

FCC 15.407 NII & RSS-247 DFS Report

for

Amtran Technology Co., Ltd.

**17F., No. 268, Liancheng Rd., Jhonghe District,
New Taipei City 23553, Taiwan, R.O.C.**

Brand : CISCO
Product Name : Video Conferencing Equipment
Model Name : AA70WW
FCC ID : MDZAA70WW
IC : 7825A-AA70WW

**Prepared by: : AUDIX Technology Corporation,
EMC Department**



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TEST REPORT CERTIFICATION

Applicant : Amtran Technology Co., Ltd.
Factory : Cisco Systems, Inc.
Product Name : Video Conferencing Equipment
Model No. : AA70WW
Serial No. : N/A
Brand : CISCO

Applicable Standards:

FCC Rules and Regulations Part 15 Subpart E
(47 CFR FCC Part 15E, §15.407)
RSS-Gen (Issue 4), November 2014
RSS-247 (Issue 2), February 2017
ANSI C63.10:2013
905462 D02 UNII DFS Compliance Procedures New Rules v02
905462 D03 UNII Clients Without Radar Detection New Rules v01r02

Audix Technology Corp. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report. **Audix Technology Corp.** does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Report: 2017. 06. 20

Producer: Annie Yu
(Annie Yu/Administrator)

Signatory: Ben Cheng
(Ben Cheng/Manager)

1. REPORT HISTORY

Revision	Date	Revision Summary	Report Number
0	2017. 06. 20	Original Report.	EM-F170370

2. SUMMARY OF TEST RESULTS

Description	Results
Channel Availability Check Time	N/A
Channel Move Time	N/A, NOTE
Non-Occupancy Period	N/A, NOTE
Non-Associated Client Beacon	N/A, NOTE
Channel Closing Transmission Time	N/A, NOTE
U-NII Detection Bandwidth	N/A
N/A is an abbreviation for Not Applicable, sine the product is client without radar detection function Note: The used antenna of this app has higher gain than approved the original grant and won't have effect on DFS testing.	

3. GENERAL INFORMATION

3.1. Description of Application

Applicant	Amtran Technology Co., Ltd. 17F., No. 268, Liancheng Rd., Jhonghe District, New Taipei City 23553, Taiwan, R.O.C.
Manufacturer	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134, USA
Product	Video Conferencing Equipment
Model	AA70WW
Brand	MDZAA70WW

3.2. Description of EUT

Test Model	AA70WW																								
Serial Number	N/A																								
Power Rating	100-240VAC, Max. 3.5A, 50/60Hz																								
Firmware Version	N/A																								
Sample Status	Production																								
RF Features	WLAN:802.11a/b/g/n/ac Bluetooth: BT and BLE																								
Transmit Type	<table border="1"> <thead> <tr> <th colspan="2">2.4 GHz</th> </tr> </thead> <tbody> <tr> <td>802.11b</td> <td>1T1R</td> </tr> <tr> <td>802.11g</td> <td>1T1R</td> </tr> <tr> <td>802.11n-HT20</td> <td>2T2R</td> </tr> <tr> <td>802.11n-HT40</td> <td>2T2R</td> </tr> <tr> <td>BT</td> <td>1T1R</td> </tr> <tr> <td>BLE</td> <td>1T1R</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">UNII Bands</th> </tr> </thead> <tbody> <tr> <td>802.11a</td> <td>1T1R</td> </tr> <tr> <td>802.11n-HT20/ 802.11ac-VHT20</td> <td>2T2R</td> </tr> <tr> <td>802.11n-HT40/ 802.11ac-VHT40</td> <td>2T2R</td> </tr> <tr> <td>802.11ac-VHT80</td> <td>2T2R</td> </tr> </tbody> </table>	2.4 GHz		802.11b	1T1R	802.11g	1T1R	802.11n-HT20	2T2R	802.11n-HT40	2T2R	BT	1T1R	BLE	1T1R	UNII Bands		802.11a	1T1R	802.11n-HT20/ 802.11ac-VHT20	2T2R	802.11n-HT40/ 802.11ac-VHT40	2T2R	802.11ac-VHT80	2T2R
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802.11ac-VHT80	2T2R																								
AC Power Cord	Unshielded, Detachable, 1.8m (3C)																								
Interface Ports of EUT	One AC power port One LAN port One HDMI port One Audio out port One USB 3.0 port																								

