

Manufacturer: Eurotech S.p.A.

Product: BTGATE 20-31

FCC ID: UKM-BTG2031

Name: Oscar Frau

Title: Project Handler

Signature: 

MPE limits (§1.1310)

Mode	Frequency	Duty Cycle	Power	Antenna Gain ⁶	EIRP ¹	EIRP	Distance	PD ²	PD Limit ³	Margin	2.1091 EIRP	2.1091 EIRP	PD/PD Limit	Worst PD/PD values to be considered
	MHz	%	dBm	dBi	dBm	mW	cm	mW/cm^2	mW/cm^2	dB	Limit	Margin		
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	
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	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	
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	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 / (4πrxD²)

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

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

RF Source	F	R	λ	λ/2π	R/(λ/2π)	Threshold	Threshold	Threshold	EIRP	Margin
Frequency	MHz	m	m	m		ERP	EIRP	EIRP	mW	dB
MHz	MHz	m	m	m		W	W	mW	mW	dB
300-1500	824,2	0,20	0,364	0,0579	3,45	0,422	0,692	692	638,3	0,35
	2412,0	0,20	0,124	0,0198	10,1	0,768	1,260	1260	11,2	20,50
1500-100000	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	ERP _{20cm}	Pth = ERP _{20cm}	Pth = EIRP _{20cm}	EIRP	Margin
GHz	mW	mW	mW	mW	dB
0,8242	1681,368	1681	2757	638,3	6,36

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

f	ERP _{20cm}	Pth = ERP _{20cm}	Pth = EIRP _{20cm}	EIRP	Margin
GHz	mW	mW	mW	mW	dB
2412,0	3060	3060	5018	11,2	26,51
2437,0	3060	3060	5018	1047,1	6,81
5825,0	3060	3060	5018	323,6	11,91
2502,5	3060	3060	5018	2691,5	2,71