-7.9	185	-25.9	275	-5
10	15.8	100	-9	190	-30.7	280	-4.6
15	14.4	105	-9.4	195	-41.2	285	-5.2
20	11.6	110	-11.4	200	-27.5	290	-7.2
25	9.1	115	-13	205	-23.6	295	-8.7
30	5	120	-15.8	210	-18.6	300	-13.7
35	-2.5	125	-18.8	215	-15.5	305	-16.4
40	-11.2	130	-25.2	220	-16.8	310	-10.8
45	-10.9	135	-21.1	225	-18.5	315	-9.4
50	-10.7	140	-16.6	230	-26.1	320	-12.5
55	-17.1	145	-18.2	235	-21.7	325	-6.5
60	-30.1	150	-18.6	240	-13.5	330	1.6
65	-14.2	155	-21.8	245	-12.5	335	5.9
70	-9.7	160	-25.5	250	-12.2	340	9.9
75	-7.7	165	-24.3	255	-11.6	345	13
80	-7.2	170	-21.5	260	-9	350	15.3
85	-7.2	175	-27.3	265	-6.8	355	16

Table 1.- Skyconnector Azimuth Data

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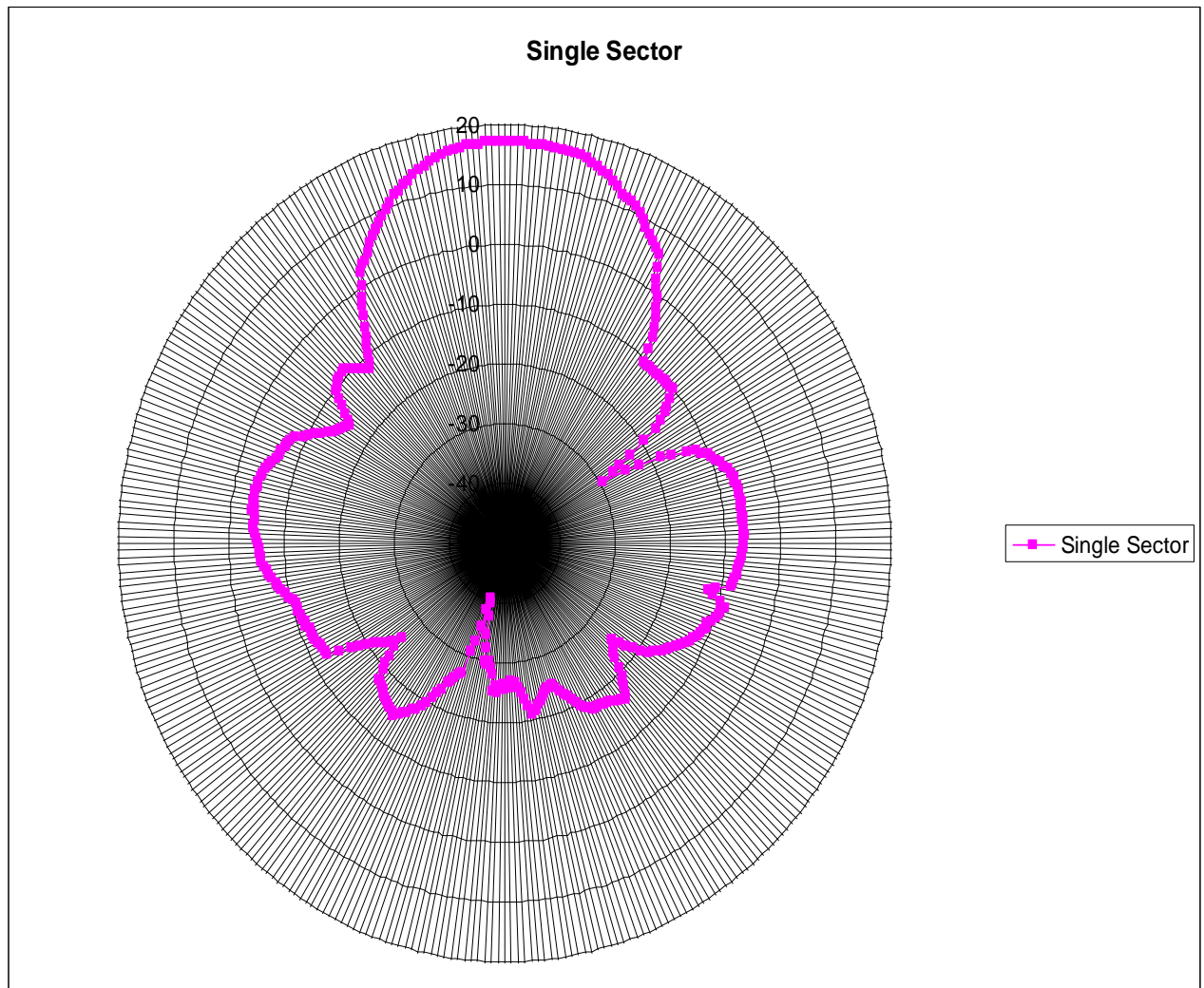


Figure 1.- Skyconnector Azimuth Pattern

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1.4 SkyConnector Elevation Pattern

The elevation beam width of the SkyConnector antenna is approximately 8 degrees total. The data and plot of antenna pattern in the azimuth direction is given in Table 2 and Figure 2 respectively. Note that in Figure 2, the horizon or 0 degrees is in the vertical direction.

