

RF EXPOSURE REPORT



Applicant: Darfon Electronics Czech s.r.o.
Turanka 1315/112, 627 00 Brno, Czech Republic.
Manufacturer: Darfon Electronics Czech s.r.o.
Turanka 1315/112, 627 00 Brno, Czech Republic.
Product Name: Dongle
Brand Name: QPAD
Model No.: DX-900-D
Model Difference: N/A
Report Number: E2/2021/30054
FCC ID 2AZDI-DX-900-D
IC: 27074-DX900D
FCC Rule Part Part 2.1093
ISED Rule: RSS-102 issue 5 Mar. 19, 2015
Issue Date: May 19, 2021

We hereby certify that:

The data evaluation in this report is in compliance with FCC Rules Part 2 & RSS-102.
The results of this report relate only to the sample identified in this report.

Approved By: _____

John Yeh / Asst. Manager

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

Report Number	Revision	Description	Issue Date	Revised By
E2/2021/30054	Rev.00	Original.	May 19, 2021	Ariel Chang

Note:

- 1、Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 General Information

Product Name	Dongle
Brand Name	QPAD
Model No.	DX-900-D
Model Difference	N/A
Hardware Version	02
Firmware Version	0004
Power Supply	Rating: DC 5V=20mA

1.2 Antenna Information:

1.2.1 WLAN 2.4GHz

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)	Worst Antenna Gain
Internal Antenna	N/A	N/A	2400-2500	-8.38	-

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2 FCC STANDARD APPLICABLE

2.1 FCC Standard Applicable:

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

As per KDB 447498 D01 4.3.1,

Step a: For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$$

$$[\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g Head \& Body SAR and } \leq 7.5 \text{ for 10-g extremity Hand SAR, where}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as numeric thresholds in **step b)** below

Step b: For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$ mW, for 100 MHz to 1500 MHz

2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

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2.2 Measurement Result:

Step a:				
This is a portable device and the max. output power including tune-up tolerance is 0.895 (mW), lower than the threshold given and derived as formula given above, where				
$=0.895(\text{mW})/5(\text{mm})*\sqrt{2.402(\text{GHz})} = 0.3 < 3.0$				
Frequency (MHz)	Max. output power including tune-up tolerance(dBm)	Max. output power including tune-up tolerance(mW)	Distance (mm)	Result
2402	-0.48	0.895	5	0.3

As the result of calculation result indicates, the RF exposure generating from given transmitter (transmitter employed digital modulation) can be excluded from SAR measurement, and is deemed compliant with RF exposure as per FCC.

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2.3 ISED Standard Applicable

As per RSS-102 Issue 5 March 19, 2015, any transmitter shall be compliant with applicable RF exposure prior to being market. In §2.5.1, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power.

For limb-worn devices where the 10 gram value applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 2.5.

2.4 Measurement Result:

Freq. (MHz)	Max. output power including tune-up tolerance(dBm)	Peak Gain (dBi)	Max Conducted Output Power (mW)	e.i.r.p (mW)	Exemption Limit (mW)
2480	-0.48	-8.38	0.895	0.130	4

Measurement Result

The Max. Conducted Output Power is 0.895mW when the device operates at the separation distance below or equals to 5mm. It is below the SAR exemption limit 4mW.

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