

# Coulisse B.V MPE ASSESSMENT REPORT

## **Report Type:**

FCC MPE assessment report

Model: CM-20

**REPORT NUMBER:** 181201447SHA-002

**ISSUE DATE:** Mar 7, 2019

**DOCUMENT CONTROL NUMBER:** TTRFFCCMPE-01\_V1 © 2018 Intertek





TEST REPORT

Intertek Testing Services Shanghai Building No.86, 1198 Qinzhou Road (North) Caohejing Development Zone Shanghai 200233, China

> Telephone: 86 21 6127 8200 www.intertek.com

Report no.: 181201447SHA-002

Applicant:	Coulisse B.V
	Vonderweg 48, 7468 DC Enter, Netherlands
Manufacturer:	Coulisse B.V
	Vonderweg 48, 7468 DC Enter, Netherlands
Manufacturing site:	NINGBO DOOYA MECHANIC & ELECTRONIC TECHNOLOGY CO., LTD. No.168 Shengguang Road, Luotuo, Zhenhai, Ningbo, ZHEJIANG, China

FCC ID: ZY4CM20

#### SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification: KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

#### **PREPARED BY:**

Teddy yin

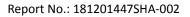
Project Engineer Teddy Yin

**REVIEWED BY:** 

amel that

Reviewer Daniel Zhao

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.





# **Revision History**

Report No.	Version	Description	Issued Date
181201447SHA-002	Rev. 01	Initial issue of report	Mar 7, 2019

intertek Total Quality. Assured. TEST REPORT

## **1 GENERAL INFORMATION**

# 1.1 Description of Equipment Under Test (EUT)

Product name:	MOTION Wi-Fi bridge
Type/Model:	CM-20
	The EUT is a transceiver to control the working condition of the
Description of EUT:	corresponding receiver, there is one model only. The EUT contains an approved WIFI modular(FCC ID: 2AC7Z-ESPWROOM32)
Rating:	5VDC, 2A
Category of EUT:	Class B
EUT type:	Table top 🔲 Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	Dec 20, 2018
Date of test:	Dec 20, 2018~Jan 6, 2019

# **1.2 Technical Specification**

Operation Frequency:	433.92MHz			
Type of Modulation:	FSK			
	Mobile			
	Portable			
Product Type:	Fix Location			
Channel Number:	1			
Antenna Designation:	Integral PCB antenna, non-user removable			
Gain of Antenna:	1.2dBi max (Declared by manufacture)			

Total Quality. Assured. TEST REPORT

# **1.3 Description of Test Facility**

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

Total Quality. Assured.

## 2 MPE Assessment

Test result: Pass

## 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave
	(V/m)	(A/m)	(uT)	power density
				S <sub>eq</sub> (W/m²)
0-1 Hz	-	3,2 × 10 <sup>4</sup>	$4 \times 10^{4}$	-
1-8 Hz	10 000	3,2 × 10 <sup>4</sup> /f <sup>2</sup>	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	87/f <sup>1/2</sup>	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq$  1.0

# intertek Total Quality. Assured.

TEST REPORT

## 2.2 Assessment Results

Power density (S) is calculated according to the formula:

 $S = PG / (4\pi R^2)$ 

Where S = power density in  $mW/cm^2$ 

- P = Radiated transmit power in mW
- G = numeric gain of transmit antenna
- R = distance (cm)

### For 433.92MHz, as we can see from the test report 181201447SHA-002:

Frequency band	Field	Max power		R	S
(MHz)	Strength (dBuV/m)				
	(ubuv/m)				
433.92MHz	79.4	-15.9dBm	0.026mW	20cm	0.000005

#### For WIFI, (FCC ID: 2AC7Z-ESPWROOM32)

Frequency band (MHz)	Max power		Antenna Gain		R	S
2412-2462MHz	16.62dBm	45.92mW	2.0dBi	1.585	20cm	0.014480

The sum of the MPE ratios = 0.000005+0.014480=0.014485mW/cm<sup>2</sup><1.0



# Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.