

RF Exposure requirements

Product name	ZigBee to IP Bridge
Model number	HNSLLBRA098B0
FCC ID	A3LBRA0
Radio specification	2.4 GHz ZigBee transceiver
Antenna	2.4 GHz, Omni-directional antenna
Power source	DC 5 V

The product is for controlling the LED lamp via ZigBee Technology. It is normally used with the minimum separation distance of 20 cm. Therefore the product can be categorized as mobile device.

As the worst case according to the KDB 447498, the following standalone SAR test exclusion was considered to qualify for the SAR test exclusion.

Tx frequency range	2405 MHz - 2475 MHz
Device category	Fixed installation (mobile device)
Maximum conducted output power	9.51 mW (9.78 dBm)

SAR test exclusion thresholds:

$[(\text{max. power of channel, mW}) / (\text{min. separation distance, mm})] \cdot \sqrt{f_{(\text{GHz})}} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$

MHz	5	10	15	20	25	30	35	40	45	50	test separation distance (mm)
2450	10	19	29	38	48	57	67	77	86	96	SAR test exclusion threshold (mW)

The source-based time-averaged maximum conducted output power of the RF channel is less than 10 mW,, and the minimum separation distance of 5 mm can be achieved. Therefore the transmitter complies with the RF exposure requirements and the SAR is not required.

