

RF Exposure Report

Project Number: 5106021**Quotation Number: SUW-202301003949****Report Number: 5106021EMC05****Revision Level: 0****Client: Aegex Technologies, LLC****Equipment Under Test: Tablet****Model Name: Aegex100H****Model Number: 100H****FCC ID: Contains 2AGVY-100MWBXX01****Applicable Standards: 47 CFR §§ 2.1091 (Mobile)****FCC KDB 447498 D01 General RF Exposure Guidance v06****FCC OET Bulletin 65****Report issued on: 27 August 2024****Result: Compliant**

FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

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TABLE OF CONTENTS

1	GENERAL INFORMATION.....	3
1.1	CLIENT INFORMATION.....	3
1.2	TEST LABORATORY.....	3
1.3	GENERAL INFORMATION OF EUT.....	3
1.4	OPERATING MODES AND CONDITIONS.....	3
2	RF EXPOSURE.....	4
2.1	TEST RESULTS.....	4
2.2	TEST METHOD.....	4
2.3	SINGLE TRANSMISSION RF EXPOSURE LEVELS (mW/cm ²).....	4
2.4	SIMULTANEOUS CONDITIONS.....	5
3	REVISION HISTORY.....	6

1 General Information

1.1 Client Information

Name: Aegex Technologies, LLC
Address: 84 Peachtree Street NW
City, State, Zip, Country: Atlanta, Georgia, 30303, USA

1.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01

1.3 General Information of EUT

Type of Product: Tablet
Model Number: 100H

Frequency Ranges: WLAN 2.4GHz: 2412 – 2484 MHz
WLAN 5GHz: 5160 – 5850 MHz
Bluetooth: 2402 – 2480 MHz

WLAN Main Antenna Model: X1005 (W3006, Pulse), Ceramic chip 2.4/5GHz dual band
*Antenna Gain: 2.42GHz:2.0dBi, 5.15GHz: 3.2dBi, 5.51GHz 4.0dBi,
5.85GHz 5.0dBi

WLAN Aux/BT Antenna Model: X1000 (W3095 Pulse), Ceramic chip 2.4/5GHz dual band
*Antenna Gain: 2.4GHz:1.5dBi, 5.0GHz: 2.9dBi, 5.5GHz 3.9dBi, 6.0GHz 4.3dBi

Max Conducted Output Power: Bluetooth: 10.86 dBm
WLAN 2.4GHz: 16.0 dBm
WLAN 5GHz: 10dBm

**Data was not measured by SGS laboratory and therefore not responsible for accuracy. Data obtained via customer, specification sheet, previous regulatory filing or other.*

1.4 Operating Modes and Conditions

Maximum power levels were utilized for all calculations. Refer to table in section 2.4 for simultaneous combinations.

2 RF Exposure

2.1 Test Results

Test Description	Product Specific Standard	Test Result
RF Exposure	FCC Part 1.1310	Compliant

2.2 Test Method

The formula below calculates power density.

$$S = \frac{PG}{4\pi R^2} \quad \text{Or} \quad S = \frac{EIRP}{4\pi R^2}$$

Where;

S = Power density (mW/cm²)

P = Maximum sourced based average power delivered to antenna port (mW)

G = Maximum power gain of the antenna in the direction of interest relative to an isotropic radiator (dBi)

R = Distance between by-stander and antenna (cm)

EIRP = Equivalent (or effective) isotropically radiated power

2.3 Single transmission RF Exposure Levels (mW/cm²)

FCC - Main Antenna

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP _{avg} /(4πR ²) mW/cm ²	FCC mW/cm ²	% of Limit	Verdict
Type	MHz				dBm	mW					
WLAN 2.4	2400-2483.5	16.0	2.0	0.0	18.0	63	20	0.013	1.00	1%	Pass
WLAN 5 GHz (UNII-1)	5150-5250	10.0	3.2	0.0	13.2	21	20	0.004	1.00	0%	Pass
WLAN 5 GHz (UNII-2)	5250-5700	10.0	4.0	0.0	14.0	25	20	0.005	1.00	0%	Pass
WLAN 5.8 GHz (UNII-3)	5725-5850	10.0	5.0	0.0	15.0	32	20	0.006	1.00	1%	Pass

FCC - Aux Antenna

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP _{avg} /(4πR ²) mW/cm ²	FCC mW/cm ²	% of Limit	Verdict
Type	MHz				dBm	mW					
WLAN 2.4	2400-2483.5	16.0	1.5	0.0	17.5	56	20	0.011	1.00	1%	Pass
Bluetooth	2400-2483.5	10.9	1.5	0.0	12.4	17	20	0.003	1.00	0%	Pass
WLAN 5 GHz (UNII-1)	5150-5250	10.0	2.9	0.0	12.9	19	20	0.004	1.00	0%	Pass
WLAN 5 GHz (UNII-2)	5250-5700	10.0	3.9	0.0	13.9	25	20	0.005	1.00	0%	Pass
WLAN 5.8 GHz (UNII-3)	5725-5850	10.0	4.3	0.0	14.3	27	20	0.005	1.00	1%	Pass

2.4 Simultaneous Conditions

Simultaneous transmissions are evaluated using the equation and highest results from each technology.

$$\frac{S_1}{S_1 \text{ Limit}} + \frac{S_2}{S_2 \text{ Limit}} + \dots + \frac{S_n}{S_n \text{ Limit}} \leq 1.0$$

Simultaneous TX Antenna Combination	
Main	Aux
WLAN 5GHz	WLAN 5GHz
WLAN 5GHz	WLAN 5GHz + BT
WLAN 5GHz	BT
WLAN 2.4GHz	WLAN 2.4GHz
WLAN 2.4GHz	BT

WLAN 5GHz + WLAN 5GHz + BT < 1.0

1% + 1% + 0% < 100%

3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial Release	27 August 2024