

Calculation: RF-Exposure for 902.3 ~ 927.5 MHz Transmitter

FCC ID: **2A6WLRN2903**

Type of Device: **LoRaWAN Transceiver Module inside Host “People Counter”
with FCC ID: 2A6WLPCTX1**

In accordance with **CFR47, §1.1310 Radiofrequency radiation exposure limits**
and

- 447498 D01 General RF Exposure Guidance v06
- 447498 D04 Interim General RF Exposure Guidance v01

S: Limit for power density according to Table 1 to § 1.1310(e)(1)
 (i) Occupational / Controlled Exposure
 (ii) General Population / Uncontrolled Exposure
(calculated for lowest frequency **902.3 MHz** with formula:
 $f/1500 \sim \mathbf{0,601 \text{ mW/cm}^2}$)

P: ***max radiated ERP 7.63 dBm ~ 5.8 mW @903 MHz***

G: *N/A as included in measured ERP*

D: Duty cycle: **1** (100%)

R: Distance in what the limit of S must be reached: **20 cm**
(refer also to the manufacturers installation / user manual)

$$S = \frac{P \cdot G \cdot D}{4 \cdot \pi \cdot R^2} \Rightarrow \underline{S} = \frac{5.8 \text{ mW} \cdot 1}{4 \cdot \pi \cdot (20 \text{ cm})^2} = \underline{\underline{\mathbf{0,0012 \frac{mW}{cm^2}}}}$$

Conclusion: The value of the calculated power density at the recommended minimum separation distance of 20cm is well below the applicable limit.