Angle, deg	Gain, dBi	Angle, deg	Gain, dBi	Angle, deg	Gain, dBi	Angle, deg	Gain, dBi
0	16.5	90	-16.3	180	-26.2	270	-16.4
5	13.2	95	-16.9	185	-25.8	275	-15.8
10	1	100	-17.5	190	-25.3	280	-15.2
15	2.8	105	-18	195	-24.9	285	-14.7
20	-2.3	110	-18.6	200	-24.4	290	-14.1
25	-4.9	115	-19.2	205	-23.9	295	-13.5
30	-5.6	120	-19.7	210	-23.4	300	-13
35	-19.7	125	-20.3	215	-22.8	305	-12.4
40	-8.7	130	-20.9	220	-22.1	310	-11.8
45	-11.2	135	-21.4	225	-21.5	315	-11.3
50	-11.8	140	-22.1	230	-20.9	320	-8.4
55	-12.4	145	-22.7	235	-20.3	325	-19
60	-12.9	150	-23.3	240	-19.8	330	-6.1
65	-13.5	155	-23.9	245	-19.2	335	-4.5
70	-14.1	160	-24.4	250	-18.6	340	-2.8
75	-14.6	165	-24.9	255	-18.1	345	3
80	-15.2	170	-25.3	260	-17.5	350	0.9
85	-15.8	175	-25.8	265	-16.9	355	12.1

Table 2.- Skyconnector Elevation Data

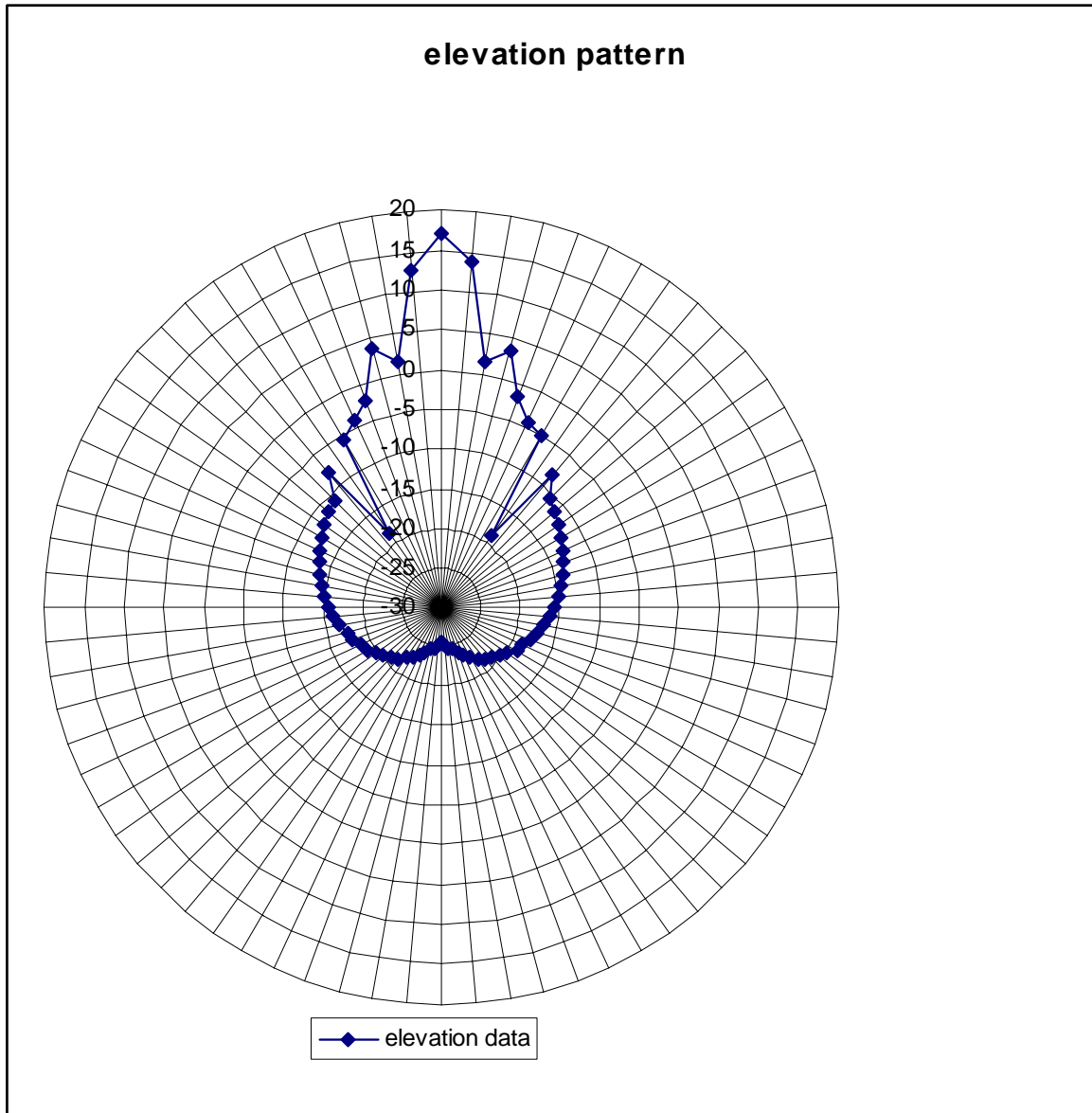


Figure 2.- Skyconnector Elevation Pattern