

Additional User Manual Statement - EM Field exposure

iRM4451 RF Exposure

FCC Maximum Permissible Exposure (MPE) limits for equipment operating in the frequency range 1500 – 100,000 MHz is 1.0 mW/cm^2 .

Following installation and commissioning, the safe distance from the antenna is the greater of:

20cm

Or

$r \text{ cm, where } r = \sqrt{(PG/4\pi S)}$

P: power input to antenna(s) in mW

G: numeric gain of antenna relative to isotropic radiator

S: power density in $\text{mW/cm}^2 = 1 \text{ mW/cm}^2$

The device has four antenna ports, so safe distance from the antenna shall be the greater of:

$20 \text{ cm or } \sqrt{(4*PG/4\pi S)}$

Which gives

$20 \text{ cm or } \sqrt{(0.32*P*G)} \text{ cm.}$

The iRM4451 unit is designed to be used with one of three standard antennas combinations:

- Four 2 dBi omni-directional antennas
- Two 17 dBi 2-port cross-polarised directional panel antennas for use with 5 MHz channels
- Two 18 dBi 2-port cross-polarised directional panel antennas for use with 10, 15 and 20 MHz channels

Rounding up the total transmit power of 51 dB for four ports, gives the following safe distances from the unit:

Antenna gain	Safe distance (m)
2 dBi	1.26
17 and 18 dBi	7.95