

## A.4 MAXIMUM PEAK OUTPUT POWER

Test Date	2022/07/01~08	Temp./Hum.	23~26°C/52~58%
Cable Loss	0.5dB	Tested By	Kuper Hsu
Test Voltage	AC 120V 60Hz (Via AC Adapter)		

### A.4.1 Peak Output Power

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Max. Peak Output Power		Antenna Gain (dBi)		Output Power (E.I.R.P.) <sup>Note 2</sup>		Limit
		AUX	Main	(dBm)	(W)	AUX	Main	(dBm)	(W)	
802.11b	2412	23.36	23.42	23.42	0.220	3.10	1.90	26.46	0.443	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2442	23.38	23.43	<b>23.43</b>	<b>0.220</b>	4.40	2.20	<b>27.78</b>	<b>0.600</b>	
	2462	23.35	23.40	23.40	0.219	4.40	2.20	27.75	0.596	
	2467	22.81	22.61	22.81	0.191	4.50	3.20	27.31	0.538	
	2472	20.97	20.02	20.97	0.125	4.50	3.20	25.47	0.352	

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Max. Peak Output Power		Antenna Gain (dBi)		Output Power (E.I.R.P.) <sup>Note 2</sup>		Limit
		AUX	Main	(dBm)	(W)	AUX	Main	(dBm)	(W)	
802.11g	2412	21.42	22.19	22.19	0.166	3.10	1.90	24.52	0.283	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2417	23.25	23.43	23.43	0.220	4.80	2.30	28.05	0.638	
	2442	23.78	24.06	<b>24.06</b>	<b>0.255</b>	4.40	2.20	<b>28.18</b>	0.658	
	2457	23.03	23.32	23.32	0.215	4.40	2.20	27.43	0.553	
	2462	21.24	21.65	21.65	0.146	4.40	2.20	25.64	0.366	
	2467	19.45	19.31	19.45	0.088	4.50	3.20	23.95	0.248	
	2472	16.96	16.75	16.96	0.050	4.50	3.20	21.46	0.140	

Note: 1. The results have been included cable loss.

2. E.I.R.P.= The Max. of Peak Output Power (AUX or Main)(dBm)+ Antenna Gain (dBi).

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Total Peak Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main	(dBm)	(W)		(dBm)	(W)	
802.11n-HT20	2412	20.08	20.19	23.15	0.207	2.54	25.69	0.371	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2417	21.38	21.47	24.44	0.278	3.73	28.17	0.656	
	2422	22.65	22.68	25.68	0.370	3.73	29.41	0.873	
	2442	23.80	23.91	<b>26.87</b>	<b>0.486</b>	3.44	<b>30.31</b>	<b>1.074</b>	
	2457	22.67	22.89	25.79	0.379	3.44	29.23	0.838	
	2462	19.49	19.56	22.54	0.179	3.44	25.98	0.396	
	2467	15.71	15.47	18.60	0.072	3.90	22.50	0.178	
2472	13.53	13.45	16.50	0.045	3.90	20.40	0.110		

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Total Peak Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main	(dBm)	(W)		(dBm)	(W)	
802.11n-HT40	2422	20.56	20.83	23.71	0.235	3.73	27.44	0.555	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2442	21.23	21.56	<b>24.41</b>	<b>0.276</b>	3.44	<b>27.85</b>	<b>0.610</b>	
	2452	20.18	20.33	23.27	0.212	3.44	26.71	0.469	
	2457	17.51	17.65	20.59	0.115	3.44	24.03	0.253	
	2462	14.79	14.82	17.82	0.061	3.44	21.26	0.134	

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Total Peak Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main	(dBm)	(W)		(dBm)	(W)	
802.11ax-HE20	2412	20.43	20.47	23.46	0.222	2.54	26.00	0.398	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2417	21.62	21.80	24.72	0.296	3.73	28.45	0.700	
	2422	22.85	22.83	25.85	0.385	3.73	29.58	0.908	
	2442	23.84	24.05	<b>26.96</b>	<b>0.497</b>	3.44	<b>30.40</b>	<b>1.096</b>	
	2457	22.84	23.14	26.00	0.398	3.44	29.44	0.879	
	2462	19.94	19.77	22.87	0.194	3.44	26.31	0.428	
	2467	16.01	15.84	18.94	0.078	3.90	22.84	0.192	
2472	13.58	13.76	16.68	0.047	3.90	20.58	0.114		

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Total Peak Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main	(dBm)	(W)		(dBm)	(W)	
802.11ax-HE40	2422	20.86	20.68	23.78	0.239	3.73	27.51	0.564	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2442	21.28	21.55	<b>24.43</b>	<b>0.277</b>	3.44	<b>27.87</b>	<b>0.612</b>	
	2452	19.84	20.27	23.07	0.203	3.44	26.51	0.448	
	2457	20.14	20.53	23.35	0.216	3.44	26.79	0.478	
	2462	14.77	14.89	17.84	0.061	3.44	21.28	0.134	

Note: 1. The results have been included cable loss.

