

COMPATIBILITY TEST REPORT

Compatibility Service Lab

Client : Atmosic Technologies
Brand Name : Atmosic
Model Name : ATM33_EVK
Device Category : BLE HID Remote
Report Date : 2023/06/05
Overall Result : **Pass**

Note:

1. This report will be invalid if reproduced in whole or in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used separately.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.
5. The failure criteria should be based on parametric and functional testing; the curve trace provided in this report is for reference only.



Compatibility Service Lab/ Manager

INTEGRATED SERVICE TECHNOLOGY.

1. Administration Data

Test Lab Information

Test Site	INTEGRATED SERVICE TECHOLGY, Compatibility Service Lab
Test Site Location	TEL: +886-2-27922890 FAX: +886-2-792-5680

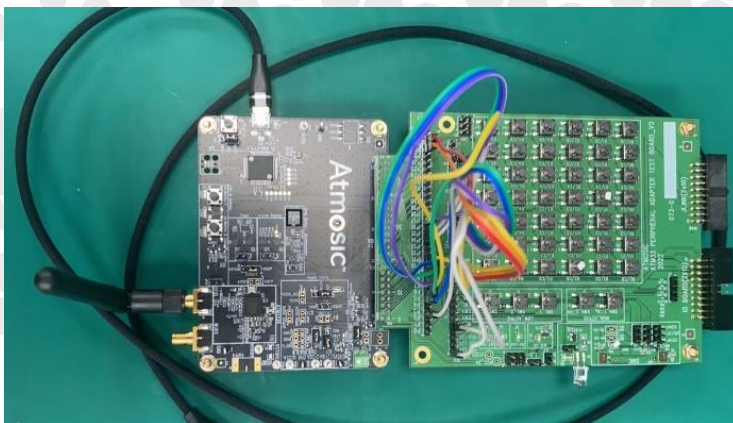
Applicant Information

Company Name	Atmosic Technologies
Contact Person	Frank Ku
Email	fku@atmosic.com
Telephone Number	+886 921881892

Description of Device Under Test (DUT)

Product Feature & Specification	
Device Category	BT HID Remote
Model Name	ATM33_EVK
FW Ver.	FW_20230530
Serial Number	

DUT Photo





Integrated Service Technology Inc.
Signal Integrity Business Unit

Report No. :

Tel: +886-2-27922890 Fax: +886-2-2792-5680
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2. Atmospheric Test Category

- 1) Connection establishment stability (test distance=1M)
- 2) Link layer performance data collection (test distance=1M)
- 3) Connection establishment stability (test distance=10M)
- 4) Link layer performance data collection (test distance=10M)

3. Test Item

Test Item	Test step	Description
TC1	Connection establishment stability (test distance=1M)	<ol style="list-style-type: none"> 1. Remove bond information and enter pairing mode on EVK (long pressing button S8+S25 4 second) 2. Peer device scans ble devices and then connects to the EVK. 3. Wait 5s and check the connection 4. Peer device unpairs the ble device information of the EVK 5. Repeat step 1~4, 10 times <p>Pass: if the peer device connects to the EVK with 10/10 success rate. Fail: write down the success count</p>
TC2	Link layer performance data collection (test distance=1M)	<ol style="list-style-type: none"> 1. Remove bond information and enter pairing mode on EVK (long pressing button S8+S25 4 second) 2. Peer device scans ble devices and then connects to the EVK. 3. Wait 10 min 4. Collect the final teraterm logs <p>copy the latest sync miss log</p>
TC3	Connection establishment stability (test distance=10M)	Same as TC1
TC4	Link layer performance data collection (test distance=10M)	Same as TC2

4. Test Equipment

4.1 Desktop Devices

No	Brand	Model Name	OS	Bluetooth			
				Version	Manufacture	Chipset	FW
1	Apple	Mac Pro 6,1 (Late 2013) A1481 (ME253TAA)	11.4	4.0	Broadcom	20702B0	v150 c 9317
2	Apple	iMac17,1 (Retina 5K, 27-inch, Late 2015) A1419 (MK462TAA)	11.4	4.2	Broadcom	20703A1	v169 c4826
3	Apple	iMac 18,2 (Retina 4K,21.5-inch, 2017) A1418 (MNDY2TAA)	11.4	4.2	Broadcom	20703A2	v100 c4314
4	Apple	iMac 19,2 (Retina 4k, 21.5-inch, 2019) A2116 (MRT32TAA)	11.4	4.2	Broadcom	4364B0	v101 c4416
5	Apple	iMac 20,2 (Retina 5K, 27-inch, 2020) A2115 (Z0ZX001L4)	13.0.1	5.0	Broadcom	4364B3	v91 c4210
6	Apple	iMac 21,1 (Retina 4.5K(Z12S), 2021) A2438 (MGPK3TA/A)	13.0.1	5.0	Broadcom	4350C2	20.1.500.3157
7	Apple	iMac Pro 1,1 27" (2018)(ZOUR00098)	13.0.1	5.0	Broadcom	4364B0	v122 c4438
8	Apple	Mac Studio M1 Ultra (2022)(Z14K000KV)	13.0.1	5.0	Broadcom	4387	20.1.501.6744
9	Apple	Mac mini M2 Pro (2023)(MNH73TA/A)	13.3.1	5.3	Broadcom	4388	20.1.190.854

