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MPE REPORT

Manufacturer: PetroPower, LLC
3003 East 37th Street North, Suite 100
Wichita, Kansas 67219 USA

Applicant: Same as Above

Product Name: Bluetooth Module

Product Description: Bluetooth module used in PetroPower, LLC Edge computer platform products.

Model(s): BT840E

FCC ID: 2BGG6BT840F

Testing Commenced: 2024-06-10

Testing Ended: 2024-06-12

Test Results: In Compliance

The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications. 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:

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Report Reviewed by:

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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.

Site description and attenuation data are on file with the Certification and Engineering Bureau, Industry Canada, Site Number 4730B.

1.2 Measurement Procedure:

All measurements were performed according to:

- KDB558074
- FCC 15.209

1.4 Document History

Document Number	Description	Issue Date	Approved By
F2P32071A-C1A-02E	First Issue	2026-02-23	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



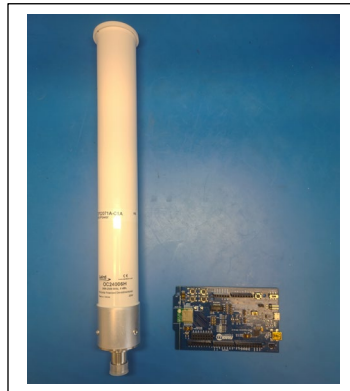
3 **ENGINEERING STATEMENT**

This report has been prepared on behalf of Petropower, LLC 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: Bluetooth Module
Model(s): BT840F
Serial No.: N/A
FCC ID: 2BGG6BT840F

MOLEX 1461530050**LAIRD CC24006H****LAIRD MD24-12**

- 4.2 Trade Name:**
Petropower, LLC
- 4.3 Power Supply:**
5V USB
- 4.4 Applicable Rules:**
- KDB447498
 - FCC 1.1310
- 4.5 Antennas:**

Device	Manufacturer	Model Number	Serial Number	Antenna Gain
Antenna Balanced	Molex	1461530050	None Specified	3.2dBi
Antenna Omni	Laird	CC24006H	None Specified	6dBi
Antenna Mini Directional	Laird	MD24-12	20230500090	11dBi

**4.6 Accessories:**

Device	Manufacturer	Model Number	Serial Number
Radio Module	Fanstel	BT840	E339347
Evaluation PCB	Fanstel	EV-BT840(832)-V4	None Specified
Accessory Software Version:		nRF Connect SDK v2.6.99	

4.7 Cables:

Cable Function	Length	Shielded (Yes/No)
Control/Power	<3m	NO
RF Out	<3m	Yes

4.8 Test Item Condition:

The equipment to be tested was received in good condition.

**5. RF EXPOSURE FOR DEVICE >20cm FROM HUMAN****5.1 Requirements: Distance used is 20cm****Laird Mini-Directional Antenna, Model MD24-12**

Previous MPE had max power of 8.43 dBm with 6dBi antenna gain and 1dB tune up, so previous EIRP was 15.43 dBm. Current product has max power of 8.49 dBm and an antenna with 5dBi higher gain, so power will be 20.49 dBm or 111.94 mW.

FCC	
Limit:	1mW/cm ²
Formula used for result:	$\frac{E.I.R.P.}{4 \pi R^2}$
Results:	E.I.R.P. = 111.94 mW 111.94 mW at the 2480 MHz High Channel (highest) $\frac{111.94 \text{ mW}}{4 \pi R^2} = \frac{111.94 \text{ mW}}{5026.55} = 0.0223 \text{ mW/cm}^2$