



# RF Exposure Evaluation Declaration

Product Name : CLOUDGATE BASIC  
WIRELESS WI-FI - 1 RS485  
Model No. : GTW\*\*\*MWT0  
FCC ID : 2AJCX-CGMWW

Applicant : CAREL INDUSTRIES S.p.A.

Address : via dell'Industria, 11 - 35020 Brugine, PD -  
ITALY

Date of Receipt : Jun. 01, 2020

Issued Date : Aug. 31, 2020

Report No. : 2060045R-RF-US-P20V01

Report Version : V1.0

The test results presented in this report relate only to the object tested.

The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result, unless the specification, standard or customer have special requirements

This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory


This report is not used for social proof in China (or Mainland China) market.


# Test Report Certification


Issued Date: Aug. 31, 2020  
Report No.: 2060045R-RF-US-P20V01



Product Name : CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485  
Applicant : CAREL INDUSTRIES S.p.A  
Address : via dell'Industria, 11 - 35020 Brugine, PD - ITALY  
Manufacturer : Jinan USR IOT Technology Limited  
Address : Room 201,301 of East Building, No.889 Chonghua Road, Jinan Free Trade Area, Shandong, 250101, China  
Model No. : GTW\*\*\*MWT0  
Brand : CAREL  
FCC ID : 2AJCX-CGMWW  
EUT Voltage : 9~36 Vdc  
Applicable Standard : KDB 447498D01V06  
FCC Part1.1310  
Test Result : Complied  
Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.  
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China  
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098  
FCC Designation Number: CN1199

Documented By :   
\_\_\_\_\_  
(Project Assistant: Kitty Li)

Reviewed By :   
\_\_\_\_\_  
(Technical Supervisor: Frank He)

Approved By :   
\_\_\_\_\_  
(Supervisor: Jack Zhang)

## 1. RF Exposure Evaluation

### 1.1.Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
<b>(A) Limits for Occupational/ Control Exposures</b>				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
<b>(B) Limits for General Population/ Uncontrolled Exposures</b>				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

R = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

## 1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

## 1.3. Test Result of RF Exposure Evaluation

Product	:	CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

### Antenna Information:

Antenna model	N/A		
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input type="checkbox"/> 2*TX+2*RX <input type="checkbox"/> 3*TX+3*RX
Antenna technology	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> Basic
			<input type="checkbox"/> CDD
			<input type="checkbox"/> Beam-forming
Antenna Type	<input checked="" type="checkbox"/>	External	<input checked="" type="checkbox"/> Dipole
	<input type="checkbox"/>	Internal	<input type="checkbox"/> PIFA
			<input type="checkbox"/> PCB
			<input type="checkbox"/> Ceramic Chip Antenna
			<input type="checkbox"/> Stamping Antenna
			<input type="checkbox"/> Metal antenna
			<input type="checkbox"/> Monopole antenna
	Antenna Gain	3 dBi	

## Power Density

### Standalone mode:

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20cm (mW/cm <sup>2</sup> )	Power Density Limit at R = 20 cm (mW/cm <sup>2</sup> )
2.4G(Wi-Fi)	2400 ~ 2483.5	30.77	0.24	1.0

The safety distance is 20cm for installed for CLOUDGATE BASIC WIRELESS WI-FI - 1 RS485 without any other radio equipment.

————— The End —————