2. According to KDB 662911 D01 d) ii), transmit signals are completely uncorrelated, then

$$\text{Directional gain} = 10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N_{\text{ANT}}] \text{ dBi}$$

The MIMO is uncorrelated and supported SDM(Spatial Division Multiplexing) mode only. This radio device doesn't support beamforming and Cyclic Delay Diversity (CDD).

3. E.I.R.P.= The Total Peak Output Power (dBm)+ Directional Gain (dBi).

4. According to KDB 662911 D01 E)1), Total Ave power = sum to individual output power + duty cycle factor (dB)

Mode	Centre Frequency (MHz)	RU Configuration	Peak Output Power (dBm)		Total Peak Output Power <sup>Note 4</sup>		Directional Gain (dBi) <sup>Note 2</sup>	Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
			AUX	Main	(dBm)	(W)		(dBm)	(W)	
802.11ax-HE20	2412	26/0	22.43	22.54	25.50	0.355	2.54	28.04	0.637	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
		52/37	22.62	22.63	<b>25.64</b>	<b>0.366</b>	2.54	<b>28.18</b>	<b>0.658</b>	
		106/53	22.36	22.25	25.32	0.340	2.54	27.86	0.611	
	2472	26/8	19.26	19.19	22.24	0.167	3.90	26.14	0.411	
		52/40	19.62	19.46	<b>22.55</b>	<b>0.180</b>	3.90	<b>26.45</b>	<b>0.442</b>	
		106/54	19.58	19.45	22.53	0.179	3.90	26.43	0.440	

Mode	Centre Frequency (MHz)	RU Configuration	Peak Output Power (dBm)		Total Peak Output Power <sup>Note 4</sup>		Directional Gain (dBi) <sup>Note 2</sup>	Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
			AUX	Main	(dBm)	(W)		(dBm)	(W)	
802.11ax-HE40	2422	242/61	20.02	20.33	<b>23.19</b>	<b>0.208</b>	3.73	<b>26.92</b>	<b>0.492</b>	<30dBm (1W) (Maximum Peak Output Power)
	2462	242/62	19.95	19.64	<b>22.81</b>	<b>0.191</b>	3.44	<b>26.25</b>	<b>0.422</b>	<36dBm (4W) (E.I.R.P)

Note: 1. The results have been included cable loss.

2. According to KDB 662911 D01 d) ii), transmit signals are completely uncorrelated, then

$$\text{Directional gain} = 10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N_{\text{ANT}}] \text{ dBi}$$

$$\text{Directional gain} = 10 \log[(10^{5.3/10} + 10^{3.4/10})/2] = 4.45\text{dBi}$$

The MIMO is uncorrelated and supported SDM(Spatial Division Multiplexing) mode only. This radio device doesn't support beamforming and Cyclic Delay Diversity (CDD).

3. E.I.R.P.= The Total Peak Output Power (dBm)+ Directional Gain (dBi).

4. According to KDB 662911 D01 E)1), Total Ave power = sum to individual output power + duty cycle factor (dB)

Mode	Centre Frequency (MHz)	Peak Output Power (dBm)		Max. Peak Output Power		Antenna Gain (dBi)		Output Power (E.I.R.P.) <sup>Note 2</sup>		Limit
		AUX	Main	(dBm)	(W)	AUX	Main	(dBm)	(W)	
BLE (1M)	2402	5.40	---	5.40	0.0035	1.90	---	7.30	0.0054	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2440	5.74	---	5.74	0.0037	2.20	---	7.94	0.0062	
	2480	5.75	---	5.75	0.0038	3.20	---	8.95	0.0079	
BLE (2M)	2402	5.41	---	5.41	0.0035	1.90	---	7.31	0.0054	
	2440	5.76	---	5.76	0.0038	2.20	---	7.96	0.0063	
	2480	5.79	---	<b>5.79</b>	<b>0.0038</b>	<b>3.20</b>	---	<b>8.99</b>	<b>0.0079</b>	
BLE (PHY Coded S2)	2402	5.39	---	5.39	0.0035	1.90	---	7.29	0.0054	
	2440	5.73	---	5.73	0.0037	2.20	---	7.93	0.0062	
	2480	5.75	---	5.75	0.0038	3.20	---	8.95	0.0079	
BLE (PHY Coded S8)	2402	5.39	---	5.39	0.0035	1.90	---	7.29	0.0054	
	2440	5.72	---	5.72	0.0037	2.20	---	7.92	0.0062	
	2480	5.73	---	5.73	0.0037	3.20	---	8.93	0.0078	

Note: 1. The results have been included cable loss.

