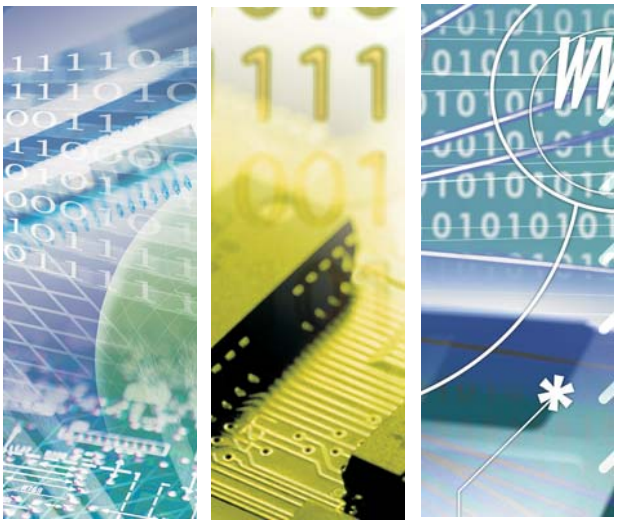
DGF104A

802.11AC/abgn Wi-Fi with BT4.2 NGFF Card



DGF104A

802.11abgn/AC+BT4.2, 2T2R, M.2 2230, QCA6174A-5

Introduction of Products

Bointec DGF104A is a Dual-Band 802.11ac/a/b/g/n WiFi + Bluetooth NGFF adapter. It is a 2T2R (WiFi/BT co-existence supported) technology, with 20/40/80MHz and 256-QAM to maximize bandwidth. Bointec DGF104A 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.

As usual, DGF104A incorporated with advanced security encryption, such as WEP, WPA, WPA2, and 802.1x for secure wireless connection

Product Highlight

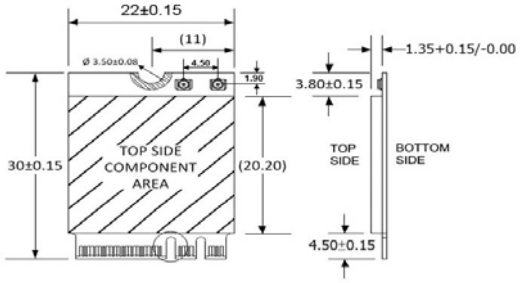
- Main Chip:QCA6174A-5
- Bluetooth V4.2, V4.1, V4.0 LE, V3.0+HS, Bluetooth V2.1+EDR system, backward compatible with BT version of 1.1, 1.2 and 2.0
- BT supports Class I (Output power up <=+10 dBm)
- BT transmission speed including 1M, 2M and 3Mbps EDR operations
- Support for Simple Pairing (SP) and 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)
- 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
- With industrial temperature grade support

Specification

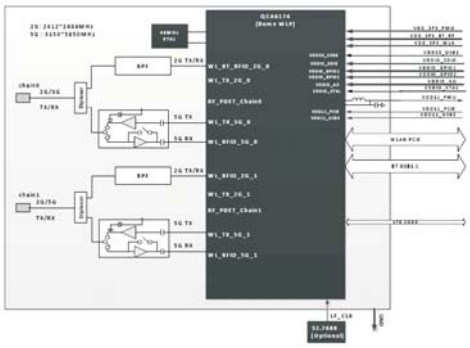
Data Rate	802.11a: 54, 48, 36, 24, 18, 12, 9, 6 Mbps
	802.11b: 11, 5.5, 2, 1 Mbps
	802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps
	802.11n: MCS 0 to 15 for HT20MHz,
	MCS 0 to 15 for HT40MHz,
	802.11ac: MCS 0 to 8 for HT20MHz
	MCS 0 to 9 for HT40MHz
	MCS 0 to 9 for HT80MHz
Media Access Control	CSMA/CA with 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
Bluetooth	
Standard	Bluetooth V4.2, 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 dBm; Class 1 Device
Receiver Sensitivity	< 0.1% BER at -70dBm
Software	BluetoothSuite
Electronics characteristics	
Operating Voltage	3.3 V ±5% I/O supply voltage
OS Supported	Linux/Win7/Win8/Win10
Antenna Type	MHF4 connectors x 2
Operating Temperature	-40 ~ +85 ℃
Storage Temperature	-40 ~ +105 ℃
Operating Humidity	5%~95%, non-condensing
Storage Humidity	5%~95%, non-condensing

Product quick glance

ME Drawing/placement



Block Diagram



Ordering Information

T.DGF104A	DGF104A, Single packed
TFGA-DGF104A0-14	Finished non packaing,Bointec,DGF104A (MP)

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