

Ultimate LRS maximum range estimator table

Usage example : if at 10 meters the RSSI is -42 dBm, the estimated maximum range is 10,000 meters

RSSI (dbm)	Test distance (meters)										100	500	1,000	2,000	5,000	10,000
	1	2	3	4	5	6	7	8	9	10						
-100.0	1.3	2.5	3.8	5.0	6.3	7.6	8.8	10.1	11	13	126	629	1,259	2,518	6,295	12,589
-99.0	1.4	2.8	4.2	5.7	7.1	8.5	9.9	11	13	14	141	706	1,413	2,825	7,063	14,125
-98.0	1.6	3.2	4.8	6.3	7.9	9.5	11	13	14	16	158	792	1,585	3,170	7,924	15,849
-97.0	1.8	3.6	5.3	7.1	8.9	11	12	14	16	18	178	889	1,778	3,557	8,891	17,783
-96.0	2.0	4.0	6.0	8.0	10.0	12	14	16	18	20	200	998	1,995	3,991	9,976	19,953
-95.0	2.2	4.5	6.7	9.0	11	13	16	18	20	22	224	1,119	2,239	4,477	11,194	22,387
-94.0	2.5	5.0	7.5	10.0	13	15	18	20	23	25	251	1,256	2,512	5,024	12,559	25,119
-93.0	2.8	5.6	8.5	11	14	17	20	23	25	28	282	1,409	2,818	5,637	14,092	28,184
-92.0	3.2	6.3	9.5	13	16	19	22	25	28	32	316	1,581	3,162	6,325	15,811	31,623
-91.0	3.5	7.1	11	14	18	21	25	28	32	35	355	1,774	3,548	7,096	17,741	35,481
-90.0	4.0	8.0	12	16	20	24	28	32	36	40	398	1,991	3,981	7,962	19,905	39,811
-89.0	4.5	8.9	13	18	22	27	31	36	40	45	447	2,233	4,467	8,934	22,334	44,668
-88.0	5.0	10.0	15	20	25	30	35	40	45	50	501	2,506	5,012	10,024	25,059	50,119
-87.0	5.6	11	17	22	28	34	39	45	51	56	562	2,812	5,623	11,247	28,117	56,234
-86.0	6.3	13	19	25	32	38	44	50	57	63	631	3,155	6,310	12,619	31,548	63,096
-85.0	7.1	14	21	28	35	42	50	57	64	71	708	3,540	7,079	14,159	35,397	70,795
-84.0	7.9	16	24	32	40	48	56	64	71	79	794	3,972	7,943	15,877	39,716	79,433
-83.0	8.9	18	27	36	45	53	62	71	80	89	891	4,456	8,913	17,825	44,563	89,125
-82.0	10.0	20	30	40	50	60	70	80	90	100	1,000	5,000	10,000	20,000	50,000	100,000
-81.0	11	22	34	45	56	67	79	90	101	112	1,122	5,610	11,220	22,440	56,101	112,202
-80.0	13	25	38	50	63	76	88	101	113	126	1,259	6,295	12,589	25,179	62,946	125,893
-79.0	14	28	42	57	71	85	99	113	127	141	1,413	7,063	14,125	28,251	70,627	141,254
-78.0	16	32	48	63	79	95	111	127	143	158	1,585	7,924	15,849	31,698	79,245	158,489
-77.0	18	36	53	71	89	107	124	142	160	178	1,778	8,891	17,783	35,566	89,141	177,828
-76.0	20	40	60	80	100	120	140	160	180	200	1,995	9,976	19,953	39,905	99,763	199,526
-75.0	22	45	67	90	112	134	157	179	201	224	2,239	11,194	22,387	44,774	111,936	223,872
-74.0	25	50	75	100	126	151	176	201	226	251	2,512	12,559	25,119	50,238	125,594	251,189
-73.0	28	56	85	113	141	169	197	225	254	282	2,818	14,092	28,184	56,368	140,919	281,838
-72.0	32	63	95	126	158	190	221	253	285	316	3,162	15,811	31,623	63,246	158,114	316,228
-71.0	35	71	106	142	177	213	248	284	319	355	3,548	17,741	35,481	70,963	177,407	354,813
-70.0	40	80	119	159	199	239	279	318	358	398	3,981	19,905	39,811	79,622	199,054	398,107
-69.0	45	89	134	179	223	268	313	357	402	447	4,467	22,334	44,668	89,337	223,342	446,684
-68.0	50	100	150	200	251	301	351	401	451	501	5,012	25,059	50,119	100,237	250,594	501,187
-67.0	56	112	169	225	281	337	394	450	506	562	5,623	28,117	56,234	112,468	281,171	562,342
-66.0	63	126	189	252	315	379	442	505	568	631	6,310	31,548	63,096	126,191	315,479	630,957
-65.0	71	142	212	283	354	425	496	566	637	708	7,079	35,397	70,795	141,589	353,973	707,946
-64.0	79	159	238	318	397	477	556	635	715	794	7,943	39,716	79,433	158,866	397,164	794,328
-63.0	89	178	267	357	446	535	624	713	802	891	8,913	44,563	89,125	178,250	445,625	891,251
-62.0	100	200	300	400	500	600	700	800	900	1,000	10,000	50,000	100,000	200,000	500,000	1,000,000
-61.0	112	224	337	449	561	673	785	898	1,010	1,122	11,220	56,101	112,202	224,404	561,009	1,122,018
-60.0	126	252	378	504	629	755	881	1,007	1,133	1,259	12,589	62,946	125,893	251,785	629,463	1,258,925
