

**Product External Specifications  
For  
802.11ac PCI Express Card**

**Model Number : 11AC-AR9880**

**Revision: 1.0**

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## **1.0 Scope**

### **1.1 Document**

This document is to specify the product requirements for **802.11ac PCI Express**. This PCI Express card is based on Qualcomm chip that complied with IEEE 802.11ac from 5GHz, and it is also backward compatible to comply with IEEE 802.11a and IEEE 802.11n standard.

### **1.2 Product Features**

- 3x3 802.11ac or 802.11n 5 GHz Wi-Fi PCIe module
- 3x3 MIMO configuration
- 20 MHz, 260Mbps peak PHY rate
- 40 MHz, 600Mbps peak PHY rate
- 80 MHz, 1.3Gbps peak PHY rate in 802.11ac
- Supports WEP, 802.1x, WPA and WPA2 enhanced security
- Friendly user configuration and diagnostic utilities
- Supports PCIe interface .
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## **2.0 Requirements**

The following sections identify the detailed requirements of the **802.11ac PCI Express**.

## 2.1 General Requirements

### 2.2.1 IEEE 802.11a Section

	Feature	Detailed Description
2.2.1.1	Standard	<ul style="list-style-type: none"> <li>IEEE 802.11a</li> </ul>
2.2.1.2	Radio and Modulation Schemes	<ul style="list-style-type: none"> <li>BPSK, QPSK, 16QAM, 64QAM, with OFDM</li> </ul>
2.2.1.3	Data Rate	<ul style="list-style-type: none"> <li>54, 48, 36, 24, 18, 12, 9, and 6 Mbps</li> </ul>
2.2.1.4	Media Access Protocol	<ul style="list-style-type: none"> <li>CSMA/CA with ACK</li> </ul>

### 2.2.2 IEEE 802.11n Section

	Feature	Detailed Description
2.2.2.1	Standard	<ul style="list-style-type: none"> <li>IEEE 802.11n</li> </ul>
2.2.2.2	Radio and Modulation Schemes	<ul style="list-style-type: none"> <li>BPSK, QPSK, 16QAM, 64QAM with OFDM</li> </ul>
2.2.2.3	Data Rate	<ul style="list-style-type: none"> <li>6.5~300 Mbps</li> </ul>
2.2.2.4	Media Access Protocol	<ul style="list-style-type: none"> <li>CSMA/CA with ACK</li> </ul>

### 2.2.3 IEEE 802.11ac Section

#	Feature	Detailed Description
2.2.3.1	Standard	<ul style="list-style-type: none"> <li>IEEE 802.11ac</li> </ul>
2.2.3.2	Radio and Modulation Schemes	<ul style="list-style-type: none"> <li>BPSK, QPSK, 16QAM, 64QAM , up to 256QAM with OFDM</li> </ul>
2.2. 3.3	Data Rate	<ul style="list-style-type: none"> <li>6.5~1300 Mbps</li> </ul>
2.2. 3.4	Media Access Protocol	<ul style="list-style-type: none"> <li>CSMA/CA with ACK</li> </ul>

### 2.2.4 General Section

#	Feature	Detailed Description
2.2.4.1	Antenna Connector	<ul style="list-style-type: none"> <li>Three antenna connectors</li> </ul>
2.2.4.2	Operating Voltage	<ul style="list-style-type: none"> <li>3.3VDC for SOC 4.2VDC for PA</li> </ul>
2.2.4.3	Current Consumption	<ul style="list-style-type: none"> <li>4.5W is use on continue TX</li> </ul>
2.2.4.4	Form Factor and Interface	<ul style="list-style-type: none"> <li>Mini-card form factor with signal of PCI-e Gen1 X1 lane</li> </ul>

## 2.3 Software Requirements

The Configuration Software supports Linux driver. This configuration software includes the following functions:

- **Information**  
Information allows you to monitor network status.
- **Configuration**  
Configuration allows you to configure parameters for wireless networking.
- **Security**  
Supports WEP, WPA-PSK, WPA2-PSK, WPA/WPA2, AES, TKIP and WPS(Wi-Fi Protected Setup)

## 2.4 Mechanical Requirements

#	Feature	Detailed Description
2.4.1	Length	• 50.76 mm (PCB)
2.4.2	Width	• 50.05mm (PCB)
2.4.3	Height	• 3.3mm (PCB)

## 2.7 Environmental Requirements

#	Feature	Detailed Description
2.7.1	Operating Temperature Conditions	• 0 °C to +40°C .