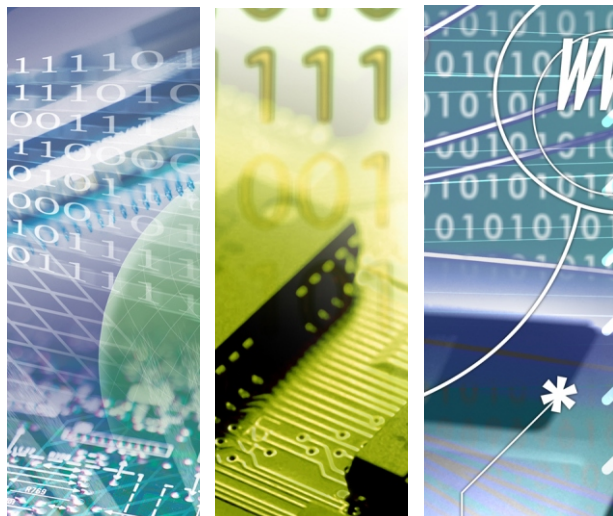




# DPE109A

802.11AC/abgn Wi-Fi with BT4.2 Combo miniPCle



DPE109A

High performance 802.11AC/abgn+BT miniPCle, 2T2R

## Introduction of Products

Bointec DPE109A is a dual band 802.11ac/a/b/g/n Dual-Band WiFi + Bluetooth miniPCle adapter. It is a 2T2R (WiFi/BT co-existence supported) technology, with 20/40/80MHz and 256-QAM to maximize bandwidth. DPE109A lets you move at the speed of life with faster speeds (up to 867 Mbps, 1~3Mbps EDR for Bluetooth), higher capacity, broader coverage and longer battery life. Dramatically reshapes your connected experience.

Bointec DPE109A incorporated with advanced security encryption, such as WEP, WPA, WPA2, and 802.1x for secure wireless connection.

Bointec DPE109A also supports the latest Bluetooth 4.2 specification, which includes both High Speed and Low-Energy operation to extend personal area connectivity to a variety of devices.

DPE109A also delivers superior WLAN/Bluetooth coexistence to ensure the best possible wireless experience. DPE109A A offers advanced algorithms developed to mitigate interference and takes advantage of the physical proximity of the WLAN and Bluetooth radios to provide maximum performance.

## Product Highlight

- IEEE Standards Support, 802.11a, 802.11b, 802.11g, 802.11n and 802.11ac
- Wi-Fi using Low power PCI Express interface
- Enterprise level security supporting: WPA, WPA2
- Two-stream spatial multiplexing up to 867Mbps data rate
- Main Chip:QCA6174A-5
- Bluetooth V4.2, V4.1, V4.0 LE, V3.0+HS, Bluetooth V2.1+EDR system, backward compatible with BT version of 1.1, 1.2 and 2.0
- BT supports Class I (Output power up  $\leq +10$  dBm)
- BT transmission speed including 1M, 2M and 3Mbps EDR operations
- Support for Simple Pairing (SP) and Enhanced Inquiry Response (EIR) function
  - Support for SCATTERNET and PICONET
- HCI USB interface to work with Windows upper layer stack
- Operates at ISM frequency Band(2.4/5GHz)



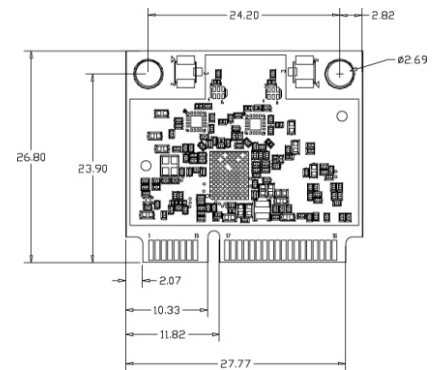
# Specification

Standard	IEEE802.11ac, IEEE802.11a, IEEE802.11b, IEEE 802.11g, IEEE 802.11n
Bus Interface	Low Power PCI Express
Data Rate	802.11a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: MCS 0 to 15 for HT20MHz, MCS 0 to 15 for HT40MHz, 802.11ac: MCS 0 to 8 for HT20MHz MCS 0 to 9 for HT40MHz MCS 0 to 9 for HT80MHz
Media Access Control	CSMA/CA with ACK
Modulation Techniques	802.11ac: 256QAM, 64QAM, 16QAM, QPSK, BPSK 802.11a: 64QAM, 16QAM, QPSK, BPSK 802.11b: CCK, DQPSK, DBPSK 802.11g: 64QAM, 16QAM, QPSK, BPSK 802.11n: BPSK, QPSK, 16QAM, 64QAM
RF Output Power	2.4GHz: 802.11b : 18 dBm±2dB 2.4GHz: 802.11n : 14 dBm±2dB 5GHz: 802.11a : 13 dBm±2dB 5GHz: 802.11ac : 10 dBm±2dB (for detail, check specification document)
RF Sensitivity	11a,20MHz:- MCS=0 PER @ -90 dBm, typical 11n,20MHz:- MCS=0 PER @ -90 dBm, typical 11b,20MHz@8%PER:- 11Mbps PER @ -91 dBm, typical (for detail, check specification document)
Network Architecture	Ad-hoc mode (Peer-to-Peer) Infrastructure mode
Security	WEP 64&128bit, WPA, WPA-PSK, WPA2, WPA2-PSK, WPS, IEEE 802.1X, IEEE 802.11i
<b>Bluetooth</b>	
Standard	Bluetooth V4.1, V4.0LE, V3.0+HS, V2.1+EDR,
Bus Interface	USB1.1
Data Rate	1 Mbps, 2Mbps and Up to 3Mbps
Modulation Scheme	GFSK, π/4-DQPSK and 8-DPSK
Frequency Range	2.402~2.480 GHz
Transmit Output Power	0? Output Power ? +10; Class 1Device
Receiver Sensitivity	< 0.1% BER at -70dBm
Software	BluetoothSuite
<b>Electronics characteristics</b>	
Operating Voltage	3.3 V ±5% I/O supply voltage
OS Supported	Linux/Win7/Win8/Win10
Antenna Type	U.FL connectors x 2
Operating Temperature	0 ~ +70 C
Storage Temperature	-40 ~ +80 C
Operating Humidity	5%~95%, non-condensing
Storage Humidity	5~95%, non-condensing

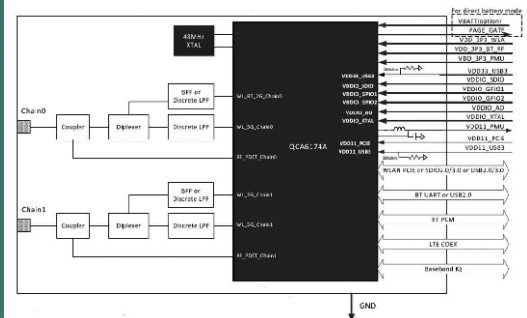
## Product quick glance



## ME Drawing/placement



## Block Diagram



## Ordering Information

PART NUMBER	DESCRIPTION
T.DPE109A	DPE109A, Single packed
T.DPE109A-DK	DPE109A-DK, development kit packed
TFGA-DPE109A0-11	Finished non packaing,Bointec,DPE109A



We are Your Partner more than Business



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