

FCC Test Report

Product Name : Dual-band Wireless-N Ethernet Adapter
Trade Name : ASUS
Model No. : EA-N66
FCC ID. : MSQ-EAN66

Applicant : ASUSTeK COMPUTER INC.

Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt : May 09, 2016

Issued Date : May 12, 2016

Report No. : 1650242R-RFUSP56V00

Report Version : V1.0



The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : May 12, 2016

Report No. : 1650242R-RFUSP56V00

Quietek

a  DEKRA company

Product Name : Dual-band Wireless-N Ethernet Adapter
 Applicant : ASUSTeK COMPUTER INC.
 Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan
 Manufacturer : ASUSTeK COMPUTER INC.
 Model No. : EA-N66
 FCC ID. : MSQ-EAN66
 EUT Voltage : AC 100-240V, 50-60Hz
 Testing Voltage : AC 120V/60Hz
 Trade Name : ASUS
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2015
 ANSI C63.10: 2013
 Test Lab : Quietek Hsin Chu Laboratory
 Test Result : Complied

The test results relate only to the samples tested.

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Documented By :



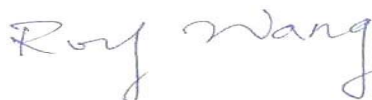
(Carol Tsai / Senior Engineering Adm. Specialist)

Tested By :



(JuBo Shen / Senior Engineer)

Approved By :



(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
11B489R-RFUSP32V01	V1.0	Initial issue of report	Dec. 07, 2011
12B281R-RFUSP46V01	V1.0	Add adapter (DSA-12PFA-09 FUS 120100)	Dec. 14, 2012
1590187R-RFUSP43V00	V1.0	Add three Lever 6 adapters (WA-24Q12FU, DSA-12PFT-12 FUS 120100, WA-12M12FU)	Oct. 14, 2015
1650242R-RFUSP56V00	V1.0	Update WLAN 5G band 1 standard to FCC 15E new rule.	May 12, 2016

Laboratory Information

We, **Quietek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C. : **TAF, Accreditation Number: 3024**
USA : **FCC, Registration Number: 365520**
Canada : **IC, Submission No: 181665 / IC Registration Number: 4075C-4**

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site:<http://www.quietek.com/english/about/certificates.aspx?bval=5>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site :
http://www.quietek.com/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory:

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory:

No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

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1. General Information

1.1. EUT Description

Product Name	Dual-band Wireless-N Ethernet Adapter	
Product Type	WLAN (3TX, 3RX)	
Trade Name	ASUS	
Model No.	EA-N66	
Frequency Range/ Channel Number	IEEE 802.11a/ IEEE 802.11n (20MHz)	5180~5240MHz / 4 Channels
	IEEE 802.11n (40MHz)	5190~5230MHz / 2 Channels
Type of Modulation	IEEE 802.11a/n	Orthogonal Frequency Division Multiplexing (OFDM)
Data Speed	IEEE 802.11a	6Mbps,9Mbps,12Mbps,18Mbps,24Mbps,36Mbps,48Mbps, 54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 23 and bandwidth defined in 802.11n

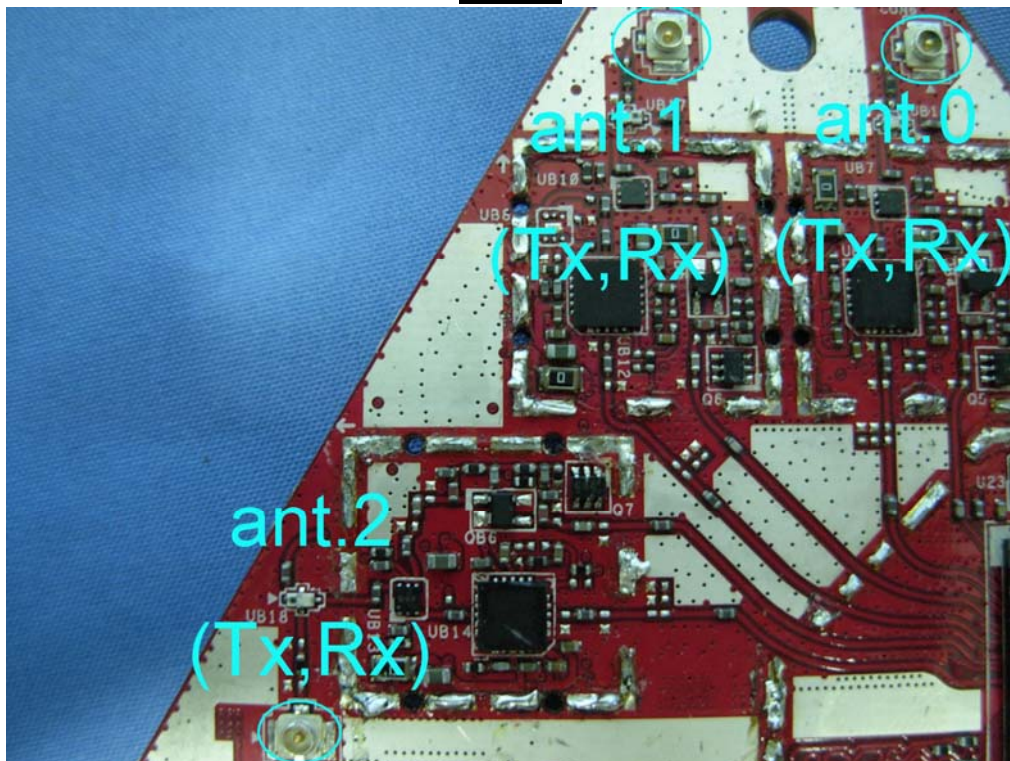
Antenna Information	
Antenna Type	Dipole Antenna
Antenna Gain	4dBi

