MPE REPORT

Manufacturer: Petropower, LLC

3003 East 37th Street North, Suite 100

Wichita, Kansas 67219 USA

Applicant: Same as Above

Product Name: T-Rex Smart Controller

Product Description: Edge compute platform used for oil field telemetry and control

applications.

Model(s): 50003*

*Denotes actual model tested as worst-case representative of product family that includes models T-Rex Smart Controller 50003 and Well-EQ Uplink 11111. Model 11111 does not have

BLE, NFC, or AC/DC power supply.

FCC ID: 2BGG6PP11

Testing Commenced: 2024-05-29

Testing Ended: 2024-09-12

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

Report Number: F2P32071A-02E Page 1 of 8 Issue Date: 2024-09-19



Order No(s): F2P32071A Applicant: Petropower, LLC Model: 50003

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Evaluation Conducted by:

Julius Chiller, Senior Wireless Project Engineer

Report Reviewed by:

Ken Littell, Vice President of Operations

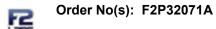
F2 Labs 26501 Ridge Road Damascus, MD 20872 Ph 301.253.4500

F2 Labs 16740 Peters Road Middlefield, OH 44062 Ph 440.632.5541

F2 Labs 8583 Zionsville Road Indianapolis, IN 46268 Ph 317.610.0611

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Report Number: F2P32071A-02E Page 2 of 8 Issue Date: 2024-09-19



Applicant: Petropower, LLC Model: 50003

TABLE OF CONTENTS

1	ADMINISTRATIVE INFORMATION
2	SUMMARY OF TEST RESULTS/MODIFICATIONS
3	ENGINEERING STATEMENT
4	EUT INFORMATION AND DATA
5	RF EXPOSURE FOR DEVICE >20cm FROM HUMAN
	> FCC

Report Number: F2P32071A-02E Page 3 of 8 Issue Date: 2024-09-19

Applicant: Petropower, LLC

Model: 50003

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-02E	First Issue	2024-09-19	K. Littell

042216

Report Number: F2P32071A-02E Page 4 of 8 Issue Date: 2024-09-19



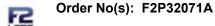
Applicant: Petropower, LLC Model: 50003 Order No(s): F2P32071A

SUMMARY OF TEST RESULTS 2

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

Modifications Made to the Equipment
None

Page 5 of 8 Report Number: F2P32071A-02E Issue Date: 2024-09-19



Applicant: Petropower, LLC

Model: 50003

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.

Report Number: F2P32071A-02E Page 6 of 8 Issue Date: 2024-09-19

Order No(s): F2P32071A Applicant: Petropower, LLC

Model: 50003

EUT INFORMATION AND DATA 4

4.1 **Equipment Under Test:**

> Product: **T-Rex Smart Controller**

50003* Model(s):

> *Denotes actual model tested as worst-case representative of product family that includes models T-Rex Smart Controller 50003 and Well-EQ Uplink 11111. Model 11111 does not have BLE,

NFC, or AC/DC power supply.

CGGSEL Serial No(s).:

Firmware Version: 111

Hardware Version: 46066002 FCC ID: **2BGG6PP11**

4.2 Trade Name: Petropwer, LLC

4.3 **Power Supply:** 120V/60 Hz

4.4 **Applicable Rules:**

• KDB 447498

• FCC 1.1310

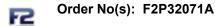
4.5 Antenna: Integral

4.6 Accessories: None

4.7 **Test Item Condition:**

The equipment to be tested was received in good condition.

Report Number: F2P32071A-02E Page 7 of 8 Issue Date: 2024-09-19



Applicant: Petropower, LLC Model: 50003

5. RF EXPOSURE FOR DEVICE >20cm FROM HUMAN

5.1 Requirements: Distance used is 20cm

Bluetooth module with Laird Mini-Directional Antenna, Model MD24-12

Limit:	1mW/cm ²
Formula used for result:	<u>E.I.R.P.</u>
	4 π R2
Results:	E.I.R.P. = 110.41mW at the 2480 MHz High Channel (highest)
	$\frac{110.41 \text{mW}}{4 \text{ m R}^2}$ = $\frac{110.41 \text{mW}}{5026.55}$ = 0.022 mW/cm2
	<u>0.022mW/cm²</u> = 0.022 Ratio
	1mW/cm2

Cellular Modem FCC ID: XMR201903EG25G

Limit:	0.55mW/cm ²
Formula used for result:	<u>E.I.R.P.</u>
	4 π R2
Results:	E.I.R.P. = 1850mW at the 824.2 - 848.8 MHz Band (highest)
	$\frac{1850\text{mW}}{4 \text{ m R}^2}$ = $\frac{1850\text{mW}}{5026.55}$ = 0.368mW/cm2
	0.368mW/cm ² = 0.67 Ratio 0.55mW/cm ²

Limit: 0.98mW/cm² (180/f²)

Formula used for result: $P(dBm)=E(dBuVm')+20LOG(d)-G-104.77=-92.33dBm\ which\ is\ 0.0000000006mW$ 12.44+0+0-104.77=92.33 E.I.R.P. 4 π R2 $Results: E.I.R.P. = 0.0000000006mW\ at\ the\ 13.56\ MHz$ $0.0000000006 = 0.000000006 = 1.1937e-13 = 1.2180e-13\ Ratio$ 4 π R2 = 5026.55 = 0.98

Combined Ratio = 0.022 + 0.67 + 0.00000000001 = 0.70 and is less than 1.