

American Aires Inc.
Research and Development department

REPORT

**R&D: Evaluation of the effective range
of the LIFETUNE ZONE MAX (2022 model)
at a frequency of 4.9 GHz (Wi-Fi 5G)**

The protective properties of the LT ZONE MAX are due to its ability to coherently convert the technogenic electromagnetic radiation of mobile communications without weakening the original signal.

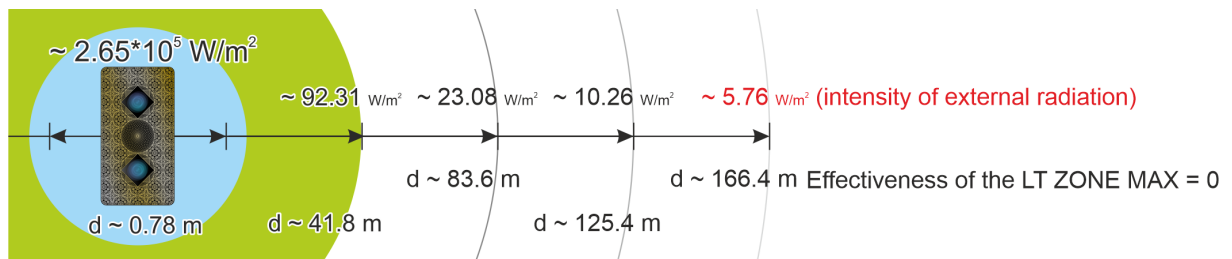
An electromagnetic field converted using the LT ZONE MAX is a stationary coherent wave superposition with a corresponding energy density characterized by intensity I (see table). Calculations were made for the frequency 4.9 GHz, which is standard for Wi-Fi radiation and 5G mobile communications. The effectiveness of the LT ZONE MAX was estimated based on the intensity of the field transformed into a coherent form, determining the zone of maximum action.

The stable electromagnetic field generated by the LT ZONE MAX has several fractal levels due to the number of ring elements in the topological circuit of its microprocessor and the size of the circuit itself. Outside the zone of maximum action, the density of the highly coherent field begins to decrease and, accordingly, the effectiveness of the device decreases.

Table of the basic parameters of the LT ZONE MAX

Diameter of the 64P1S5G microprocessor circuit	0.02 m
Number of elements in the topological circuit of the microprocessor	4161
Device size	0.065 m / 0.122 m
Diameter of the maximum effective zone of influence	0.78 m
Recommended coverage diameter of the effective influence	41.8 m
Intensity I of the EM field in the maximum effective zone for the frequency 4.9 GHz (5G)	$2.65 \cdot 10^5 \text{ W/m}^2$

Fig. 1 shows the scale of the drop in the LT ZONE MAX's effectiveness using the example of its interaction with Wi-Fi radiation at a frequency of 4.9 GHz ($I \sim 5.76 \text{ W/m}^2$).



When the protective electromagnetic field's intensity decreases to the parameters of the intensity of external radiation, the LT ZONE MAX's effectiveness drops to zero.

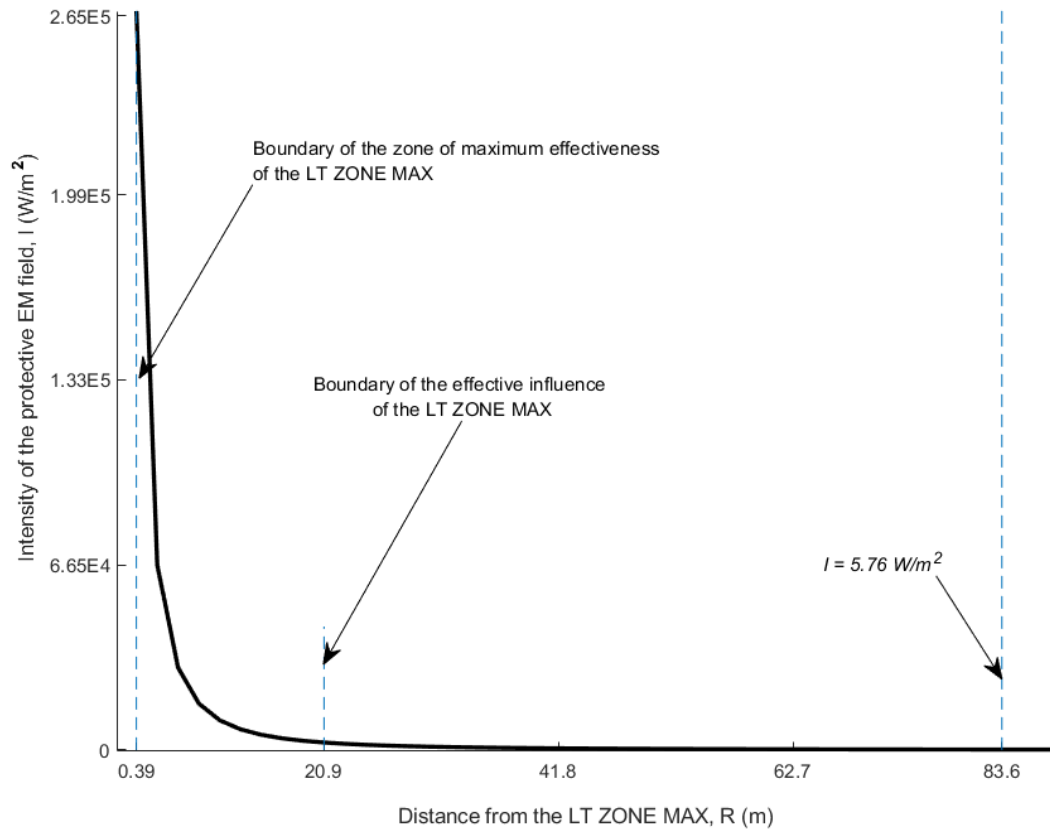
If there are several external sources of radiation, it is necessary to use several devices LT ZONE in conjunction with the LT ZONE MAX, since the external radiation's total intensity dramatically reduces the LT ZONE's zone of effective influence.

If there are powerful external sources of radiation, such as server data centers or cryptocurrency mining farms, as well as to cover large amounts of space, it is necessary to use several LT ZONE MAX and LT ZONE devices in a complex with the individual means of protection (LT FLEX, LT GO, LT ONE), since the external radiation's total intensity dramatically reduces the LT ZONE MAX's zone of effective influence.

The decrease in effectiveness is determined by the decrease in the intensity of the protective EM field, which is inversely proportional to the square of the distance from the device (LT ZONE MAX) and is estimated using the following formula:

$$I \sim \frac{1}{R^2}.$$

At a distance of ~ 20.9 m from the center of the LT ZONE MAX (for EMR at a frequency of 4.9 GHz), the intensity of the protective field reaches a value at which the effectiveness drops to a critical level (see Fig. 2), determining the boundary of a highly coherent spherical field with a diameter of ~ 41.8 m.



Thus, the recommended coverage diameter of the effective influence of the LT ZONE MAX is ~ 41.8 m.

The indicated distances are reached in open space.