

CALCULATION OF ELEVATION ANGLES ABOVE 30 DEGREES FOR RADWIN 2000 E CON EC10

The list of antennas approved with **RADWIN 2000 E CON EC10** are provided in the table below.

All antennas are crosspolarized 2x2 MIMO.

The **RADWIN 2000 E CON EC10** is software configurable to Standard Power Access Point or Fixed Client

Antennas List

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
External	RADWIN	RW-9628-5872	Dish	28.0	-	6.0	Yes	5925-6425
External	RADWIN	RW-9628-5872	Dish	28.0	-	6.0	Yes	6525-6875
External	RADWIN	RW-9632-5872	Dish	32.0	-	4.0	Yes	5925-6425
External	RADWIN	RW-9632-5872	Dish	32.0	-	4.0	Yes	6525-6875

The next pages consist the tables with the calculation of the elevation angles above 30 degrees for all the above antennas according to KDB Publication 987594 D02

Method:

1. Mounting elevation angle defined as 0° relative to horizon.
2. The EIRP was calculated for each transmission chain by combining the conducted power and the highest radiation gain between 30° and 90° for each frequency and channel bandwidth.
3. The EIRP from both chains was combined to calculate the overall EIRP and compared to the 125 mW (21 dBm) limit.

Antenna RW-9628-5872

CBW (MHz)	Frequency (MHz)	Port a (H)			Port b (V)			Total EIRP (dBm)	EIRP Limit [Θ≥30°] (dBm)	Result
		Output Power (dBm)	Max Ant. G. [Θ≥30°] (dBi)	EIRP (dBm)	Output Power (dBm)	Max Ant. G. [Θ≥30°] (dBi)	EIRP (dBm)			
Band 5925-6425 MHz										
20.0	5945.0	4.31	4.39	8.70	4.70	4.20	8.90	11.81	21.00	PASS
20.0	6175.0	4.76	4.39	9.15	5.05	4.20	9.25	12.21	21.00	PASS
20.0	6415.0	4.26	-0.47	3.79	5.09	-0.94	4.15	6.98	21.00	PASS
40.0	5960.0	4.69	4.39	9.08	5.25	4.20	9.45	12.28	21.00	PASS
40.0	6175.0	4.68	4.39	9.07	5.19	4.20	9.39	12.24	21.00	PASS
40.0	6405.0	4.01	-0.47	3.54	5.14	-0.94	4.20	6.89	21.00	PASS
80.0	5985.0	4.77	4.39	9.16	5.16	4.20	9.36	12.27	21.00	PASS
80.0	6175.0	4.55	4.39	8.94	5.17	4.20	9.37	12.17	21.00	PASS
80.0	6385.0	4.49	-0.47	4.02	5.27	-0.94	4.33	7.19	21.00	PASS
160.0	6025.0	4.56	4.39	8.95	5.12	4.20	9.32	12.15	21.00	PASS
160.0	6175.0	4.74	4.39	9.13	5.22	4.20	9.42	12.29	21.00	PASS
160.0	6345.0	4.30	-0.47	3.83	5.55	-0.94	4.61	7.25	21.00	PASS
Band 6525-6875 MHz										
20.0	6535.0	5.74	-0.47	5.27	3.97	-0.94	3.03	7.30	21.00	PASS
20.0	6700.0	5.21	-0.47	4.74	4.49	-0.94	3.55	7.20	21.00	PASS
20.0	6865.0	5.22	2.51	7.73	4.62	3.35	7.97	10.86	21.00	PASS
40.0	6545.0	4.68	-0.47	4.21	4.92	-0.94	3.98	7.11	21.00	PASS
40.0	6700.0	4.46	-0.47	3.99	4.64	-0.94	3.70	6.86	21.00	PASS
40.0	6855.0	4.22	2.51	6.73	4.90	3.35	8.25	10.57	21.00	PASS
80.0	6565.0	5.08	-0.47	4.61	4.88	-0.94	3.94	7.30	21.00	PASS
80.0	6700.0	4.97	-0.47	4.50	4.95	-0.94	4.01	7.27	21.00	PASS
80.0	6835.0	4.32	2.51	6.83	4.96	3.35	8.31	10.64	21.00	PASS
160.0	6605.0	4.98	-0.47	4.51	4.79	-0.94	3.85	7.20	21.00	PASS
160.0	6700.0	4.94	-0.47	4.47	5.00	-0.94	4.06	7.28	21.00	PASS
160.0	6795.0	4.67	-0.47	4.20	5.23	-0.94	4.29	7.26	21.00	PASS

