IEEE 802.11a/b/g/n Wireless Dual-Band Network Adapter

IEEE Dual Band 802.11n USB2.0 module for DTV

Model # S BOM-06005-000

Introduction

The Wireless Dual-band USB Network Adapter is another cutting edge introduction in both 5GHz and 2.4GHz wireless communication for home networking devices. Designed for both your home and office, this wireless network adapter provides excellent performance of speed, coverage and security expected by today's wireless users.

WN8722BTAAC-VO is IEEE 802.11n compliant while maintaining full backwards compatibility with the 802.11a, 802.11b and 802.11g standards. It utilizes advanced MIMO (Multiple-In, Multiple-Out) technology to deliver incredible speed and range. The Wireless Dual-band Network Adapter provides an excellent solution for sharing an Internet connection and files such as video, music, photos, and documents.

Hardware

General Overview

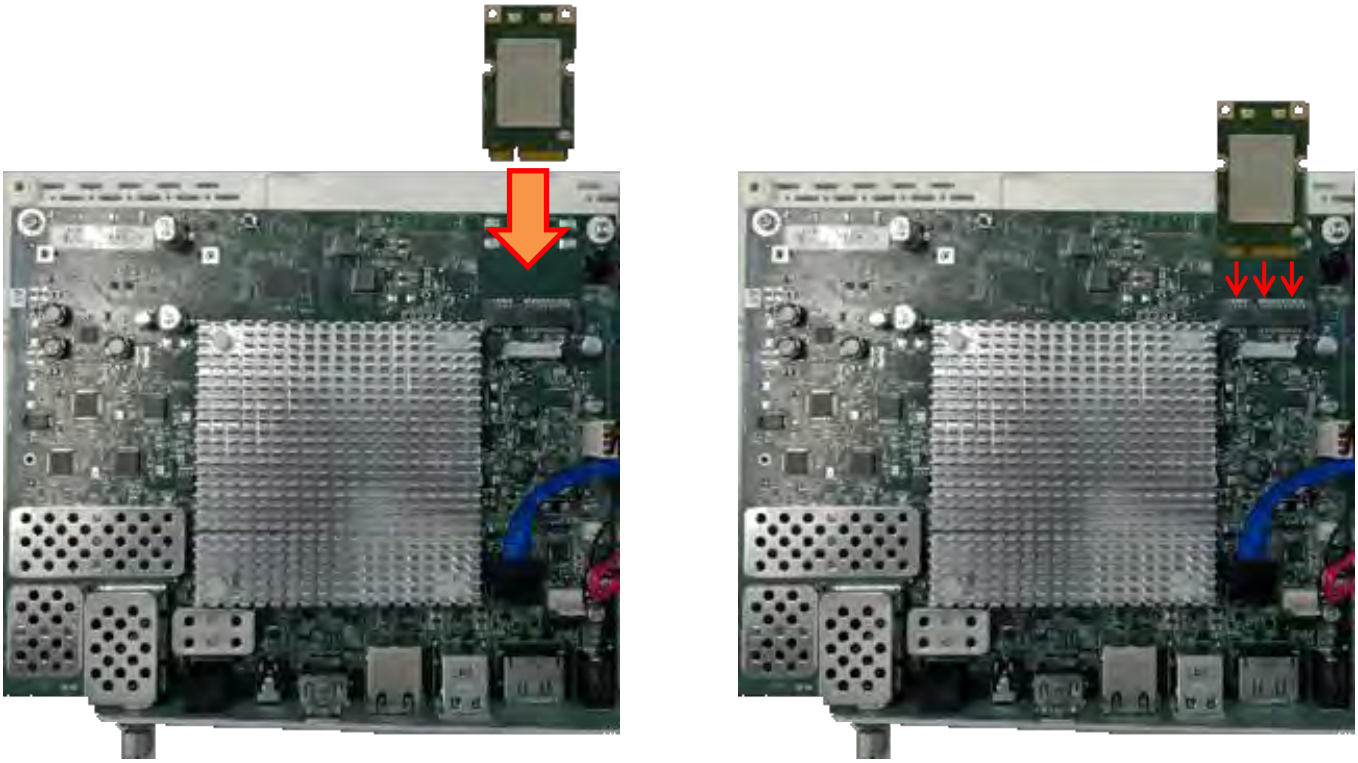
- USB 2.0 Interface
- 3 * antenna connectors

