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 calcuated 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)

			$G_{(\theta,\phi)}$ = $\underline{63.096}$ (=$\underline{18}$ 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	=	$\dfrac{P \times G_{(\theta,\phi)}}{4 \times \pi} / R^2$ = $\underline{1006.61}$ / R^2 W/m^2
	$\dfrac{S_i}{S_{Limit,i}}$	=	$\underline{100.66}$ / R^2
Whole Product	Calculation for Whole Product		
Whole Product	$\dfrac{S}{S_{Limit}}$	=	$\underline{100.66}$ / $R^2 \leq 1$
	R	≥	$\underline{10.03}$ m (the minimum Safe Distance)
	NOTE:		The result is the worst case of each individual source and simultaneous transmission sources (if applicable).

END