

Declaration of Electromagnetic Field Health Compliance

To whom it may concern,

As to the product **eBox-F** made by Huawei Technologies Co., Ltd., we declare that it complies with the Basic restrictions/Reference levels for electric, magnetic and electromagnetic fields as specified in following standards(s):

Nr.	Standard
1	47CFR FCC Part 1 (10-1-12 Edition) & OET Bulletin 65
2	RSS-102 (Issue4, March 2010)

The compliance is demonstrated based on the following calculation model assessment:

- The power density according to far-field model is:

$$S = \frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$$

Where:

- P = input power of the antenna.
- G = antenna gain relative to an isotropic antenna.
- θ, ϕ = elevation and azimuth angles.
- R = distance from the antenna to the point of investigation.

- For single or multiple RF sources, the calculated power density should comply with following:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Where:

- s_i = the power density when the f is i .
- $S_{Limit,i}$ = the reference level requirement for power density when f is i .

- The calculation of the power density or safe distance is:

- NOTE 1: The RF exposure evaluation is base on the far-field and the radiation exposure is over-estimated.
- NOTE 2: The maximum output power level is taken into account as a worst case for the purpose of the calculation of power density or safe distance.
- NOTE 3: The minimum antenna feed cable loss (assumed no cable loss) is taken into account as a worst case for the purpose of the calculation of power density or safe distance.
- NOTE 4: The maximum antenna radiation exposure orientation and maximum antenna gain is taken into account as a worst case for the purpose of the calculation of power density or safe distance.

RF Source	Calculation
RF Source #1	$f = 2400 \text{ to } 2483.5 \text{ MHz}$
(IEEE 802.15.4)	$S_{Limit,i} = 10 \text{ W/m}^2$
	$P = 0.00155 \text{ W} (= 1.9 \text{ dBm, measured max peak value})$

RF Source	Calculation
	$G_{(\theta,\phi)} = 3.388 (= 5.3 \text{ dBi, rated max})$ $\theta, \phi = \text{The worst condition is considered, i.e. the max } G \text{ is used.}$ $R \geq 0.2 \text{ m}$ $S_i \leq \frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2} = 0.01 \text{ W/m}^2$ $\frac{S_i}{S_{Limit,i}} \leq 0.01$
RF Source(s) Combination	$\sum_i \frac{S_i}{S_{Limit,i}} \leq 0.001 \text{ (Less than 1, so complied)}$
NOTE:	<p>Actually, the exposure can be considered as “low power / inherently compliant” without testing based on that the emissions is limited to a level that cannot exceed the basic restriction.</p>

Person responsible for making this declaration:



Zhang Weimin
 RF Engineer, EMC Lab
 Reliability Laboratory of Huawei Technologies Co., Ltd.
 January 8, 2014