

Prüfbericht-Nr.: Test Report No.: 60299217-002		Auftrags-Nr.: Order No.: 23870191		Seite 1 von 5 Page 1 of 5	
Kunden Referenz-Nr.: Client Reference No.: -		Auftragsdatum Order date: 2019-05-28			
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Prüfgegenstand: Test item: COPA Mesh					
Bezeichnung / Typ-Nr.: Identification / Type No.: E0048 FCC ID: 2A0FP-E0048					
Auftrags-Inhalt: Order content: RF Exposure Evaluation					
Prüfgrundlage: Test specification: FCC 47 CFR §2.1091 IEEE Std. C95.1:2005					
Wareneingangsdatum: Date of receipt: N/A					
Prüfmuster-Nr.: Test sample No.: N/A					
Prüfzeitraum: Testing period: N/A					
Ort der Prüfung: Place of testing: Lund, Sweden					
Prüflaboratorium: Testing laboratory: TÜV Rheinland Sweden					
Prüfergebnis: Test results: See detail in report					
Geprüft von Tested by: Niall Forrester Technical Expert 2019-10-30 		Kontrolliert von Reviewed by: Per-Isacsson Lab Manager 2019-10-30 			
Datum Date	Name / Stellung Name / Position	Unterschrift Signature	Datum Date	Name / Stellung Name / Position	Unterschrift Signature
Sontiges / Other:					
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Revisions Revisions			
Revision Revision	Datum Date	Anmerkung Remark	Verfasser Author
001	2019-10-01	First Release	Niall Forrester
002	2019-10-30	Updated Maximum Conducted Output Power	Niall Forrester

Note: Latest revision report will replace all previous reports

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PRODUCT INFORMATION

1.1 Equipment under Test (EUT) description

Model name:	COPA Mesh
Manufacturer:	Anticimex Innovation Center A/S
Model number:	E0048
FCC ID:	2AOF-P-E0048
Description:	Sub-GHz module used in the Smart Connect System

1.2 Wireless Technologies and Frequency Bands supported by the DUT

Technology	Band	Frequency Range (Tx)	Evaluation Performed
'Sub GHz' Proprietary	868.3 MHz	868.3 MHz	NO
'Sub GHz' Proprietary	917-926 MHz	917 MHz – 926 MHz	YES

1.3 Conducted Power and Antenna Gain

Technology	Band	Maximum Conducted Output Power (dBm)	Antenna Gain (dBi)
'Sub GHz' Proprietary	917-926 MHz	14	1.3

Maximum Power and Antenna Gain are based on details supplied by the device manufacturer.

EVALUATION

1.4 Summary

At 20cm, the device is compliant with the "General Population / Uncontrolled" requirements set out in FCC 47 CFR §1.1310 Table 1 (B) for all supported combinations of wireless technologies.

1.5 Limits

47 CFR § 1.1310 - Radiofrequency radiation exposure limits

Table 1B

Limits for Maximum Permissible Exposure (MPE)
(Limits for general Population / Uncontrolled Exposure)

Frequency Range (MHz)	Electric Field strength (V/m)	Magnetic Field strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3 - 1.34	614	1.63	*100	30
1.34 - 30	824/f	2-19/f	*180/f ²	30
30 - 300	27.5	0.073	0.2	30
300 - 1500	-	-	f/1500	30
1500 - 10000	-	-	1.0	30

Notes:

- f = frequency in MHz
- * = Plane-wave equivalent power density

1.6 Stand-alone Calculations

The Power Density at 20cm separation distance has been calculated for each of the transmitter technologies supported by the device according to a re-arrangement of the Friis formula, as below:

$$S = \frac{P * G}{4\pi * r^2}$$

Where:

- “S” is power density in mW/cm²
- “P” is maximum avg. conducted power (incl. tolerances) in mW according to data from the manufacturer
- “G” is the peak antenna gain (numerical) according to data from the manufacturer
- “r” is the separation distance (20 cm)

Power Density (S) at 20cm Distance for Each Transmitter

Technology	Band	Frequency (MHz)*	Power (dBm)	P (mW)	Gain (dBi)	G (Numerical)	r (cm)	S (mW/cm ²)	Limit** (mW/cm ²)
‘Sub GHz’ Proprietary	917-926 MHz	917	14	25.12	1.3	1.35	20	0.007	0.61

*The lowest frequency in each band has been chosen, to give the most conservative limit

**The limits listed are from FCC 47 CFR §1.1310 Table 1 (B): “Limits for General Population/Uncontrolled”

From 300MHz to 1500MHz, the limit is f/1500 mW/cm² where “f” is the frequency in MHz