

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZCR210402037903 Page: 1 of 7

RF Exposure Evaluation Report

Application No.:	SZCR2104020379AT
Applicant:	AJAX SYSTEMS CYPRUS HOLDINGS LTD
Address of Applicant:	Ifigeneias, 17, Strovolos, 2007, Nicosia Cyprus
Manufacturer:	AJAX SYSTEMS MANUFACTURING LIMITED LIABILITY COMPANY
Address of Manufacturer:	Sklyarenka, 5, Kyiv, 04073, Ukraine
Factory:	AJAX SYSTEMS MANUFACTURING LIMITED LIABILITY COMPANY
Address of Factory:	Sklyarenka, 5, Kyiv, 04073, Ukraine
Product Name:	Panic button
Model No.:	Ajax Button (9NA)
Trade Mark:	AJAX
FCC ID:	2AX5VBUTTON-NA
	47 CFR Part 1.1307
Standards:	47 CFR Part 1.1310
	47 CFR Part 2.1091
Date of Receipt:	2021-04-07
Date of Test:	2021-04-09 to 2021-04-25
Date of Issue:	2021-04-27
Test Result :	PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Keny. XN

Keny Xu EMC Laboratory Manager



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falisfication of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the Astiention: To check the authenticity of testing inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: <u>CN.Doccheck@sgs.com</u> No. Workshop, M-10, Midle Sedion, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国 · 深圳 · 科技图中区M-10祷一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.com



Report No.: SZCR210402037903 Page: 2 of 7

2 Version

	Revision Record							
Version	Chapter	Date	Modifier	Remark				
01		2021-04-27		Original				

Authorized for issue by:			
	Bolisonti		
	Edison Li/Project Engineer	-	
	Eric Fu		
	Eric Fu/Reviewer	-	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-end-Cond

01 - mail: <u>CN_DocCnecKassgs.com</u> No.1 Workshop, M-10, Midde Section, Science & Technology Park, Shenzhen, China 518057 tt (86–755) 26012053 ft (86–755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技园中区M-10栋一号厂房 邮编: 518057 tt (86–755) 26012053 ft (86–755) 26710594 sgs.china@sgs.com



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZCR210402037903 Page: 3 of 7

3 Contents

		Page
1	I COVER PAGE	1
2	2 VERSION	2
3	3 CONTENTS	1
-		
4	4 GENERAL INFORMATION	4
	4.1 GENERAL DESCRIPTION OF EUT	4
	4.2 TEST LOCATION	
	4.3 TEST FACILITY	
	4.4 DEVIATION FROM STANDARDS	5
	4.5 ABNORMALITIES FROM STANDARD CONDITIONS	5
	4.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER	5
5		
	5.1 RF Exposure Compliance Requirement	
	5.1.1 Limits 5.1.2 Test Procedure	00 ∠
	5.1.2 Test Procedure 5.1.3 EUT RF Exposure Evaluation	0
	ט. ו. ג בט ו גר בגףטגעופ בעמוטמוטוו	/



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-end-Cond

01 - mail: <u>CN_DocCnecKassgs.com</u> No.1 Workshop, M-10, Midde Section, Science & Technology Park, Shenzhen, China 518057 tt (86–755) 26012053 ft (86–755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技园中区M-10栋一号厂房 邮编: 518057 tt (86–755) 26012053 ft (86–755) 26710594 sgs.china@sgs.com



Report No.: SZCR210402037903 Page: 4 of 7

4 General Information

4.1 General Description of EUT

Power supply:	DC 3V
Environment:	Uncontrolled Environment
Internal Source:	More than 108MHz
Operation Frequency:	905MHz to 926.5MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK
Number of Channels:	The number of available frequency hopping channels of this device is 103, only 101 channels are used in normal operation and constantly involved, 2 is reserve in case of jamming.
Antenna Type:	РСВ
Antenna Gain:	-4dBi



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx. Attention is drawn to the limitation or liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exconerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this ter report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

or email: <u>CN_Doccheck@sgs.com</u> No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 中国 • 深圳 • 科技园中区M-10栋一号厂房 邮编: 518057 t (86–755) 26012053 f (86–755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210402037903 Page: 5 of 7

4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594 No tests were sub-contracted.

4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC – Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-en-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not excore a transaction from exercising all their rights and obligations under the transaction documents. This document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) test and sub aspmele(s) are retained for 30 days only. Attention: To check the authenticity of testing inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国 • 深圳 • 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 www.sqsqroup.com.cn

sgs.china@sgs.com



Report No.: SZCR210402037903 Page: 6 of 7

5 **RF Exposure Evaluation**

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b) TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)	
(A) Lim	its for Occupational	/Controlled Exposu	res		
0.3–3.0 3.0–30 30–300 300–1500 1500–100,000	614 1842/f 61.4	1.63 4.89/f 0.163	*(100) *(900/f²) 1.0 f/300 5	6 6 6 6 6	
(B) Limits 1	for General Populati	on/Uncontrolled Ex	oosure		
0.0.4.04		4.00	*(100)		

0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula Friis transmission formula: Pd = (Pout*G)/(4* Pi * R²) Where Pd = power density in mW/cm² Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

For Uncontrolled Environment, the MPE limit of 300MHz to 1500MHz is f/1500 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-en-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN. Doccheck@ags.com

No.1 Worksnop, M-10, Miode Section, Science & Technology Park, Shenzhen, China 518057 t (86–755)26012053 f (86–755)26710594 www.sgsgroup.com.ch 中国 • 深圳 • 科技园中区M-10栋一号厂房 邮编: 518057 t (86–755)26012053 f (86–755)26710594 sgs.china@sgs.com



Report No.: SZCR210402037903 Page: 7 of 7

5.1.3 EUT RF Exposure Evaluation

1) Test Results

The max tune-up tolerance power Into Antenna & RF Exposure Evaluation Distance:

Antenna	Max Antenna Gain (dBi)	Max Antenna Gain (Numeric)	Max tune-up tolerance power (dBm)	Max tune-up Tolerance power to Antenna (mW)	Power Density at R = 20 cm (mW/cm²)	Limit (mW/cm ²)	MPE Ratios	Result
1	-4	0.40	1.5	1.41	0.0001	0.6033	0.0002	PASS

Note: Refer to report No. SZCR210402037902 or EUT test Max Conducted Peak Output Power value. The distancer (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement; the limit range of 905MHz-926.5MHz is 0.6033~0.6177 mW/cm², The max PSD should need to be less than or equal to the minimum limit.

-End of Report-



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-en-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not excore a transaction from exercising all their rights and obligations under the transaction documents. This document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) test and sub aspmele(s) are retained for 30 days only. Attention: To check the authenticity of testing inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@egs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国 ·深圳 ·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

6-755) 26710594 sgs.china@sgs.com

www.sgsgroup.com.cn