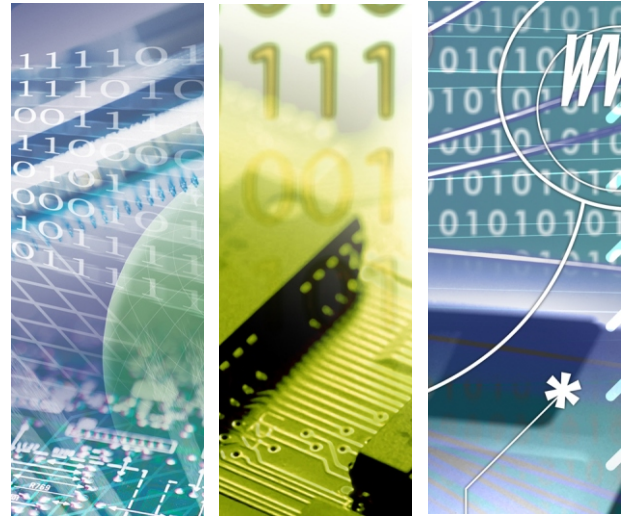




# CPE103A

802.11 abgn/AC, 3T3R, Full miniPCIe Card



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## Introduction of Products

Bointec CPE103A is an 802.11abgn/AC compliant dual-band 3x3 Full mini PCIe Card. It is based on Qualcomm Atheros QCA9880 chipset, designed to deliver wireless data rates of up to 1.3Gbps. The CPE103A supports 20/40/80MHz and 256-QAM to maximize bandwidth efficiency. Each card is individually tested and inspected to ensure the industry's highest quality resulting greater performance and reliability.

CPE103A card gives customers the ability to easily and reliably support applications where this extra bandwidth and performance is required, like deploying HD video over Wi-Fi. Applications include commercial AP, routers, gateways, large-size printers, video devices, medical devices etc.

## Product Highlight

- QCA9880 PCI-e 3X3 solution
- External Front End Module (PA/LNA/TR Switch) for Extreme Performance
- Dual band support switchable
- Support 20MHz, 40MHz and 80MHz Bandwidth
- Support 256 QAM Modulation for 2G & 5G
- Antenna Port Data rate up to 1.3Gbps for 5GHz and 650Mbps for 2.4GHz
- PCI-e Interface, Single power supply 3.3V
- 30x50mm size with the same mounting hole location as the standard full mini PCIe card
- Operation temperature : -20~70 degrees C



# Specification

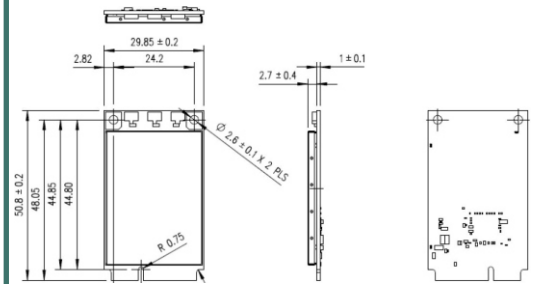
General specifications	
Chipset	Qualcomm Atheros QCA9880
Host Interface	PCI Express mini card v1.2
Radio Specifications	IEEE 802.11 ac/abgn
Antenna Terminal	U.FL connector x3
Operating Voltage	3.3V ± 5%
Environmental specifications	
Operating Temperature & Humidity	Temperature: -20 ~ +70°C
	Humidity: 10 ~ 90% RH
Storage Temperature & Humidity	Temperature: -40 ~ +80°C
	Humidity: 5 ~ 90% RH
Dimensions	29.9 x 50.8 x 4.0mm Thickness = 1.0mm
Connector Type	PCI Express mini card edge

