Test Report

Prepared for: Etherstack, Inc

Model: XBR5100P5VI

Description: XBR Base Station Transceiver

FCC ID:2ADAKXBR5100P5VI

Serial Number: 241100135

Project No: p2540016.7

Test Results: Pass

To

FCC Part 1.1310

Date of Issue: June 5, 2025

On the behalf of the applicant:	**Etherstack Inc** **16 Madison Square W. FL12 Suite 1200** **New York, NY 10010**
Attention of:	**Doug Chapman** **Ph: (917) 258-6601** **E-Mail: dougc@etherstack.com**
Prepared By:	**Compliance Testing, LLC** **Mesa, AZ 85204** **(480) 926-3100 phone / (480) 926-3598 fax** **www.compliancetesting.com** **ANAB Cert#: AT-2901** **FCC Site Reg.750616** **ISED Site Reg. #2044A-2**

Greg Corbin

Project Test Engineer

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
Rev 1.0	6/5/2025	Greg Corbin	Original Document

ANAB

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to the joint ISO-ILAC-IAF Communiqué dated January 2009).

The tests results contained within this test report all fall within our scope of accreditation, unless noted below.

Please refer to http://www.compliancetesting.com/labscope.html for current scope of accreditation.

FCC Site Reg. #750616

IC Site Reg. #2044A-2

Non-accredited tests contained in this report:

N/A

EUT Description

Model:	XBR5100P5VI
Serial:	241100135
Firmware:	0.2.04_1
Software:	N/A
Description:	XBR Base Station Transceiver
Additional Information:	The EUT is a 100-watt base station transceiver using FM and C4FM modulation operating in the UHF band as noted in Table 1.
Power	13.8 vdc
Receipt of Sample(s):	5/13/2025
EUT Condition:	**Visual Damage** No **State of Development** Production/Production Equivalent

MPE Evaluation

The EUT is a mobile device used in an Uncontrolled Exposure environment.

Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (ii)	0.3-1.34 MHz:	Limit [mW/cm²] = 100
	1.34-30 MHz:	Limit [mW/cm²] = (180/f²)
	30-300 MHz:	Limit [mW/cm²] = 0.2
	300-1500 MHz:	Limit [mW/cm²] = f/1500
	1500-100,000 MHz	Limit [mW/cm²] = 1.0

Test Data

Worst case RF exposure calculations were calculated using the highest gain antenna, the rated output power.

The lowest frequency was used for the limit calculation.

MPE calculation

Test Frequency, MHz	450
Power,EIRP mW (P)	100000
Antenna Gain Isotropic	3.16 dBi
Antenna Gain Numeric (G)	2.07
Antenna Type	diploe
Distance (R)	20 cm

$S = \frac{P * G}{4\pi r^2}$
Power Density (S) mw/cm^2

Power Density (S) =41.183 mW/cm^2
Limit = (from above table) = 0.300 mW/cm^2

The EUT Power Density of 41.183 mW/cm^2 is over the limit of 0.300 mW/cm^2 with a 3.16 dBi gain antenna at 20 cm distance.

The Minimum Safe Distance was calculated on the next page.

Minimum Safe Distance Evaluation

This is a mobile device used in **Uncontrolled** Exposure environment.

Limits Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)	0.3-1.34 MHz:	Limit [mW/cm²] = 100
	1.34-30 MHz:	Limit [mW/cm²] = (180/f²)
	30-300 MHz:	Limit [mW/cm²] = 0.2
	300-1500 MHz:	Limit [mW/cm²] = f/1500
	1500-100,000 MHz	Limit [mW/cm²] = 1.0

Test Data

Test Frequency, MHz	450
Power, Conducted, mW (P)	100000
Antenna Gain Isotropic	3.16 dBi
Antenna Gain Numeric (G)	2.07
Antenna Type	diploe
Limit (L)	0.300 mW/cm^2

R=√(PG/4πL)			
Distance (R) cm	Power mW (P)	Numeric Gain (G)	Limit (L)
234.4 cm	100000	2.07	0.300

The minimum safe distance is 234.4 cm for a 3.16 dBi gain antenna.

END OF TEST REPORT