

Manufacturer: Eurotech S.p.A.

Product: BTAIR 20-31

FCC ID: UKM-BTA2031

Name: Oscar Frau

Title: Project Handler

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	PD/PD Limit	Worst PD/PD values to be considered
			Power dBm	Gain ⁶ dBi							Limit mW	Margin dB		
BT ⁴	2412,0	100	7,00	2,5	9,50	8,9	20	0,002	1,000	27,51	1260	21,50	0,00177	0,16547
WiFi ⁴	2437,0	100	26,70	2,5	29,20	831,8	20	0,165	1,000	7,81	1260	1,80	0,16547	
WiFi ⁴	5825,0	100	23,40	4,6	28,00	631,0	20	0,126	1,000	9,01	1260	3,00	0,12552	0,12552
GSM 850 ⁵	824,2	100	25,95	0,4	26,35	431,5	20	0,086	0,549	8,06	692	2,05	0,15624	0,18144
WCDMA B4 ⁵	1712,4	100	27,00	2,6	29,60	912,0	20	0,181	1,000	7,41	1260	1,40	0,18144	
LTE B7 ⁵	2502,5	100	28,00	1,3	29,30	851,1	20	0,169	1,000	7,71	1260	1,70	0,16933	
LTE B41 ⁵	2498,5	100	28,00	1,3	29,30	851,1	20	0,169	1,000	7,71	1260	1,70	0,16933	
FCC Co-Location =			0,47244	< 1										

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

²PD = EIRP / (4πx²D²)

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 ANT-DB1-RAF-RPS

Cellular antenna: type 2JW0124-C868B

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	431,5	2,05
1500-100000	2412,0	0,20	0,124	0,0198	10,1	0,768	1,260	1260	8,9	21,50
	2437,0	0,20	0,123	0,0196	10,2	0,768	1,260	1260	831,8	1,80
	5825,0	0,20	0,052	0,0082	24,40	0,768	1,260	1260	631,0	3,00
	1712,4	0,20	0,175	0,0279	7,17	0,768	1,260	1260	912,0	1,40

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	431,5

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	8,9
2437,0	3060	3060	5018	831,8
5825,0	3060	3060	5018	631,0
1712,4	3060	3060	5018	912,0