

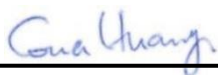
RF EXPOSURE EVALUATION REPORT

FCC ID : 2AXW2-3476
Equipment : Digital Media Receiver
Model Name : C76N8S
Applicant : Calcium Crater LLC
DTC QUADRANT
5445 DTC PARKWAY, PENTHOUSE 4
GREENWOOD VILLAGE, COLORADO, 80111
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA092923-01	Rev. 01	Initial issue of report	Jan. 26, 2021

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Digital Media Receiver
Model Name	C76N8S
FCC ID	2AXW2-3476
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8GHz Band: 5725 MHz ~ 5825 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	WLAN: 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Carlie Tsai

2. Maximum RF average output power among production units

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
	802.11b	CH 1	2412	1Mbps	18.50
		CH 6	2437		18.50
		CH 11	2462		18.00
		CH 12	2467		17.50
		CH 13	2472		14.50
	802.11g	CH 1	2412	6Mbps	17.50
		CH 6	2437		18.50
		CH 11	2462		16.50
		CH 12	2467		14.00
		CH 13	2472		12.00
	802.11n-HT20	CH 1	2412	MCS0	17.50
		CH 6	2437		18.50
		CH 11	2462		16.00
		CH 12	2467		13.50
		CH 13	2472		12.00

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
	802.11a	CH 36	5180	6Mbps	20.50
		CH 44	5220		20.00
		CH 48	5240		20.00
	802.11n-HT20	CH 36	5180	MCS0	20.00
		CH 44	5220		19.50
		CH 48	5240		19.50
	802.11n-HT40	CH 38	5190	MCS0	16.50
		CH 46	5230		19.00
	802.11ac-VHT20	CH 36	5180	MCS0	19.50
		CH 44	5220		19.50
		CH 48	5240		19.50
	802.11ac-VHT40	CH 38	5190	MCS0	16.00
		CH 46	5230		19.00
	802.11ac-VHT80	CH 42	5210	MCS0	15.00

5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
	802.11a	CH 52	5260	6Mbps	19.50
		CH 60	5300		19.50
		CH 64	5320		19.50
	802.11n-HT20	CH 52	5260	MCS0	19.50
		CH 60	5300		19.00
		CH 64	5320		19.00
	802.11n-HT40	CH 54	5270	MCS0	19.00
		CH 62	5310		15.50
	802.11ac-VHT20	CH 52	5260	MCS0	19.50
		CH 60	5300		18.50
		CH 64	5320		18.50
	802.11ac-VHT40	CH 54	5270	MCS0	19.00
		CH 62	5310		15.50
	802.11ac-VHT80	CH 58	5290	MCS0	15.00

5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
	802.11a	CH 100	5500	6Mbps	20.50
		CH 116	5580		20.50
		CH 140	5700		19.50
		CH 144	5720		19.00
	802.11n-HT20	CH 100	5500	MCS0	20.00
		CH 116	5580		20.00
		CH 140	5700		19.00
		CH 144	5720		18.50
	802.11n-HT40	CH 102	5510	MCS0	17.50
		CH 110	5550		19.50
		CH 134	5670		19.00
		CH 142	5710		18.50
	802.11ac-VHT20	CH 100	5500	MCS0	19.50
		CH 116	5580		20.00
		CH 140	5700		19.00
		CH 144	5720		18.50
	802.11ac-VHT40	CH 102	5510	MCS0	17.00
		CH 110	5550		19.50
		CH 134	5670		19.00
		CH 142	5710		18.00
	802.11ac-VHT80	CH 106	5530	MCS0	14.50
		CH 122	5610		19.00
		CH 138	5690		18.50

5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
	802.11a	CH 149	5745	MCS0	19.00
		CH 157	5785		19.00
		CH 165	5825		19.00
	802.11n-HT20	CH 149	5745	MCS0	18.50
		CH 157	5785		18.50
		CH 165	5825		18.50
	802.11n-HT40	CH 151	5755	MCS0	18.00
		CH 159	5795		18.00
	802.11ac-VHT20	CH 149	5745	MCS0	18.50
		CH 157	5785		18.50
		CH 165	5825		18.50
	802.11ac-VHT40	CH 151	5755	MCS0	18.00
		CH 159	5795		17.50
	802.11ac-VHT80	CH 155	5775	MCS0	18.00

Mode	Maximum Output Power (dBm)
Bluetooth BR/EDR	13.00
Bluetooth LE	5.50

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
WLAN2.4GHz Band	3.45	18.50	21.950	0.157	156.675	0.031	1.000	0.031
WLAN5GHz Band	4.57	20.50	25.070	0.321	321.366	0.064	1.000	0.064
Bluetooth	2.78	13.00	15.780	0.038	37.844	0.008	1.000	0.008

4.2. Collocated Power Density Calculation

WLAN Power Density / Limit	Bluetooth Power Density / Limit	Σ (Power Density / Limit) of WLAN+Bluetooth
0.064	0.008	0.072

Note:

1. Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth.
2. Considering the WLAN collocation with the Bluetooth transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.