Antenna RW-9632-5872

CBW (MHz)	Frequency (MHz)	Port a (H)			Port b (V)			Total EIRP (dBm)	EIRP Limit [Θ≥30°] (dBm)	Result
		Output Power (dBm)	Max Ant. G. [Θ≥30°] (dBi)	EIRP (dBm)	Output Power (dBm)	Max Ant. G. [Θ≥30°] (dBi)	EIRP (dBm)			
Band 5925-6425 MHz										
20.0	5945.0	0.26	0.13	0.39	0.67	-0.62	0.05	3.23	21.00	PASS
20.0	6175.0	0.55	0.21	0.76	1.13	0.09	1.22	4.01	21.00	PASS
20.0	6415.0	0.36	-0.28	0.08	1.03	1.22	2.25	4.31	21.00	PASS
40.0	5960.0	0.69	0.13	0.82	1.06	-0.62	0.44	3.64	21.00	PASS
40.0	6175.0	0.48	0.21	0.69	1.27	0.09	1.36	4.05	21.00	PASS
40.0	6405.0	0.15	-0.28	-0.13	1.01	1.22	2.23	4.22	21.00	PASS
80.0	5985.0	0.57	1.36	1.93	1.26	1.81	3.07	5.55	21.00	PASS
80.0	6175.0	0.67	0.21	0.88	1.01	0.09	1.10	4.00	21.00	PASS
80.0	6385.0	0.33	-0.28	0.05	1.07	1.22	2.29	4.32	21.00	PASS
160.0	6025.0	0.11	1.36	1.47	1.09	1.81	2.90	5.25	21.00	PASS
160.0	6175.0	0.23	0.21	0.44	1.21	0.09	1.30	3.90	21.00	PASS
160.0	6345.0	0.25	0.90	1.15	1.15	1.80	2.95	5.15	21.00	PASS
Band 6525-6875 MHz										
20.0	6535.0	1.51	-2.02	-0.51	0.33	1.38	1.71	3.75	21.00	PASS
20.0	6700.0	1.22	-3.41	-2.19	0.45	2.40	2.85	4.03	21.00	PASS
20.0	6865.0	1.14	-0.77	0.37	0.66	1.68	2.34	4.48	21.00	PASS
40.0	6545.0	0.53	-2.02	-1.49	0.86	1.38	2.24	3.77	21.00	PASS
40.0	6700.0	0.33	-3.41	-3.08	0.57	2.40	2.97	3.93	21.00	PASS
40.0	6855.0	0.31	-0.77	-0.46	0.83	1.68	2.51	4.28	21.00	PASS
80.0	6565.0	1.11	-2.02	-0.91	0.67	1.38	2.05	3.83	21.00	PASS
80.0	6700.0	0.59	-3.41	-2.82	0.87	2.40	3.27	4.23	21.00	PASS
80.0	6835.0	0.41	-0.77	-0.36	0.87	1.68	2.55	4.34	21.00	PASS
160.0	6605.0	0.38	2.53	2.91	0.87	2.23	3.10	6.02	21.00	PASS
160.0	6700.0	0.78	-3.41	-2.63	0.91	2.40	3.31	4.30	21.00	PASS
160.0	6795.0	0.55	-0.77	-0.22	1.17	1.68	2.85	4.59	21.00	PASS