

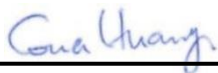
RF EXPOSURE EVALUATION REPORT

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 |
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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

| | Mode | Channel | Frequency (MHz) | Data Rate | Tune-Up Limit |
|-------------|--------------|---------|-----------------|-----------|---------------|
| 2.4GHz WLAN | 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 |



| | Mode | Channel | Frequency (MHz) | Data Rate | Tune-Up Limit |
|----------------|----------------|---------|-----------------|-----------|---------------|
| 5.2GHz WLAN | 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 | |

| | Mode | Channel | Frequency (MHz) | Data Rate | Tune-Up Limit |
|-------------|----------------|---------|-----------------|-----------|---------------|
| 5.3GHz WLAN | 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.