YV52 Mini ATX-Wireless LAN Card Product Manual

Version 1.0

Revision 1.0

March 2, 2022

Revision History

Issued Date	Revision Version	Change Reason

CONTENT

FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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 or more 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 Radiation Exposure Statement

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all.

Introduction

This specification is applied to the IEEE802.11b/g/n card.

The Combo card is a single-band, single-stream, IEEE 802.11n compliant, MAC/PHY/Radio system-on-a-chip with internal 2.4GHz power Amplifiers (PA). The device enables development of PCI Express, so that IEEE 802.11n WLAN clients can take advantage of the high throughput. It implemented the DSSS, CCK and OFDM base band processing to support IEEE 802.11 b/g/n data rates. It applies BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK and CCK modulation schemes.

Installation Steps

1. Turn off the desktop PC and disconnect the power.
2. Open the main chassis, select an empty PCI-E slot on the motherboard, and remove the baffle of the corresponding slot on the rear panel of the PC.
3. Insert the PCI-E network card into the selected PCI-E slot, and make sure that all the network card pins are in contact with the slot.
4. After inserting, fix the network card on the chassis with screws, and finally close the chassis.
5. Plug the PC back in and turn on the PC.

Specifications

WLAN	Wireless LAN Standard：802.11b/g/n Speed：150Mbps Frequency Range：2412-2462MHz
Interface	1x PCIe
Internal I/O Ports	1x M.2 Connector(s)
Antenna	External Omnidirectional Antenna Color：Black
Size	65.3mm x 38.79mm
Operating Systems	Microsoft® Windows 10 | Linux
Temperature	Operating: -10°C to 60°C Storage: -20°C to 70°C
Humidity	20~80%

WLAN Data Rate

802.11g:
54Mbps with fall back of 48, 36, 24, 18, 12, 9, 6 Mbps
802.11b:
11Mbps with fall back rates of 5.5, 2, and 1 Mbps
802.11n:
MCS0~MCS7 (HT20&HT40@1stream)

Modulation Schemes

802.11g:
64QAM (54 Mbps, 48 Mbps), 16QAM (36 Mbps, 24Mbps),
QPSK (18 Mbps, 12 Mbps), BPSK (9 Mbps, 6 Mbps)
802.11b:
CCK (11 Mbps, 5.5 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps)
802.11n:
MCS0: BPSK, R=1/2;   MCS1:QPSK, R=1/2;
MCS2: QPSK, R=3/4;   MCS3:16QAM, R=1/2;
MCS4: 16QAM, R=3/4; MCS5: 64QAM, R=2/3;
MCS6: 64QAM, R=3/4; MCS7: 64QAM, R=5/6.

Power consumption:

WiFi :
a) WLAN Continuous Tx / BT Idle
b mode 11Mbits/sec   267mA
g mode 54Mbits/sec   261mA
HT20 mode 72Mbits/sec   257mA
HT40 mode 144Mbits/sec   264mA

b) WLAN Continuous Rx / BT Idle
b mode 11Mbits/sec   273mA
g mode 54Mbits/sec   265mA
HT20 mode 72Mbits/sec   259mA
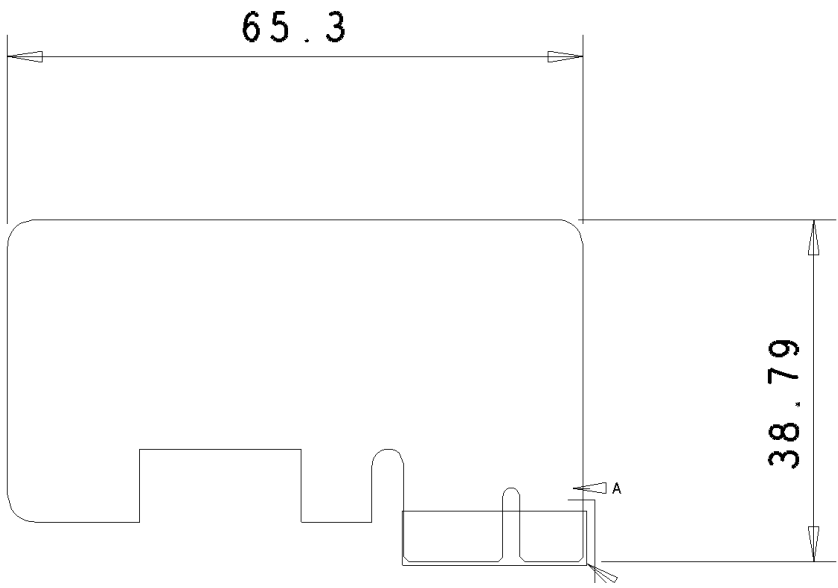HT40 mode 144Mbits/sec   260mA

Transmitter Output Power

Target Power (tolerance +/- 1.5 dBm):

		2.4G	dBm
802.11b		11, 5.5, 2, 1Mbps	Reference test report
802.11g		36, 24,18, 12, 9, 6 Mbps	Reference test report
		54, 48Mbps	Reference test report
802.11n(20MHz)		MCS 4-0	Reference test report
		MCS 7-5	Reference test report
802.11n(40MHz)		MCS 5-0	Reference test report
		MCS 7-6	Reference test report

Schematic diagram

Unit：Millimeter (mm)

65.3

38.79

A

Board Outlines

FCC WARNING

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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 or more 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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.