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MPE Report

Manufacturer:	QRC Technologies, A Parsons Company 1191 Central Park Boulevard Fredericksburg, Virginia 22401 USA
Applicant:	Same as Above
Product Name:	BlueFly
Product Description:	BlueFly is a personal smart device locator, capable of detecting devices emitting BLE, Bluetooth BR/EDR, or Wi-Fi. It is a low SWAP/low-cost device and is a commercial drone mountable sensor capable of detecting a range of IoT signals including BLE, Bluetooth BR/EDR and Wi-Fi. The sensor incorporates a GNSS receiver and a long-range wireless communication transceiver (LORA) for independent geolocation and control. Users will interact with the sensor through a CivTak plugin (Android app).
Model:	BlueFly
FCC ID:	2BHXO-Q1700 (host)
Contains FCC ID:	2ABCB-RPICM4
Testing Commenced:	2025-06-19
Testing Completed:	2025-09-22
Summary of Results:	In Compliance The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications and/or manufacturer's statement. Any changes to the design or build of this unit subsequent to this testing may deem it non-compliant.
Standards:	• KDB447498 • FCC 1.1310



Evaluation Conducted by: Erik Tobin, EMC Engineer



Report Reviewed by: Ken Littell, Vice President of Operations

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Note: Complies/Does Not Comply criteria are based upon the following condition: Where the results are compared to published test standard or manufacturer specified limits, the Complies or Does Not Comply opinion is considered without applying the stated measurement of uncertainty.

This report shall not be duplicated except in full without the written approval of F2 Labs.
Reports noted as a revision replace all previously issued reports and/or antecedent report revisions issued under this job number.

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	➤ <u>FCC</u>

1 ADMINISTRATIVE INFORMATION

1.1 Measurement Location:

F2 Labs in Middlefield, Ohio.

Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

1.2 Measurement Procedure:

All measurements were performed according to:

- KDB558074
- FCC 15.247

1.4 Document History

Document Number	Description	Issue Date	Approved By
F2P34169B-05E	First Issue	2025-12-17	K. Littell

2 SUMMARY OF TEST RESULTS

Test Name	Standard(s)	Results
RF Exposure for Device >20cm from Human	KDB447498 FCC 1.1310	Complies

Modifications Made to the Equipment
None

3 ENGINEERING STATEMENT

This report has been prepared on behalf of QRC Technologies, A Parsons Company, to provide documentation for the calculations described herein, based on the measurements taken in supporting Test Reports. This equipment has been tested and calculations were found to comply with KDB447498 and FCC 1.1310. The test results found in this test report relate only to the item(s) tested.

4 EUT INFORMATION AND DATA

4.1 Equipment Under Test:

Product: BlueFly

Model(s): BlueFly

Serial No.: 6004-0002

FCC ID: 2BHXO-Q1700



4.2 Trade Name:

QRC Technologies, A Parsons Company

4.3 Power Supply:

Battery-Operated (5VDC)

4.4 Applicable Rules:

- KDB447498
- FCC 1.1310

4.5 Equipment Type:

Wireless Drone Controller

4.6 Antenna:

Integral

4.7 Accessories:

None

5. RF EXPOSURE FOR DEVICE >20cm FROM HUMAN

FCC Requirements: Distance used is 20cm

Limit: 1,500-100,000 MHz = 1.0mW/cm²
300 -1500 MHz = f/1500 = 0.601 mW/cm² at 900 MHz

Formula used for result:
$$\frac{E.I.R.P.}{4 \pi R^2}$$

Results: E.I.R.P. = 24.6mW for 900 MHz LoRa with -1.73dBi antenna
E.I.R.P. = 25.12mW for 2.4GHz Wi-Fi with -1.41dBi antenna
E.I.R.P. = 27.30mW for Bluetooth with 2.9dBi antenna

MPE for 2.4 GHz WiFi is 0.0050 mW/cm²

$$\frac{25.12\text{mW}}{4 \pi R^2} = \frac{25.12\text{mW}}{5026.55} = 0.0050 \text{ mW/cm}^2$$

Ratio of 2.4 GHz WiFi is $\frac{0.0050}{1} = 0.0050$

MPE for Bluetooth is 0.0054 mW/cm²

$$\frac{27.30\text{mW}}{4 \pi R^2} = \frac{27.30\text{mW}}{5026.55} = 0.0054 \text{ mW/cm}^2$$

Ratio of Bluetooth is $\frac{0.0054}{1} = 0.0054$

MPE for 900 MHz band is 0.0050 mW/cm²

$$\frac{24.6\text{mW}}{4 \pi R^2} = \frac{24.6\text{mW}}{5026.55} = 0.0050 \text{ mW/cm}^2$$

Ratio of 900 MHz band is $\frac{0.0050}{0.601} = 0.0080$

Combined Ratio for all transmitters = **0.0184**

Combined Ratio Limit = 1