



RF Exposure Evaluation Declaration

FCC ID: 2ASFG-CS1500D

APPLICANT: Carestream Dental LLC

Application Type: Certification

Product: Intraoral Camera

Model No.: CS 1500, Wireless

FCC Classification: Digital Transmission System (DTS)

Test Procedure(s): KDB 447498 D01v06

Test Date: March 05, 2019

Reviewed By:

Kevin Guo

(Kevin Guo)

Approved By:

Robin Wu

(Robin Wu)



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1904WSU018-U2	Rev. 01	Initial report	04-29-2019	Valid

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Intraoral Camera
Model No.:	CS 1500, Wireless
WiFi Specification	802.11g

1.2. Product Specification Subjective to this Report

Frequency Range	802.11g: 2412 ~ 2462MHz
Channel Number:	802.11g: 11
Type of Modulation	802.11g: OFDM
Data Rate:	802.11g: 6/9/12/18/24/36/48/54Mbps
Antenna type	Dipole Antenna
Antenna Gain	1.6dBi

Note: For other features of this EUT, test report will be issued separately.

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	Intraoral Camera
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
802.11g	2412 ~ 2462	15.03	0.0063	1

CONCULISON:

The max Power Density at R (20 cm) = $0.0063\text{mW/cm}^2 < 1\text{ mW/cm}^2$ for 802.11g.

Therefore, the Min Safety Distance is 20cm.

_____ The End _____

Appendix A – EUT Photograph

Refer to “1904WSU018-UE” file.