-59.0	141	283	424	565	706	848	989	1,130	1,271	1,413	14,125	70,627	141,254	282,508	706,269	1,412,538
-58.0	158	317	475	634	792	951	1,109	1,268	1,426	1,585	15,849	79,245	158,489	316,979	792,447	1,584,893
-57.0	178	356	533	711	889	1,067	1,245	1,423	1,600	1,778	17,783	89,141	177,828	355,656	889,140	1,778,279
-56.0	200	399	599	798	998	1,197	1,397	1,596	1,796	1,995	19,953	99,763	199,526	399,052	997,631	1,995,262
-55.0	224	448	672	895	1,119	1,343	1,567	1,791	2,015	2,239	22,387	111,936	223,872	447,744	1,119,361	2,238,721
-54.0	251	502	754	1,005	1,256	1,507	1,758	2,010	2,261	2,512	25,119	125,594	251,189	502,377	1,255,943	2,511,886
-53.0	282	564	846	1,127	1,409	1,691	1,973	2,255	2,537	2,818	28,184	140,919	281,838	563,677	1,409,141	2,818,383
-52.0	316	632	949	1,265	1,581	1,897	2,214	2,530	2,846	3,162	31,623	158,114	316,228	632,456	1,581,139	3,162,278
-51.0	355	710	1,064	1,419	1,774	2,129	2,484	2,839	3,193	3,548	35,481	177,407	354,813	709,627	1,774,067	3,548,134
-50.0	398	796	1,194	1,592	1,991	2,389	2,787	3,185	3,583	3,981	39,811	199,054	398,107	796,214	1,990,536	3,981,072
-49.0	447	893	1,340	1,787	2,233	2,680	3,127	3,573	4,020	4,467	44,668	223,342	446,684	893,367	2,233,418	4,466,836
-48.0	501	1,002	1,504	2,005	2,506	3,007	3,508	4,009	4,511	5,012	50,119	250,594	501,187	1,002,374	2,505,936	5,011,872
-47.0	562	1,125	1,687	2,249	2,812	3,374	3,936	4,499	5,061	5,623	56,234	281,171	562,342	1,124,684	2,811,707	5,623,413
-46.0	631	1,262	1,893	2,524	3,155	3,786	4,417	5,048	5,679	6,310	63,096	315,479	630,957	1,261,915	3,154,787	6,309,573
-45.0	708	1,416	2,124	2,832	3,540	4,248	4,956	5,664	6,372	7,079	70,795	353,973	707,946	1,415,892	3,539,729	7,079,458
-44.0	794	1,589	2,383	3,177	3,972	4,766	5,560	6,355	7,149	7,943	79,433	397,164	794,328	1,588,656	3,971,641	7,943,282
-43.0	891	1,783	2,674	3,565	4,456	5,347	6,239	7,130	8,021	8,913	89,125	445,625	891,251	1,782,502	4,456,251	8,912,502
-42.0	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	100,000	500,000	1,000,000	2,000,000	5,000,000	10,000,000
-41.0	1,122	2,244	3,366	4,488	5,610	6,732	7,854	8,976	10,098	11,220	112,202	561,009	1,122,018	2,244,037	5,610,092	11,220,185
-40.0	1,259	2,518	3,777	5,036	6,295	7,554	8,812	10,071	11,330	12,589	125,893	629,463	1,258,925	2,517,851	6,294,627	12,589,254
-39.0	1,413	2,825	4,238	5,650	7,063	8,475	9,888	11,300	12,713	14,125	141,254	706,269	1,412,538	2,825,075	7,062,688	14,125,375
-38.0	1,585	3,170	4,755	6,340	7,924	9,509	11,094	12,679	14,264	15,849	158,489	792,447	1,584,893	3,169,786	7,924,466	15,849,383
-37.0	1,778	3,557	5,335	7,113	8,891	10,670	12,448	14,226	16,005	17,783	177,828	889,140	1,778,279	3,556,559	8,891,397	17,782,794
-36.0	1,995	3,991	5,986	7,981	9,976	11,972	13,967	15,962	17,957	19,953	199,526	997,631	1,995,262	3,990,525	9,976,312	19,952,623
-35.0	2,239	4,477	6,716	8,955	11,194	13,432	15,671	17,910	20,148	22,387	223,872	1,119,361	2,238,721	4,477,442	11,193,606	22,387,211
-34.0	2,512	5,024	7,536	10,048	12,559	15,071	17,583	20,095	22,607	25,119	251,189	1,255,943	2,511,886	5,023,773	12,559,543	25,118,864
-33.0	2,818	5,637	8,455	11,274	14,092	16,910	19,729	22,547	25,365	28,184	281,838	1,409,141	2,818,383	5,636,766	14,091,915	28,183,829
-32.0	3,162	6,325	9,487	12,649	15,811	18,974	22,136	25,298	28,460	31,623	316,228	1,581,139	3,162,278	6,324,555	15,811,388	31,622,777
-31.0	3,548	7,096	10,644	14,193	17,741	21,289	24,837	28,385	31,933	35,481	354,813	1,774,067	3,548,134	7,096,268	17,740,669	35,481,339
-30.0	3,981	7,962	11,943	15,924	19,905	23,886	27,868	31,850	35,830	39,811	398,107	1,990,536	3,981,072	7,962,143	19,905,359	39,810,717