Hardware Architecture

Broadcom 43570 single chip USB2.0

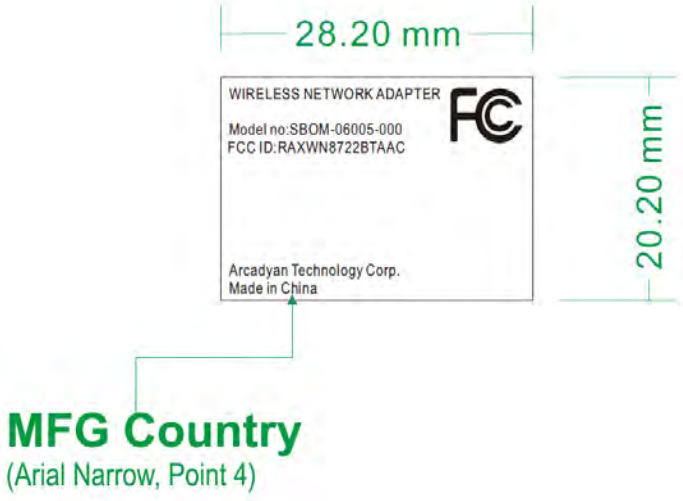
Main Chipset Information

BCM43570: MIMO MAC + Baseband processor and RF with fully forward compatible with IEEE 802.11n draft2.0 standard.



Inserting the USB Network Adapter

ID label



Software

Operating System Supported

Windows 2000, XP, Vista

Wireless Mode Supported

AP (Infrastructure) Client mode

Security

- AP (Infrastructure) mode supports
  - Static WEP that support both 64 and 128 bit keys.
  - WPA(TKIP) with PSK
- Ad-hoc mode supports
  - None (plaintext)
  - Static WEP that supports both 64 and 128 bit keys.

Product Specification

- Frequency Band:

  Draft 802.11n Radio: 2.4 GHz
  802.11g Radio: 2.4 GHz
  802.11b Radio: 2.4 GHz

USA – FCC:	2412~2462MHz (Ch1~Ch11)
Canada – IC:	2412~2462MHz (Ch1~Ch11)
Europe – ETSI :	2412~2472MHz (Ch1~Ch13)
Japan – STD-T66/STD-33:	2412~2484MHz (Ch1~Ch14)

- Operating Channels:

  IEEE 802.11b/g/n compliant:
  11 channels (US, Canada)
  13 channels (ETSI)
  14 channels (Japan)

- Modulation
  DBPSK @1Mbps
  DQPSK@2Mbp
  CCK@5.5/11Mbps
  BPSK@6/9 Mbps
  QPSK@12/18Mbps
  16-QAM@24Mbps
  64-QAM@48/54Mpb and above, RX up to 300Mbps

- Current consumption(5V DC):
  TX: <480mA Max, @MCS15, 40MHz
  RX: <380 mA Max, @MCS15, 40MHz
  Radio OFF mode: <60 mA

- Operating Temperature: 0 ~ 40 °C ambient
- Storage Temperature: -10 ~ 70 °C ambient
- Humidity: 5 ~ 90% and must be non-condensing
- Regulation and certification compliance available:
  - WHQL
  - ETSI/CE
  - ESD: EN61000-4-2, which specifies 4kV contact and 8kV air discharge.

Antenna list:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)		
					2.4GHz	5GHz	Bluetooth
1	arcadyan	120800021300J	PCB Antenna	I-PEX	4.01	7.65	-
2	arcadyan	120800021400J	PCB Antenna	I-PEX	3.77	5.03	-
3	arcadyan	120800021500J	PCB Antenna	I-PEX	-	-	4.66

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible

for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures. Referring to the multi-transmitter policy, ultiple-transmitter(s) and module(s) can be operated simultaneously without C2PC.

This device is restricted for indoor use.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

IMPORTANT NOTE:

This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated. Additional testing and certification may be necessary when multiple modules are used.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: RAXWN8722BTAAC ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.