2. E.I.R.P.= The Max. of Peak Output Power (AUX)(dBm)+ Antenna Gain (dBi).

**A.4.2 Average Output Power (Reporting only)**

Mode	Centre Frequency (MHz)	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 3</sup>		Antenna Gain (dBi)		Average Output Power (E.I.R.P.) <sup>Note 2</sup>		Limit
		AUX	Main		(dBm)	(W)	AUX	Main	(dBm)	(W)	
802.11b	2412	19.98	19.89	N/A	19.98	0.100	4.40	2.20	23.08	0.203	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2442	20.02	19.88		<b>20.02</b>	<b>0.100</b>	4.40	2.20	<b>24.42</b>	<b>0.277</b>	
	2462	19.92	19.88		19.92	0.098	4.50	3.20	24.32	0.270	
	2467	19.08	18.82		19.08	0.081	4.50	3.20	23.58	0.228	
	2472	16.72	15.66		16.72	0.047	3.10	1.90	21.22	0.132	

Mode	Centre Frequency (MHz)	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 3</sup>		Antenna Gain (dBi)		Average Output Power (E.I.R.P.) <sup>Note 2</sup>		Limit
		AUX	Main		(dBm)	(W)	AUX	Main	(dBm)	(W)	
802.11b	2412	16.61	17.17	N/A	17.17	0.052	3.10	1.90	19.71	0.094	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2417	18.48	18.71		18.71	0.074	4.80	2.30	23.28	0.213	
	2442	19.36	19.52		<b>19.52</b>	<b>0.090</b>	4.40	2.20	<b>23.76</b>	<b>0.238</b>	
	2457	18.26	18.53		18.53	0.071	4.40	2.20	22.66	0.185	
	2462	16.44	16.65		16.65	0.046	4.40	2.20	20.84	0.121	
	2467	14.35	14.40		14.40	0.028	4.50	3.20	18.85	0.077	
	2472	11.41	11.26		11.41	0.014	4.50	3.20	15.91	0.039	

Note: 1. The results have been included cable loss.

2. E.I.R.P.= Max Average Output Power (AUX or Main)(dBm)+ Antenna Gain (dBi).

3. Max Average Output Power (dBm) = Max of each average output power (dBm)+ Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode	Centre Frequency (MHz)	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Average Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main		(dBm)	(W)		(dBm)	(W)	
802.11n-HT20	2412	15.09	15.22	N/A	18.17	0.066	2.54	20.71	0.118	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2417	16.41	16.57		19.50	0.089	3.73	23.23	0.210	
	2422	17.81	17.67		20.75	0.119	3.73	24.48	0.281	
	2442	19.29	19.46		<b>22.39</b>	<b>0.173</b>	<b>3.44</b>	<b>25.83</b>	<b>0.383</b>	
	2457	17.96	17.98		20.98	0.125	3.44	24.42	0.277	
	2462	14.62	14.64		17.64	0.058	3.44	21.08	0.128	
	2467	10.63	10.53		13.59	0.023	3.90	17.49	0.056	
	2472	7.65	7.69		10.68	0.012	3.90	14.58	0.029	

Mode	Centre Frequency (MHz)	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Average Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main		(dBm)	(W)		(dBm)	(W)	
802.11n-HT40	2422	14.22	14.35	N/A	17.30	0.054	3.73	21.03	0.127	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2442	14.87	15.13		<b>18.01</b>	<b>0.063</b>	<b>3.44</b>	<b>21.45</b>	<b>0.140</b>	
	2452	13.86	14.18		17.03	0.050	3.44	20.47	0.111	
	2457	11.20	11.13		14.18	0.026	3.44	17.62	0.058	
	2462	8.04	8.21		11.14	0.013	3.44	14.58	0.029	