4.2 Laptop Devices

No	Brand	Model Name	OS	Bluetooth			
				Version	Manufacture	Chipset	FW
1	MSI_Gaming	GS60	Win 10 Home (22H2 (19045.284 6))	4.0	Qualcomm	Atheros AR3012	HCI 6.0
2	Lenovo	ThinkPad X260	Win 10 Home (21H2 (19044.284 6))	4.1	Intel	8260	HCI 8.256
3	Microsoft	Surface Pro 4	Win 10 Home (21H2 (19044.248 6))	4.0	Marvell	AVASTAR	HCI 8.33536
4	HP	Spectre Notebook 13-v019tu	Win 10 Home (22H2 (19045.248 6))	4.2	Intel	8260	HCI 8.256
5	Lenovo	YOGA 910	Win 10 Home (21H2 (19044.236 4))	4.1	Qualcomm	Atheros QCA61	HCI 7.0
6	HP	EliteBook Folio G1	Win 10 Pro (20H2(1904 2.928))	4.2	Intel	8260	HCI 8.256
7	HP	ENVY x360	Win 10 Home (22H2 (19045.248 6))	4.2	Realtek	RTL8822BE	HCI 9.53898
8	DELL	XPS13-9310-P3708STW	Win 10 Pro (21H2 (19044.284 6))	5.1	Intel	AX1650s	HCI 10.256
9	MSI	Modern 14 B11M-033TW	Win 10 Pro (20H2 (19042.123 7))	5.0	Intel	AX201	HCI 10.256

10	Acer	Swift3 SF314-57-57FV	Win 10 Home (22H2 (19045.296 5))	5.0	Intel	AX201	HCI 9.256
11	HP	OMEN by HP 15-dh1008TX	Win 10 Home (22H2 (19045.296 5))	5.0	Intel	AX201	HCI 10.256
12	Lenovo	Legion Y540-15IRH-PG0	Win 10 Home (21H2 (19014.260 4))	4.2	Intel	AC 9560	HCI 10.256
13	ASUS	ZenBook 13 OLED UX325UA	Win 10 Home (21H2 (19044.213 0))	5.0	Intel	AX201	HCI 10.256
14	ASUS	TUF Dash F15 FX516PM	Win 10 Home (21H2 (19044.213 0))	5.1	Intel	AX201	HCI 11.8825
15	MSI	Alpha 17 A4DEK-031TW	Win 10 Home (21H2 (19044.248 6))	5.1	Intel	AX200	HCI 10.256
16	Lenovo	Yoga Slim 7i Pro	Win 11 Home (22H2 (22621.155 5))	5.1	Intel	AX201	22.170.0.2
17	DELL	Inspiron 16 5625-R1508STW	Win 11 Home (22H2 (22621.155 5))	5.2	MediaTek	MT 7921	1.930.3.228
18	Microsoft	Surface Pro 9	Win 11 Home (22H2 (22621.819)	5.3	Intel	AX211	22.150.0.6
19	Microsoft	Surface Laptop 4	Win 11 Home (22H2 (19045.248 6))	5.1	Intel	AX200	22.60.0.6

20	HP	EliteBook 640 14 inch G9 Notebook PC	Win 11 Pro (22H2 (22621.126 5))	5.3	Intel	AX211	22.130.0.2
21	DELL	G15-5525	Win 11 Home (22H2 (22621.141 3))	5.2	MediaTek	MT 7921	1.930.3.287
22	HP	Pro c640 G2 Chromebook (TPN-Q261)	Chrome OS (112.0.561 5.134)	5.0	Intel	AX201	N/A
23	Google	PixelBook Go	Chrome OS (112.0.561 5.134)	5.0	N/A	N/A	N/A
24	ROG	Zephyrus G14	Win 11 Home (22H2 (22621.155 5))	5.2	MediaTek	MT 7922	1.930.2.230
25	Apple	MacBook Pro 15,4 A2159 (2019)	11.6.6	5.0	Broadcom	4377	v73 c141
26	Apple	MacBook 9,1 A1534 (Early 2016)	10.11.6	4.0	Broadcom	4350C1	v82 c5384
27	Apple	MacBook 10,1 A1534 (2017)	10.15.3	4.2	Broadcom	4350	v127 c5602
28	Apple	MacBook Pro 14,3 A1707 (2017) MacBook Pro 13,3 A1707 (2016)	10.15.3 11.4	4.2	Broadcom	20703A2	v91 c49301 v100 c4312
29	Apple	MacBook Air 8,2 A1932 (MVFJ2TA/A) (2019)	10.15.7	4.2	Broadcom	4355	v63 c4999
30	Apple	MacBook Pro 15,1 A1990 (2019)	11.6.7	5.0	Broadcom	4364B0	v87 c4409
31	Apple	MacBook Air 13" (2020) (MVH52TA/A)(HWI D: 9,1)	12.6.1	5.0	Broadcom	4377	81.84.147
32	Apple	MacBook Air 13" (2019)(MVFJ2TA/A) (HWID: 8,2)	12.4	4.2	Broadcom	4350C2	v0 c0
33	Apple	MacBook Pro 13" (2020)(MYD92TA/A) (HWID:17,1)	12.6.1	5.0	Broadcom	4378	19.2.450.22 95

