



Maximum Permissible Exposure Evaluation

FCC ID: 2A8YG-93146

1. General Information about EUT

1.1 Client Information

Applicant	:	Pitsco Education LLC
Address	:	1003 E. Adams Pittsburg, Kansas 66762 USA
Manufacturer	:	Pitsco Education LLC
Address	:	1003 E. Adams Pittsburg, Kansas 66762 USA

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	TETRIX PRIZM PRO
Models No.	:	93146
Model Different	:	N/A
Brand Name	:	N/A
Sample ID	:	HC-C-202411-0142-01-01
Product Description	Operation Frequency:	Bluetooth LE: 2402MHz~2480MHz 2.4G WiFi: 2412MHz~2462MHz
	Antenna Gain:	0dBi PCB Antenna
Power Rating	:	Input: DC 12.0V
Software Version	:	seeker_fw_072424
Hardware Version	:	rev-1.2
Remark: The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.		

2. Method of Measurement for FCC

1. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

2. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

S: power density

P: power input to the antenna

G: power gain of the antenna in the direction of interest relative to an isotropic radiator.

R: distance to the center of radiation of the antenna

Simultaneous transmission MPE Considerations

According to KDB447498: All transmitters and antennas in the host must be either evaluated for MPE compliance, by measurement or computational modeling, or qualify for the standalone MPE test exclusion in section 7.1. Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 .

This means that:

$$\sum \text{ of MPE ratios } \leq 1.0$$



3. Test Result:

Worst MPE Result						
Test Mode	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	Max. ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm ²) [S]
Bluetooth LE	4.30	4±1	5	0	20	0.0002
2.4G WiFi	18.15	18±1	19	0	20	0.0158
Note: The antenna gain used max. antenna gain						

4. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm ²)
300-1,500	F/1500
1,500-100,000	1.0

For: 2402~2480MHz&2412~2462MHz

MPE limit S: 1mW/ cm²

The MPE is calculated as **0.0158mW / cm² < limit 1mW / cm²**.

So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b). The RF Exposure Information page from the manual is included here for reference.

-----END OF THE REPORT-----

