

FCC ID: 2AEUPBHABV002, Base Station VZ, Communications Hub
MPE limits for FCC, 1.1310

Mode	Frequency MHz	Duty Cycle %	Power dBm	Antenna		EIRP ¹ dBm	EIRP mW	Distance D cm	PD ² mW/m ²	PD Limit mW/cm ²	Margin dB	2.1091 EIRP		PD/PD Limit	
				Gain dBi	EIRP ¹ dBm							Limit mW	Margin dB		
Z-Wave ^{7,13}	908.4	100				-1.30	0.74131	20	0.00015	0.606	36.1			0.00024	
TI ⁸	902.2	100	13.8	0.56		14.36	27.290	20	0.00543	0.601	20.4			0.00903	
BLE ⁹	2402	100	8.11	3.96		12.07	16.106	20	0.00320	1.0	24.9			0.00320	
Zigbee ¹⁰	2405	100	19.20	4.4		23.6	229.09	20	0.04558	1.0	13.4			0.04558	
Wifi 2.4G ¹¹	2412	100	16.7	3.96		20.7	116.41	20	0.02316	1.0	16.4			0.02316	
Wifi 5G ¹²	5180	100	15.3	2.35		17.7	58.210	20	0.01158	1.0	19.4			0.01158	
LTE BAND 2 ^{3,4}	1850	100	24.0	3.6		27.6	575	20	0.114	1.00	9.41	4910	9.31	0.11448	
LTE BAND 4 ^{3,4}	1710	100	23.0	3.8		26.8	479	20	0.095	1.00	10.21	4910	10.11	0.09522	
LTE BAND 5 ^{3,4}	824	100	24.0	1.7		25.7	372	20	0.074	0.55	8.71	2455	8.20	0.13455	
LTE BAND 12 ^{3,4}	699	100	24.0	2.8		26.8	479	20	0.095	0.47	6.90	2455	7.10	0.20434	
LTE BAND 13 ^{3,4}	777	100	24.0	2.8		26.8	479	20	0.095	0.52	7.36	2455	7.10	0.18382	
LTE BAND 26 ^{3,4}	814	100	24.0	1.7		25.7	372	20	0.074	0.54	8.66	2455	8.20	0.13621	
GSM850 1 Txslot ^{3,5}	824	12.5	32.31	1.7		24.98	315	20	0.063	0.55	9.43	2455	8.92	0.11397	
GSM850 2 Txslot ^{3,5}	824	25	32.11	1.7		27.79	601	20	0.120	0.55	6.62	2455	6.11	0.21769	
GSM850 3 Txslot ^{3,5}	824	37.5	31.31	1.7		28.75	750	20	0.149	0.55	5.66	2455	5.15	0.27160	
GSM850 4 Txslot ^{3,5}	824	50	30.28	1.7		28.97	789	20	0.157	0.55	5.44	2455	4.93	0.28567	
GSM1850 1 Txslot ^{3,6}	1850	12.5	29.76	3.6		24.33	271	20	0.054	1.00	12.68	4910	12.58	0.05391	
GSM1850 2 Txslot ^{3,6}	1850	25	29.65	3.6		27.23	528	20	0.105	1.00	9.78	4910	9.68	0.10512	
GSM1850 3 Txslot ^{3,6}	1850	37.5	29.51	3.6		28.85	767	20	0.153	1.00	8.16	4910	8.06	0.15267	
GSM1850 4 Txslot ^{3,6}	1850	50	29.42	3.6		30.01	1002	20	0.199	1.00	7.00	4910	6.90	0.19939	
FCC Co-Location =		0.00024	+	0.00903	+	0.04558	+	0.02316	+	0.28567	=	0.36	=	0.36	<1

¹EIRP = (Power dBm + Antenna Gain dBi) + 10 x Log (Duty Cycle % / 100)

²PD = EIRP / (4πx²D²)

³FCC ID: XMR201707BG96

⁴TA Technology Report No. R1706-0199MPE

⁵TA Technology Report No. RXA1706-0199RF01R1

⁶TA Technology Report No. RXA1706-0199RF02R1

⁷Z-Wave Wireless Test Report – 387256-7TRFWL

⁸TI Wireless Test Report – 387256-8TRFWL

⁹BLE Wireless Test Report – 387256-1TRFWL

¹⁰Zigbee Wireless Test Report – 387256-6TRFWL

¹¹2.4GHz wi-fi Wireless Test Report – 387256-10TRFWL

¹²5GHz Wireless Test Report – 387256-1R2TRFWL

¹³ANSI C63.10-2013, ANSI C63.10-2013 (39), for d = 3 m, EIRP[dBm] = E[dB V/m] - 95.2 = 93.9-95.2 = -1.3 dBm