

MPE Calculations (Mobile)

The device is not a portable device (i.e. intended to be worn on the body or be hand-held), so it is classified as being either a mobile device or a fixed mounted device. The user's manual specifies a minimum separation distance of at least 20cm, consistent with this classification.

FCC part 1.1310, Table 1 limits the power density for uncontrolled exposure. The power density, Pd (mW/cm²) calculated from the maximum EIRP, Pt (mW) and the distance, d (m), between the transmitting antenna and the closest person, can be calculated using:

Formula is:

$$Pd = Pt / (4 * \pi * d^2)$$

Frequency (MHz)	MPE Limit (mW/cm ²)	Eirp (mW)	Pd at 20cm (mW/cm ²)	Distance where Pd = Limit (cm)
2401.89 - 2480	1	408	0.08	5.7

Band	Mode	Output Power (dBm)		Antenna gain (Max)	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average		dBm	W			W	dBm
2402 - 2480	-	0.87	-	0.0	0.87	0.0012	79	1	0.0012	0.87
2401.89-2469.68	-	18.09	-	8.0	26.09	0.4064	75	1	0.4064	26.09
Totals:								2	0.4077	26.10

MPE exposure is based on two 2.4GHz pre-approved modules. Device can be programmed so that both radios transmit simultaneously.

The total value from both the BT and Frequency Hopping modules was used to determine co-location compliance to the worst case MPE limit which is 1 mW/cm².