3.3. Antenna Information

No.	Antenna Part Number	Manufacture	Antenna Type	Frequency (GHz)	Max Gain (dBi)
1	RFMTA34071AIMLB702 (ANT 1)	Walsin Technology Corporation	PIFA	2.4 to 2.5	2.6
				5.15 to 5.85	4.77
2	RFMTA340772IMLB701 (ANT 2)		PIFA	2.4 to 2.5	2.81
				5.15 to 5.85	4.92

3.4. EUT Specifications Assessed in Current Report

Mode	UNII Band	Fundamental Range (MHz)	Channel Number
802.11a	I	5180-5240	4
	II-2A	5260-5320	4
	II-2C	5500-5700	11
		5500-5700 ^{NOTE}	8
	III	5745-5825	5
802.11n-HT20/ 802.11ac-VHT20	I	5180-5240	4
	II-2A	5260-5320	4
	II-2C	5500-5720	11
		5500-5720 ^{NOTE}	8
	III	5745-5825	5
802.11n-HT40/ 802.11ac-VHT40	I	5190-5230	2
	II-2A	5270-5310	2
	II-2C	5510-5670	5
		5510-5670 ^{NOTE}	5
	III	5755-5795	2
802.11ac-VHT80	I	5210	1
	II-2A	5290	1
	II-2C	5530	1
	III	5775	1
Remark: UNII Band II (DFS Function, Slave/no In service monitor, no Ad-Hoc mode)			
Note: It is for RSS-247, not include 5600-5650MHz range.			

Mode	Modulation	Data Rate (Mbps)
802.11a	OFDM (BPSK/QPSK/16QAM/64QAM)	Up to 54
802.11n-HT20	OFDM (BPSK/QPSK/16QAM/64QAM)	Up to 144.4
802.11n-HT40		Up to 300
802.11ac-HT20	OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)	Up to 173.3
802.11ac-HT40		Up to 400
802.11ac-VHT80		Up to 866.7

Channel List					
802.11a/802.11n-HT20/802.11ac-VHT20					
UNII Band	Channel Number	Frequency (MHz)	UNII Band	Channel Number	Frequency (MHz)
I	36	5180	II-2C	120 ^{NOTE}	5600
	40	5200		124 ^{NOTE}	5620
	44	5220		128 ^{NOTE}	5640
	48	5240		132	5660
II-2A	52	5260		136	5680
	56	5280		140	5700
	60	5300	III	149	5745
	64	5320		153	5765
II-2C	100	5500		157	5785
	104	5520		161	5805
	108	5540		165	5825
	112	5560			
	116	5580			

Note: Not support for RSS-247.

Channel List					
802.11n-HT40/802.11ac-VHT40					
UNII Band	Channel Number	Frequency (MHz)	UNII Band	Channel Number	Frequency (MHz)
I	38	5190	II-2C	118	5590
	46	5230		126 ^{NOTE}	5630
II-2A	54	5270		134	5670
	62	5310	III	151	5755
II-2C	102	5510		159	5795
		110	5550		

Note: Not support for RSS-247.

Channel List					
802.11ac-VHT80					
UNII Band	Channel Number	Frequency (MHz)	UNII Band	Channel Number	Frequency (MHz)
I	42	5210	II-2C	106	5530
II-2A	58	5290	III	155	5775

3.5. Description of Test Facility

Test Firm Name	:	AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Location & Facility	:	No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
NVLAP Lab. Code	:	200077-0
FCC OET Designation	:	TW1004 & TW1090