



中国认可
国际互认
检测
TESTING
CNAS L0310



Declaration of Compliance for RF Exposure Evaluation

Product Name: Remote Radio Unit

Product Model: RRU3971 1900M

Applicant: Huawei Technologies Co., Ltd.

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To whom it may concern,

As to the product(s) involved in this document, we declare that they comply with the following standards(s):

- 47CFR FCC Part 1 & OET Bulletin 65

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:

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

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 .
- f = operating frequency.

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 for Individual Source	
RF Source #1	f	= 1930 to 1990 MHz
	$S_{Limit,i}$	= 10 W/m ²
	$P, G_{(\theta, \phi)}$	☒ $P \times G_{(\theta, \phi)}$: $P^{(*)}$ = 50.12 W (=46+1=47.0 dBm, per port) 200.48 W (calculated, four ports)



		$G_{(\theta,\phi)} = 63.096 (=18 \text{ dBi})$ (*): The value is from: ☐ measured max (See relevant RF report), ☒ rated + declared tolerance, ☐ max allowed by RF standard. And, the transmission duty cycle is: ☒ ignored, ☐ used, that is: _____ % (for mode: _____).
	θ, ϕ	= The worst condition is considered, i.e. the max G is used.
	S_i	= $\frac{P \times G_{(\theta,\phi)}}{4 \times \pi} / R^2 = 1006.61 / R^2 \text{ W/m}^2$
	$\frac{S_i}{S_{Limit,i}}$	= $100.66 / R^2$
Whole Product	Calculation for Whole Product	
Whole Product	$\frac{S}{S_{Limit}}$	= $100.66 / R^2 \leq 1$
	R	$\geq 10.03 \text{ m (the minimum Safe Distance)}$
	NOTE: The result is the worst case of each individual source and simultaneous transmission sources (if applicable).	

END