Mode	Centre Frequency (MHz)	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Average Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main		(dBm)	(W)		(dBm)	(W)	
802.11ax-HE20	2412	15.32	15.42	N/A	18.38	0.069	2.54	20.92	0.124	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2417	16.70	16.78		19.75	0.094	3.73	23.48	0.223	
	2422	17.85	17.82		20.85	0.122	3.73	24.58	0.287	
	2442	19.34	19.57		<b>22.47</b>	<b>0.177</b>	<b>3.44</b>	<b>25.91</b>	<b>0.390</b>	
	2457	18.10	18.15		21.14	0.130	3.44	24.58	0.287	
	2462	14.76	14.86		17.82	0.061	3.44	21.26	0.134	
	2467	10.84	10.60		13.73	0.024	3.90	17.63	0.058	
	2472	7.53	7.64		10.60	0.011	3.90	14.50	0.028	

Mode	Centre Frequency (MHz)	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Average Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
		AUX	Main		(dBm)	(W)		(dBm)	(W)	
802.11ax-HE40	2422	14.04	14.28	N/A	17.17	0.052	3.73	20.90	0.123	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
	2442	14.68	14.94		<b>17.82</b>	<b>0.061</b>	<b>3.44</b>	<b>21.26</b>	<b>0.134</b>	
	2452	13.64	13.99		16.83	0.048	3.44	20.27	0.106	
	2457	13.65	14.00		16.84	0.048	3.44	20.28	0.107	
	2462	7.97	8.11		11.05	0.013	3.44	14.49	0.028	

Note: 1. The results have been included cable loss.

2. According to KDB 662911 D01 d) ii), transmit signals are completely uncorrelated, then

$$\text{Directional gain} = 10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N_{\text{ANT}}] \text{ dBi}$$

$$\text{Directional gain} = 10 \log[(10^{5.3/10} + 10^{3.4/10})/2] = 4.45 \text{ dBi}$$

The MIMO is uncorrelated and supported SDM(Spatial Division Multiplexing) mode only. This radio device doesn't support beamforming and Cyclic Delay Diversity (CDD).

3 E.I.R.P.= The Total Average Power (dBm)+ Directional gain (dBi).

4. According to KDB 662911 D01 E)1), Total Ave power = sum to individual output power + duty cycle factor (dB), when duty cycle is less than 98%.

Mode	Centre Frequency (MHz)	RU Configuration	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Average Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
			AUX	Main		(dBm)	(W)		(dBm)	(W)	
802.11ax-HE20	2412	26/0	17.40	17.46	N/A	20.44	0.111	2.54	22.98	0.199	<30dBm (1W) (Maximum Peak Output Power) <36dBm (4W) (E.I.R.P)
		52/37	18.06	18.13		<b>21.11</b>	<b>0.129</b>	2.54	23.65	0.232	
		106/53	17.88	17.94		20.92	0.124	2.54	24.82	0.303	
	2472	26/8	5.20	5.35		8.29	0.007	3.90	12.19	0.017	
		52/40	6.17	6.26		9.23	0.008	3.90	13.13	0.021	
		106/54	6.35	6.46		<b>9.42</b>	<b>0.009</b>	3.90	13.32	0.021	

Mode	Centre Frequency (MHz)	RU Configuration	Average Output Power (dBm)		Duty Cycle Factor (dB) 10log(1/X)	Max. Average Output Power <sup>Note 4</sup>		Directional Gain (dBi) Note 2	Average Output Power (E.I.R.P.) <sup>Note 3</sup>		Limit
			AUX	Main		(dBm)	(W)		(dBm)	(W)	
802.11ax-HE40	2422	242/61	15.01	15.19	N/A	<b>18.11</b>	<b>0.065</b>	<b>3.73</b>	<b>21.84</b>	<b>0.153</b>	<30dBm (1W) (Maximum Peak Output Power)
	2462	242/62	7.75	7.86		<b>10.82</b>	<b>0.012</b>	<b>3.44</b>	<b>14.26</b>	<b>0.027</b>	<36dBm (4W) (E.I.R.P)

Note: 1. The results have been included cable loss.

2. According to KDB 662911 D01 d) ii), transmit signals are completely uncorrelated, then

$$\text{Directional gain} = 10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N_{\text{ANT}}] \text{ dBi}$$

$$\text{Directional gain} = 10 \log[(10^{5.3/10} + 10^{3.4/10})/2] = 4.45 \text{ dBi}$$

The MIMO is uncorrelated and supported SDM(Spatial Division Multiplexing) mode only. This radio device doesn't support beamforming and Cyclic Delay Diversity (CDD).

3 E.I.R.P.= The Total Average Power (dBm)+ Directional gain (dBi.)

4. According to KDB 662911 D01 E)1), Total Ave power = sum to individual output power + duty cycle factor (dB), when duty cycle is less than 98%.

## A.4.3 Measurement Plots