Transmit Power (The max. power may be different depending on local regulations)		Receiver Sensitivity (Typical)	
802.11bg	802.11gn	802.11bg	802.11gn
18dBm @ 1-11Mbps	22dBm @ MCS0 (HT20/40)	-90dBm @ 1-11Mbps	-90dBm/-88dBm @ MCS0 (HT20/40)
18dBm @ 6Mbps	22dBm @ MCS1 (HT20/40)	-92dBm @ 6Mbps	-89dBm/-85dBm @ MCS1 (HT20/40)
18dBm @ 9Mbps	22dBm @ MCS2 (HT20/40)	-91dBm @ 9Mbps	-87dBm/-84dBm @ MCS2 (HT20/40)
18dBm @ 12Mbps	21dBm @ MCS3 (HT20/40)	-90dBm @ 12Mbps	-82dBm/-79dBm @ MCS3 (HT20/40)
18dBm @ 18Mbps	21dBm @ MCS4 (HT20/40)	-87dBm @ 18Mbps	-79dBm/-74dBm @ MCS4 (HT20/40)
18dBm @ 24Mbps	21dBm @ MCS5 (HT20/40)	-84dBm @ 24Mbps	-75dBm/-72dBm @ MCS5 (HT20/40)
16dBm @ 36Mbps	19dBm @ MCS6 (HT20/40)	-81dBm @ 36Mbps	-74dBm/-71dBm @ MCS6 (HT20/40)
15dBm @ 48Mbps	16dBm @ MCS7 (HT20/40)	-76dBm @ 48Mbps	-72dBm/-69dBm @ MCS7 (HT20/40)
13dBm @ 54Mbps		-75dBm @ 54Mbps	
802.11a	802.11a/n(5G)	802.11a	802.11a/n(5G)
16dBm @ 6Mbps	21dBm @ MCS0 (HT20/40)	-87dBm @ 6Mbps	-90dBm/-88dBm @ MCS0 (HT20/40)
16dBm @ 9Mbps	21dBm @ MCS1 (HT20/40)	-86dBm @ 9Mbps	-89dBm/-85dBm @ MCS1 (HT20/40)
16dBm @ 12Mbps	21dBm @ MCS2 (HT20/40)	-85dBm @ 12Mbps	-87dBm/-84dBm @ MCS2 (HT20/40)
16dBm @ 18Mbps	20dBm @ MCS3 (HT20/40)	-82dBm @ 18Mbps	-82dBm/-79dBm @ MCS3 (HT20/40)
16dBm @ 24Mbps	20dBm @ MCS4 (HT20/40)	-79dBm @ 24Mbps	-79dBm/-74dBm @ MCS4 (HT20/40)
15dBm @ 36Mbps	18dBm @ MCS5 (HT20/40)	-76dBm @ 36Mbps	-75dBm/-72dBm @ MCS5 (HT20/40)
14dBm @ 48Mbps	16dBm @ MCS6 (HT20/40)	-71dBm @ 48Mbps	-74dBm/-71dBm @ MCS6 (HT20/40)
13dBm @ 54Mbps	16dBm @ MCS7 (HT20/40)	-70dBm @ 54Mbps	-72dBm/-69dBm @ MCS7 (HT20/40)
802.11ac		802.11ac	
21dBm @ MCS0 (VHT20/40)	21dBm @ MCS0 (VHT80)	-90dBm/-88dBm @ MCS0 (VHT20/40)	-85dBm @ MCS0 (VHT80)
21dBm @ MCS1 (VHT20/40)	21dBm @ MCS1 (VHT80)	-89dBm/-87dBm @ MCS1 (VHT20/40)	-83dBm @ MCS1 (VHT80)
21dBm @ MCS2 (VHT20/40)	21dBm @ MCS2 (VHT80)	-87dBm/-84dBm @ MCS2 (VHT20/40)	-81dBm @ MCS2 (VHT80)
20dBm @ MCS3 (VHT20/40)	19dBm @ MCS3 (VHT80)	-82dBm/-80dBm @ MCS3 (VHT20/40)	-77dBm @ MCS3 (VHT80)
20dBm @ MCS4 (VHT20/40)	19dBm @ MCS4 (VHT80)	-79dBm/-77dBm @ MCS4 (VHT20/40)	-73dBm @ MCS4 (VHT80)
18dBm @ MCS5 (VHT20/40)	17dBm @ MCS5 (VHT80)	-75dBm/-73dBm @ MCS5 (VHT20/40)	-69dBm @ MCS5 (VHT80)
16dBm @ MCS6 (VHT20/40)	16dBm @ MCS6 (VHT80)	-74dBm/-72dBm @ MCS6 (VHT20/40)	-67dBm @ MCS6 (VHT80)
16dBm @ MCS7 (VHT20/40)	16dBm @ MCS7 (VHT80)	-72dBm/-70dBm @ MCS7 (VHT20/40)	-66dBm @ MCS7 (VHT80)
15dBm @ MCS8 (VHT20/40)	14dBm @ MCS8 (VHT80)	-68dBm/-66dBm @ MCS8 (VHT20/40)	-62dBm @ MCS8 (VHT80)
15dBm @ MCS9 (VHT40)	14dBm @ MCS9 (VHT80)	-64dBm @ MCS9 (VHT40)	-61dBm @ MCS9 (VHT80)

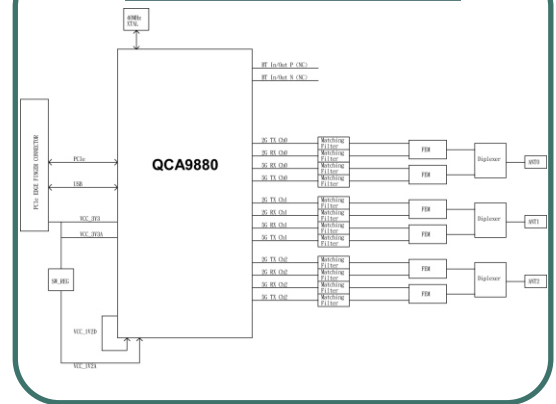
## Product quick glance



## ME Drawing/placement



## Block Diagram



## Ordering Information

TFGA-CPE103A0-11	Finished good non packing, Bointec, CPE103A
T.CPE103A	Singal packed, CPE103A
T.CPE103A-DK	Development Kit, CPE103A



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