802.11 ac PCIe Module

Model Number: NGP1058

Warning Statement

FCC NOTICE

This device 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 device 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 device does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

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

RF Exposure warning
The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.
This device and its antenna(s) must not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures.
Refering to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without C2P.

This device is going to be operated in 5.725~5.85GHz frequency range.

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.

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 200cm 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: HZB-NGP1058W ". 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.

Overview the Product

Introduction

The high-performance Wireless Radio Module is designed for enterprise and public access applications. Embedded with the Atheros chipset, it boasts network robustness, stability and wider network coverage. Based on 802.11n (Draft 2.0), the access point supports high-speed data transmission of up to 800Mbps.

The access point host with this device is capable of operating in different modes, which makes it suitable for a wide variety of wirelessapplications, including long-distance deployments.

Designed with dual polarization high gain antenna it offers a compact, rugged design for outdoor installation and excellent performance..

To protect your security and privacy, the access point with this device is armed with many enhanced and latest wireless security features such as IEEE 802.11i standards, MAC Address Filtering, IEEE 802.1x Authentication and 64/128-bit WEP (Wired Equivalent Privacy) to ensure privacy for the heterogeneous mix of users within the same wireless network.

This radio transmitter FCC ID: HZB-NGP1058W has been approved by FCC to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1.	Mars	MA-WA55-30	External Antenna (Panel)	30dBi
2.	Mars	MA-WB55-20	External Antenna (Sector)	20dBi
3	Andrew	PX3F-52-N7A	External Antenna (Grid DISH)	33.5dBi
4	Smartant	SAA08-220570	External Antenna (Omni)	10dBi
5	Proxim	N/A	External Antenna (Dipole)	5dBi

Features

- Qualcomm-Atheros QCA9882,Peregrine Series

- Maximum 27dBm output power (per chain), 30dBm (aggregate)

- IEEE 802.11ac complaint & backward compatible with 802.11a/n

- 2X2 MIMO Technology & up to 867Mbps

- MiniPCI Express 1.1 interface

- Supports Spatial Multiplexing, Cyclic-Delay Diversity (CDD), low-density parity check (LDPC), Maximal Ratio Combining (MRC), Space Time Block Code (STBC)

- Supports IEEE 802.11d, e, h, I, k, RO, v time stamp, and w standards

- Supports Dynamic Frequency Selection (DFS)

- Cards are individually calibrated for Quality Assurance

- Supported by either CompexWRT with Atheros Reference Wireless Driver OR OpenWRT with ath10k Wireless Driver on WPJ344

FIGURE 1: BLOCK DIAGRAM
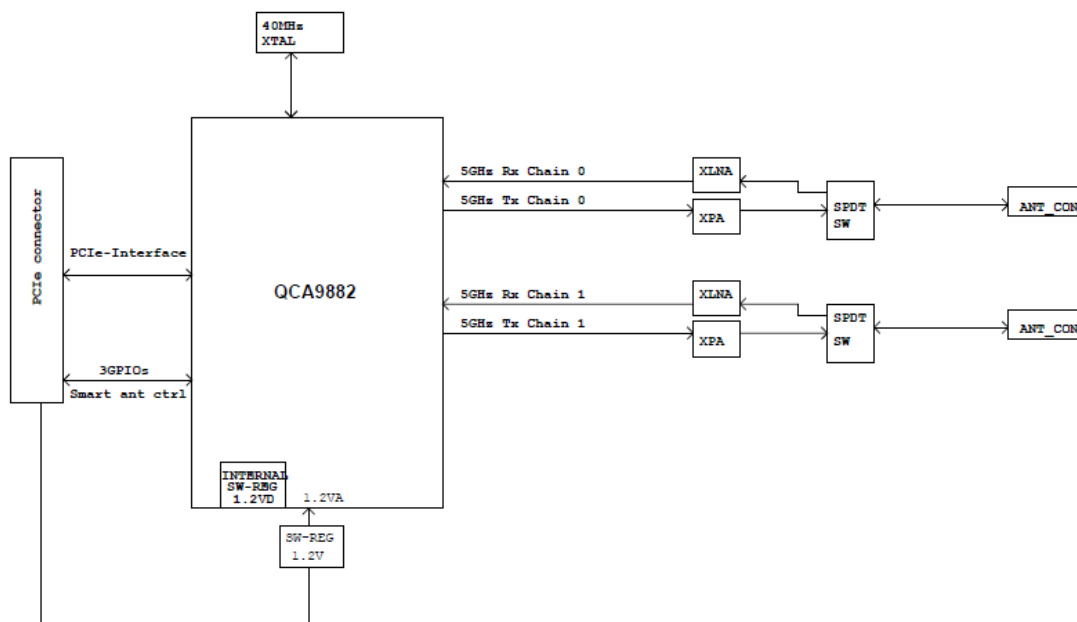
Install in the Host

This device will be build-in into Proxim's Host Tsunami ®, and it should be professional installation.

The host system must be labelled with: Contains FCC ID: HZB-NGP1058W;

Please refer to the user guide for the host on our web site :
http://www.proxim.com/