

RF Exposure information

The reader transmitter operates according to FCC part 15 subpart C section 15.249. The standard does not contain RF Exposure limits.
The reader includes a single modular approved transmitter FCC ID:MK8CPX-05-WLM54G.

The power density $P \text{ (mW/cm}^2\text{)} = P_T / 4\pi r^2$

Maximum conducted output power given in FCC ID: MK8CPX-05-WLM54G module grant is 40 mW (16 dBm) in 2412-2462 MHz band. Limit for power density for general population/uncontrolled exposure is 1 mW/cm² for 1500 -100000 MHz frequency range.

The gain of L-Com HG2403RD-RSF antenna used with the module in the reader is 3 dBi.

The maximum equivalent isotropically radiated power EIRP is

$$P_T = 16 \text{ dBm} + 3 \text{ dBi} = 19 \text{ dBm} = 79.4 \text{ mW}$$

The power density at 20 cm is calculated as follows:

$$79.4 \text{ mW} / 4\pi (20 \text{ cm})^2 = 0.02 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

General public cannot be exposed to dangerous RF level.