

User's manual of 802.11n miniPCI

BUFFALO INC.

Broadband Solutions Business Unit

Product Name : 802.11n Wireless miniPCI
Product Number : WZR-G300N
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Rev.	Date	Description of change	Prepared by
A0	2006/04/19	first edition	Nakazono

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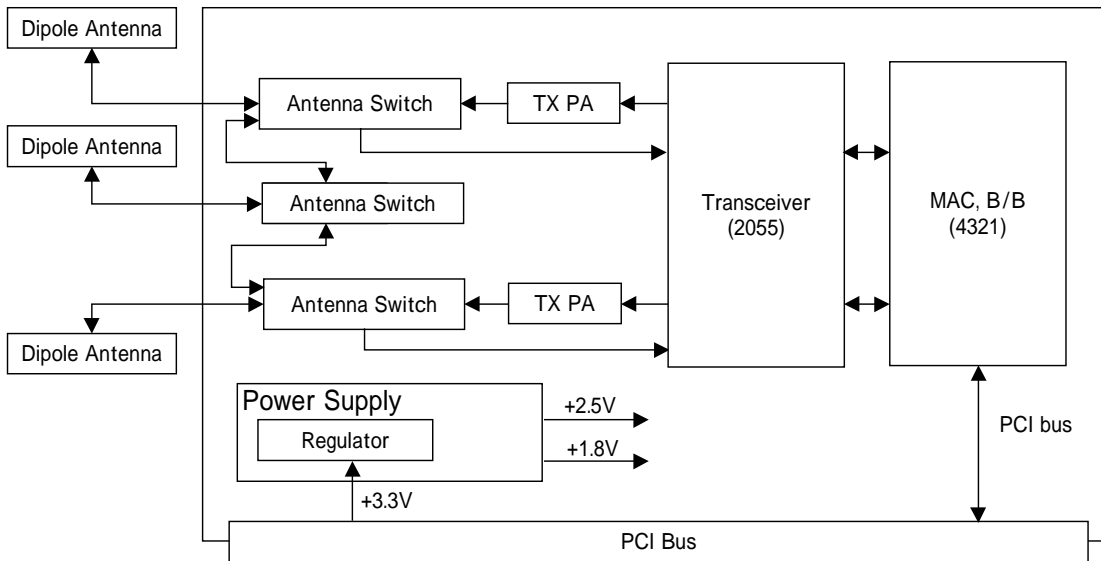
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1. Introduction

This document describes the design specifications of 802.11n Wireless miniPCI. This product guarantees compatibility with IEEE 802.11n draft compliant goods. And this product is compatible with IEEE802.11b/g legacy goods.

