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**802.11a/b/g MiniPCI
for the Agency Series PP2170 Laptop
FCC ID: MCLJ07H06901**

Technical Description

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0. Revision History

Date	Change Note	REV Note
Feb 7, 2003	1 st Rev.	0

1. Introduction

Project Name: 802.11a/b/g MiniPCI Module for the Agency Series PP2170 Laptop
FCC ID: MCLJ07H06901

This documentation provides the Technical Description of the 802.11a/b/g MiniPCI Module. It is a confidential document of AMBIT.

2. Technical Description

The J07H069.01 card is an 802.11a/b/g Mini-PCI module for the Agency Series PP2170 Laptop. The module is compatible with the IEEE 802.11a standard and the IEEE 802.11g draft standard, and meets the mechanical specifications of the Type IIIA Mini-PCI form factor. The operational frequency range includes:

5.15~5.25GHz (lower U-NII band) for US/Canada/Japan

5.25~5.35GHz (middle U-NII band) for US/Canada

5.725~5.850GHz for US

2412 ~ 2484MHz ISM band (11 ch. for U.S., 13 ch. for Europe, 14 ch. for Japan)

It is based upon an Atheros Communications AR5001 three-chipset reference design. The three chips include the AR5111 integrated 5GHz CMOS radio transceiver, the AR2111 5GHz/2.4GHz integrated up/down-converter, and the AR5212 MAC/baseband processor.

The rated conducted output power of the 5GHz transmitter when operating in 802.11a mode is **16.55 dBm in the 5.15 to 5.25 GHz band, 17.46 dBm in the 5.25 to 5.35 band and 20.71dbm in the 5.725 to 5.850 GHz band.** The rated conducted output power of the 2.4GHz transmitter when operating in 802.11b CCK mode is **20.08dbm.** The rated conducted output power of the 2.4GHz transmitter when operating in 802.11g OFDM mode is **21.98dbm.** When the J07H069.01 module is installed in the Agency Series PP2170 laptop, each antenna port connector is attached to a stamped metal, PIFA antenna. These antennas are embedded in each side of the laptop display. The peak gains of these antennas vs. frequency are:

Peak gain in the 2.4GHz band is 4.96 dBi.

Peak gain in the 5.1 to 5.35 GHz band is 2.33 dBi.

Peak gain in the 5.47 to 5.850 GHz band is 2.37 dBi.

