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 userís 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)
2400 - 4990	1	1900.93	0.38	12.3

Band	Mode	Output Power		Antenna gain	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average	(Max)	dBm	W			W	dBm
2400 - 2483.5	CCK	-	20.0	7.5	27.5	0.562	11	1	0.562	27.50
2400 - 2483.5	CCK	-	20.0	7.5	27.5	0.562	11	1	0.562	27.50
4940 - 4990	OFDM	-	21.4	7.5	28.9	0.776	10	1	0.776	28.90
							Totals:	3	1.901	32.79

MPE exposure is based on two 2.4GHz pre-approved modules with one 4.9GHz transmitter. Device can be programmed to transmitt simultaneously.

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)
2400 - 4990	1	1687.02	0.34	11.6

Band	Mode	Output Power		Antenna gain	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average	(Max)	dBm	W			W	dBm
2400 - 2483.5	CCK	-	20.0	7.5	27.5	0.562	11	1	0.562	27.50
2400 - 2483.5	CCK	-	20.0	7.5	27.5	0.562	11	1	0.562	27.50
2400 - 2483.5	CCK	-	20.0	7.5	27.5	0.562	11	1	0.562	27.50
							Totals:	3	1.687	32.27

MPE exposure is based on three 2.4GHz transmitter. Device can be programmed to transmitt simultaneously.

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)
2400 - 4990	1	2114.84	0.42	13.0

Band	Mode	Output Power		Antenna gain	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average	(Max)	dBm	W			W	dBm
2400 - 2483.5	CCK	-	20.0	7.5	27.5	0.562	11	1	0.562	27.50
4940 - 4990	OFDM	-	21.4	7.5	28.9	0.776	10	1	0.776	28.90
4940 - 4990	OFDM	-	21.4	7.5	28.9	0.776	10	1	0.776	28.90
							Totals:	3	2.115	33.25

MPE exposure is based on two 4.9GHz transmitter and one 2.4GHz radio. Device can be programmed to transmitt simultaneously.

MPE Calculations (Fixed Location)

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 a fixed mounted device. The userís manual specifies a minimum separation distance of at least 35cm, 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)
2400 - 4990	1	22401.78	4.46	42.2

Band	Mode	Output Power		Antenna gain	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average	(Max)	dBm	W			W	dBm
2400 - 2483.5	CCK	-	13.0	21.0	34.0	2.51	11	1	2.512	34.00
2400 - 2483.5	CCK	-	13.0	21.0	34.0	2.51	11	1	2.512	34.00
4940 - 4990	OFDM	-	21.4	21.0	42.4	17.38	10	1	17.378	42.40
							Totals:	3	22.402	43.50

MPE exposure is based on two 2.4GHz pre-approved modules with one 4.9GHz transmitter. Device can be programmed to transmitt simultaneously.

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)
2400 - 4990	1	7535.66	1.50	24.5

Band	Mode	Output Power		Antenna gain	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average	(Max)	dBm	W			W	dBm
2400 - 2483.5	CCK	-	13.0	21.0	34.0	2.512	11	1	2.512	34.00
2400 - 2483.5	CCK	-	13.0	21.0	34.0	2.512	11	1	2.512	34.00
2400 - 2483.5	CCK	-	13.0	21.0	34.0	2.512	11	1	2.512	34.00
							Totals:	3	7.536	38.77

MPE exposure is based on three 2.4GHz transmitter. Device can be programmed to transmitt simultaneously.

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)
2400 - 4990	1	37267.90	7.41	54.5

Band	Mode	Output Power		Antenna gain	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average	(Max)	dBm	W			W	dBm
2400 - 2483.5	CCK	-	13.0	21.0	34.0	2.512	11	1	2.512	34.00
4940 - 4990	OFDM	-	21.4	21.0	42.4	17.38	10	1	17.378	42.40
4940 - 4990	OFDM	-	21.4	21.0	42.4	17.38	10	1	17.378	42.40
							Totals:	3	37.268	45.71

MPE exposure is based on two 4.9GHz transmitter and one 2.4GHz radio. Device can be programmed to transmitt simultaneously.