Accessories Information	
LAN Cable	Non-Shielded, 1.0m
Power Adapter	DVE, DSA-12GX-12 FUS 120120 I/P : 100-240V~50/60Hz 0.3A O/P : +12V \equiv 1A Cable Out: Non-Shielded, 1.5m
Power Adapter	PHIHONG, PSA12A-120 I/P : 100-240V~0.5A 50-60Hz O/P : 12V \equiv 1.0A 27-37VA Cable Out: Non-Shielded, 1.5m, one ferrite core bonded.
Power Adapter	DVE, DSA-12PFA-09 FUS 120100 I/P : 100-240V~50/60Hz 0.5A O/P : +12V \equiv 1A Cable Out: Non-Shielded, 1.5m
Power Adapter (Level 6)	APD, WA-24Q12FU I/P : 100-240V~50-60Hz 0.7A Max. O/P : 12V \equiv 2A Cable Out: Non-Shielded, 1.5m
Power Adapter (Level 6)	DVE, DSA-12PFT-12 FUS 120100 I/P : 100-240V~50/60Hz 0.5A O/P : +12V \equiv 1A Cable Out: Non-Shielded, 1.5m
Power Adapter (Level 6)	APD, WA-12M12FU I/P : 100-240V~, 50-60Hz 0.5A Max. O/P : 12V \equiv 1A Cable Out: Non-Shielded, 1.5m

ANT-TX / Rx & Bandwidth

ANT-TX / RX	SINGLE-TX		THREE-TX		RX	
	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
IEEE802.11a	✓				✓	
IEEE802.11n			✓	✓	✓	✓

TX / RX



IEEE 802.11n

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI (Note1)	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI (Note1)	
								20MHz	40MHz	20MHz	40MHz
8	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.4	30.0
9	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.9	60.0
10	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.3	90.0
11	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.8	120.0
12	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.7	180.0
13	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.6	240.0
14	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.0	270.0
15	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.4	300.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 2 – MCS parameters for TX Antenna number = 2

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI (Note1)	
								20MHz	40MHz	20MHz	40MHz
16	BPSK	1/2	1	156	324	78	162	19.5	40.5	21.7	45.0
17	QPSK	1/2	2	312	648	156	324	39.0	81.0	43.3	90.0
18	QPSK	3/4	2	312	648	234	486	58.5	121.5	65.0	135.0
19	16-QAM	1/2	4	624	1296	312	648	78.0	162.0	86.7	180.0
20	16-QAM	3/4	4	624	1296	468	972	117.0	243.0	130.0	270.0
21	64-QAM	2/3	6	936	1944	624	1296	156.0	324.0	173.3	360.0
22	64-QAM	3/4	6	936	1944	702	1458	175.5	364.5	195.0	405.0
23	64-QAM	5/6	6	936	1944	780	1620	195.0	405.0	216.7	450.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 3 – MCS parameters for TX Antenna number = 3

Symbol	Explanation
R	Code rate
N _{BPSC}	Number of coded bits per single carrier
N _{CBPS}	Number of coded bits per symbol
N _{DBPS}	Number of data bits per symbol
GI	guard interval

IEEE 802.11a & IEEE 802.11n (20MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	40	5200MHz	44	5220MHz	48	5240MHz

IEEE 802.11n (40MHz)

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz

Note:

1. This device is a Dual-band Wireless-N Ethernet Adapter including 2.4GHz b/g/n and 5GHz a/n (3x3) transmitting and receiving function.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart E Paragraph 15.407.
3. Regards to the frequency band operation; the lowest , middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. The function of the 2.4GHz & 5.8GHz transmitting is measured and makes a test report of the report number: 1590187R-RFUSP28V00 & 1650242R-RFUSP56V00-A.
5. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 1590187R-RFUSP01V00 under Declaration of Conformity.
6. For this project, this device no increase power level, so update WLAN 5G band 1 standard to FCC 15E new rule without any tested.

Attachment 1

- **Original Report**