34	Apple	MacBookPro 13" (2020) (MWP72TA/A)(HWI D:16,2)	12.6.1	5.0	Broadcom	4364B3	v72 c4192
35	Apple	MacBook Pro 13" (2019)(MUHN2TA/ A) (HWID: 15,4)	12.4	5.0	Broadcom	4377	v75 c143
36	Apple	MacBook Pro 15" (2018)(MR9Q2TA/ A) (HWID: 15,1)	12.6.1	5.0	Broadcom	4364B0	v107 c4427
37	Apple	MacBook Pro 14" (2021)(MKGP3TA/A) (HWID: 18,3)	13.0.1	5.0	Broadcom	4387	19.5.432.47 40
38	Apple	MacBookAir 14.2 (M2,2022) A2681(MLY33TA/A)	13.2.1	5.0	Broadcom	4387	20.1.501.67 45
39	Apple	MacBookPro 14.7 (M2,2022) A2338 (MNEH3TA/A)	13.0.1	5.0	Broadcom	4378B3	20.1.93.153
40	Apple	MacBookPro 14.5 (M2 Max,2023) A2779(MPHG3TA/ A)	13.3.1	5.3	Broadcom	4388	20.1.190.85 2

4.3 Mobile Devices

No	Brand	Model Name	OS	Bluetooth Version
1	Apple	iPhone XR	iOS 14.1	5.0
2	Apple	iPhone X	iOS 13.5	5.0
3	Apple	iPhone Xs Max	iOS 13.4	5.0
4	Apple	iPhone 11	iOS 15.4	5.0
5	Google	Pixel 5	Android 11	5.0
6	Google	Pixel 4a 5G ver.	Android 11	5.0
7	Google	Pixel 4 XL	Android 10	5.0
8	ASUS	ZenFone 7 Pro	Android 10	5.0
9	ASUS	ROG Phone 3	Android 10	5.1
10	HTC	U20 5G	Android 10	5.0
11	HTC	Desire 20+	Android 10	5.0
12	LG	Velvet 5G	Android 10	5.1
13	LG	V60 ThinQ 5G	Android 11	5.1
14	Microsoft	Lumia 950	Android 10	4.1
15	Nokia	8.3	Android 10	5.0
16	Motorola	One Hyper	Android 10	5.0
17	Samsung	Galaxy A71 5G ver.	Android 10	5.0
18	Samsung	Galaxy Note 10	Android 10	5.0
19	Samsung	Galaxy S20	Android 10	5.1
20	SONY	XPERIA 1 II	Android 10	5.1
21	SONY	XPERIA 5	Android 10	5.0
22	LG	G5	Android 6.0.1	4.2
23	Apple	iPhone 12 (64G) A2403 (MGJ73TA/A)	iOS 15.4	5.0
24	Apple	iPhone 13 Pro Max (128G) A2643 (MLL73TA/A)	iOS 15.4	5.0
25	Apple	iPhone 14 (128GB) A2882	iOS 16.0.2	5.3
26	Samsung	Galaxy S8	Android 9	5.0
27	Samsung	Galaxy S21 FE	Android 12	5.2
28	VIVO	X80 Pro	Android 13	5.2

4.4 Tablet Devices

No	Brand	Model Name	OS	Bluetooth Version
1	Apple	iPad Pro 11" _2020(A2228)_2nd	iOS 16.1.1	5.0
2	Apple	iPad Pro 11" _2021(A2377)_3rd	iOS 16.1.1	5.0
3	Apple	iPad Pro 11" _2022(A2761)_4th	iOS 16.1.1	5.3

5. Test Result

All test equipment is **PASS**

Test Item	Test step	Description	Test Result
TC1	Connection establishment stability (test distance=1M)	<ol style="list-style-type: none"> 1. Remove bond information and enter pairing mode on EVK (long pressing button S8+S25 4 second) 2. Peer device scans ble devices and then connects to the EVK. 3. Wait 5s and check the connection 4. Peer device unpairs the ble device information of the EVK 5. Repeat step 1~4, 10 times <p>Pass: if the peer device connects to the EVK with 10/10 success rate. Fail: write down the success count</p>	Pass
TC2	Link layer performance data collection (test distance=1M)	<ol style="list-style-type: none"> 1. Remove bond information and enter pairing mode on EVK (long pressing button S8+S25 4 second) 2. Peer device scans ble devices and then connects to the EVK. 3. Wait 10 min 4. Collect the final teraterm logs <p>copy the latest sync miss log</p>	Pass
TC3	Connection establishment stability (test distance=10M)	Same as TC1	Pass
TC4	Link layer performance data collection (test distance=10M)	Same as TC2	Pass