

Title: Evaluation of ER Exposure from CellNet Transmitters for General Population / Uncontrolled Exposure***Methodology:***

Using Table 1 in Appendix A of FCC OET Bulletin 65 (Edition 97-01), the Maximum Permissible Exposure limit for general population / uncontrolled exposure is specific as a power density:

$$MPE = f / 1500 \text{ milliwatts per square centimeter, where } f \text{ is in MHz (between 300 to 1500 MHz)}$$

Averaged over 30 minutes. Based on spherical surface around the source, the minimum distance D can be computed as:

$$D = \text{SQRT} (EIRP / 4\pi * MPE)$$

Hardware	Peak transmit power (dBm)	Antenna gain (dBi)	Duty cycle (average d over 30 minutes)	Peak EIRP (dBm)	Peak EIPR (mW)	Frequency (MHz)	MPE (mW per sq. cm)	Minimum distance (cm)
Repeater (Repeat All)	26.7	5	0%	31.7	1479.1	918	0.29426	10.84

Note 1: The BLT III will be used with an external antenna with a 5dBi gain (Please refer to Antenna Specification (M/N: ASPG918).

Note 2: The RF safety exposure statements are mention in the installation guide page 1 of 3.

Reference:

[1] FCC OET Bulletin 65 (97-01 Edition), "Evaluation Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields", August 1997.

RF Hazard Statement

The instant device, a Part 15 spread spectrum transmitter, is a fixed device professionally installed inside an enclosed utility meter. Accordingly, the device is not designed to be used by any person. The antenna associated with the device is not external but is rather also contained within the same utility meter enclosure. The device communicates with a fixed local area network.

This transmitter does not fit within the definition of a “mobile device” set forth in section 2.1091(b) of the Commission’s rules, 47 C.F.R. Section 2.1091(b), because it is designed to be used in fixed locations. In addition, the transmitter does not meet the definition of a “portable device” contained in section 2.1093(b), because it is not designed to be used by any person. Furthermore, section 1.1307(b)(1), which is reference by section 15.247(b)(4), categorically excludes this Part 15 device from the requirement to conduct a routine environmental evaluation for RF exposure since the device is neither a millimeter wave device, nor an unlicensed personal communications service device.

In any event, based on the maximum output power (+30 dBm) and antenna gain information contained in the underlying equipment authorization application for this device, the emissions for the device are well below the maximum exposure limits set forth in section 1.1310 and 2.1093(d). Furthermore, the device only emits approximately six very brief transmissions in any given one-half hour period, each with a duration approximately 0.0027 seconds. Accordingly, the RF emissions for the device are well within the limits set by the Commission.