2. System block diagram

WZR-G300N BLOCK DIAGRAM



3. Product Spec

3-1. System Configuration

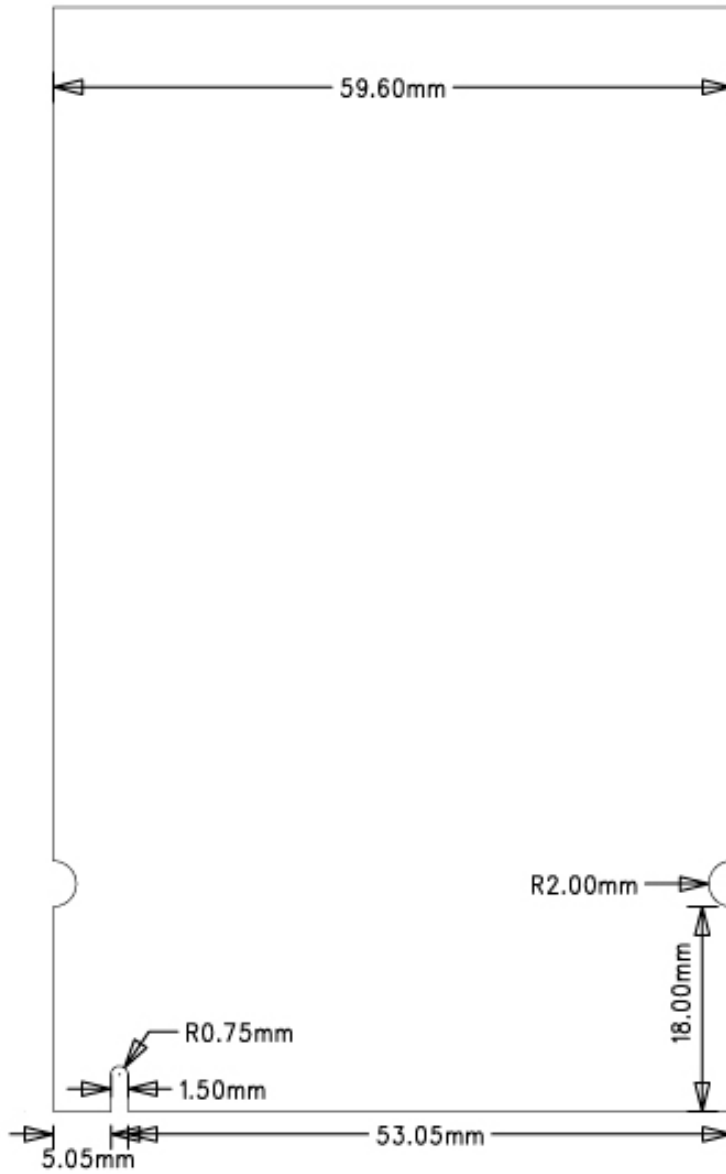
ITEM	Contents
Interface / System bus support	PCI
Standard	IEEE 802.11g, 802.11b
Data rate (Mbps)	54,48,36,24,18,12,9,6,11,5.5,2,1 20MHz BW: 130,117,104,78,52,39,26,13 40MHz BW: 270,243,216,162,108,81,54,27
Modulation	PSK/CCK,DQPSK,DBPSK,OFDM
Network architectures	Infrastructure and ad hoc
Operating channels	2.4GHz: 11 for North America, 13 for Europe, and 14 for Japan
RF Output Power	2x2: 2.4GHz 11n 15 dBm 2x2: 2.4GHz 11g 18 dBm 2x2: 2.4GHz 11b 17 dBm
Antenna connectors	U.FL-R-SMT-1(10) HIROSE or compatibility connector
Power requirements	DC 3.3V
Power consumption	Average standby < 20mW
Security	IEEE 802.1x, WEP/WEP2, WPA/WPA2, TKIP , Weak-key avoidance, CCX, CCX2.0, CCX3.0 , 128bit OCB mode AES, IEEE 802.11i
Certifications	IEEE 802.11-compliant, Wi-Fi CERTIFIED , ACPI power management

3-2. Basic Spec

Basic Spec		Contents
Garver version		WMIB-200GN_V02
Schematic version		WMIB-200GN_V02S
BOM version		970-300-0035R
Weight		25g
Reglation	Japan MIC (Telec)	(apply by Buffalo)
	FCC ClassB	
	CE	
	Wifi	(apply by Buffalo)

4. Outline Dimension

Outline Dimension



Files Name	WMB-200GN_V02	Date	2006/3/20		
Part No	190-X03-8400R	Layer	PAN		
Model No	WMB-200GN	REV	02	UNIT	mm
Drawer	Sonic Lu	View	TOP		

5. Manufacturing Test

The production company must report test result of wireless to BUFFALO in production test.

It must show that a produced product satisfies TELEEC standard.

5-1. Instruction

5-2. Test Configuration

5-3. Test Flow and Criteria

6. Assembly and Label information

6-1. Instruction

6-2. Assembly drawing

6-3. Label Drawing

7. Packaging and Shipment

7-1. Instruction

7-2. Packing drawing

7-3. Shipment method

8. Restrictions about production

8-1. Manufacturers of aluminum electrolytic capacitor which BUFFALO approves

Choose aluminum electrolytic capacitor among the following manufacturers.

凱美電機 (J A M I C O N)

智寶 (T E A P O)

世昕 (L U X O N)

T A I C O N

輝城(L-tec)

8-2. Manufacturers where BUFFALO prohibited use

The aluminum electrolytic capacitor must not use the following manufacturers.

Gloria

LELON(立隆)

Fuhjyyu

The ceramic condenser must not use the following manufacturers.

PanOverSea

TeamYoung (天揚)

The PCB must not use the following manufacturers.

TOPSEARCH

9. 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.

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.

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.

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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Buffalo declares that WZR-G300N (FCC ID: FDI-09101466-0) is limited in CH1~CH11 for 2.4 GHz by specified firmware controlled in U.S.A.

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users (for example: Access point, Router...etc). The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: FDI-09101466-0".

Manual Information That Must be Included

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the users manual of the end product which integrate this module.

The users manual for OEM integrators must include the following information in a prominent location " IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.