Declaration of Electromagnetic Field Health Compliance

To whom it may concern,

As to the product **eBox-G** 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:

1. 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.

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

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

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.

3. 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 (IEEE 802.15.4)	f	=	2400 to 2483.5 MHz
	$S_{Limit,i}$	=	10 W/m^2
	P	=	0.00155 W (= 1.9 dBm, measured max peak value)
	$G_{(\theta,\phi)}$	=	3.388 (= 5.3 dBi, rated max)

RF Source	Calculation		
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	R	≥	0.2 m
	S_i	≤	$\frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$ = 0.01 W/m ^{2}
	$\frac{S_i}{S_{Limit,i}}$	≤	0.01
RF Source #2 (GSM/GPRS, Cellular)	f	=	824 to 849 MHz
	$S_{Limit,i}$	=	824/150 = 5.4933 W/m ^{2}
	$EIRP = P \times G_{(\theta,\phi)}$	=	Peak: 0.93152 W (= 0.568 W e.r.p., measured max.) Average: 0.11644 W (considering 1/8 slots emit)
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	R	≥	0.2 m
	S_i	≤	$\frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$ = 0.232 W/m ^{2}
	$\frac{S_i}{S_{Limit,i}}$	≤	0.04
RF Source #3 (GSM/GPRS, PCS)	f	=	1850 to 1910 MHz
	$S_{Limit,i}$	=	10 W/m ^{2}
	$EIRP = P \times G_{(\theta,\phi)}$	=	Peak: 0.682 W (measured max.) Average: 0.08525 W (considering 1/8 slots emit)
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	R	≥	0.2 m
	S_i	≤	$\frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$ = 0.17 W/m ^{2}
	$\frac{S_i}{S_{Limit,i}}$	≤	0.017
RF Source(s) Combination	$\sum_i \frac{S_i}{S_{Limit,i}}$	≤	0.05 (Less than 1, so complied)
NOTE: Only "RF source #1 and #2" or "RF source #1 and #3" are transmitting simultaneously, the worst case between these two is used as the combination result.			

Person responsible for making this declaration:

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