

Manufacturer: Eurotech S.p.A.

Name: Oscar Frau

Product: BTAIR 20-31

Title: Project Handler

FCC ID: UKM-BTA2031

Signature:



MPE limits (§1.1310)

Mode	Frequency MHz	Duty Cycle %	Antenna			EIRP ¹ dBm	EIRP mW	Distance cm	PD ² mW/cm ²	PD Limit ³ mW/cm ²	Margin dB	2.1091 EIRP	2.1091 EIRP	Worst PD/PD values to be considered
			Power dBm	Gain ⁶ dBi	EIRP ¹ dBm							Limit mW	Margin dB	
BT ⁴	2412,0	100	7,00	3,5	10,50	11,2	20	0,002	1,000	26,51	1260	20,50	0,00223	0,20832
WiFi ⁴	2437,0	100	26,70	3,5	30,20	1047,1	20	0,208	1,000	6,81	1260	0,80	0,20832	
WiFi ⁴	5825,0	100	23,40	1,7	25,10	323,6	20	0,064	1,000	11,91	1260	5,90	0,06438	0,06438
GSM 850 ⁵	824,2	100	25,95	2,1	28,05	638,3	20	0,127	0,549	6,36	692	0,35	0,23109	
WCDMA B4 ⁵	1712,4	100	27,00	6,3	33,30	2138,0	20	0,425	1,000	3,71	5018	3,71	0,42533	0,53546
LTE B7 ⁵	2502,5	100	28,00	6,3	34,30	2691,5	20	0,535	1,000	2,71	5018	2,71	0,53546	
LTE B41 ⁵	2498,5	100	28,00	6,3	34,30	2691,5	20	0,535	1,000	2,71	5018	2,71	0,53546	
FCC Co-Location =		0,80816	< 1											

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

²PD = EIRP / (4πr²)

³CFR 47 Part 1, §1.1310(e), table 1

⁴See FCC ID: UKM-BTG2031, CHID of the FCC ID: 2AE3B-AEH-AR9462 [FCC ID: PPD-AR5B22 (original FCC ID)]; Report No: RF110907E02 R1, §4.5.7 and §5.5.7

⁵See FCC ID: XMR201903EG25G; RF Exposure Report No. HR/2019/1001602. Worst case for each band has been considered.

⁶Antenna SET A:

WiFi antenna: type 2J4802P

Cellular antenna: type 2J6983MPa

2.1091 EIRP Limit

1.1307 (b)(3)(i)(C) exemption limit

RF Source Frequency MHz	F MHz	R m	λ m	λ/2π m	R/(λ/2π)	Threshold ERP W	Threshold EIRP W	Threshold EIRP mW	EIRP mW	Margin dB
300-1500	824,2	0,20	0,364	0,0579	3,45	0,422	0,692	692	638,3	0,35
1500-100000	2412,0	0,20	0,124	0,0198	10,1	0,768	1,260	1260	11,2	20,50
	2437,0	0,20	0,123	0,0196	10,2	0,768	1,260	1260	1047,1	0,80
	5825,0	0,20	0,052	0,0082	24,40	0,768	1,260	1260	323,6	5,90
	2502,5	0,20	0,120	0,0191	10,48	0,768	1,260	1260	2691,5	-3,30

1.1307 (b)(3)(i)(B) exemption limit

0.3 GHz ≤ f ≤ 1.5 GHz
20 cm < d ≤ 40 cm

f GHz	ERP _{20cm} mW	th = ERP _{20cm} ; h = EIRP _{20cm} mW	EIRP mW	Margin dB
0,8242	1681,368	1681	2757	638,3

1.5 GHz < f ≤ 6.0 GHz
20 cm < d ≤ 40 cm

f GHz	ERP _{20cm} mW	th = ERP _{20cm} ; h = EIRP _{20cm} mW	EIRP mW	Margin dB
2412,0	3060	3060	5018	11,2
2437,0	3060	3060	5018	1047,1
5825,0	3060	3060	5018	323,6
2502,5	3060	3060	5018	2691,5