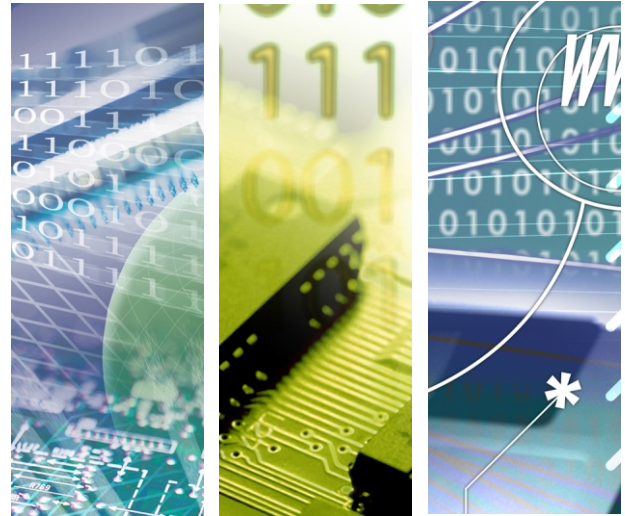
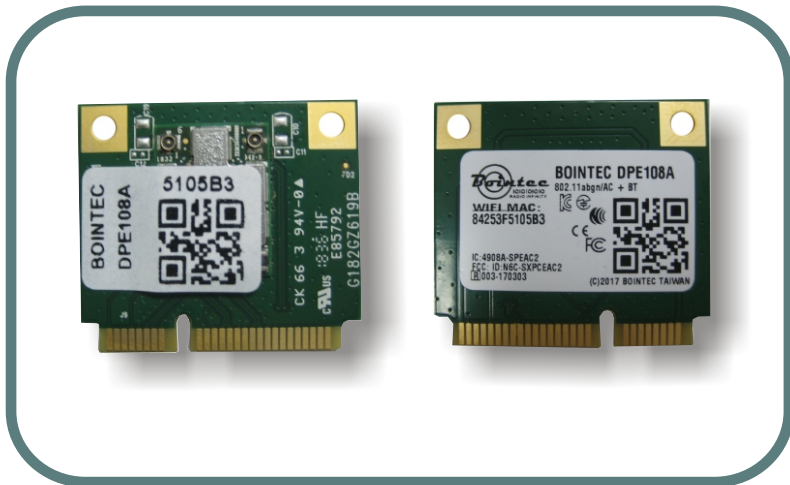




DPE108A

802.11abgn/AC 2T2R + BT4.2 combo miniPCle



DPE108A

802.11abgn/AC+BT4.2, 2T2R, miniPCle, QCA6174A-5 Solder down module

Introduction of Products

Bointec DPE108A is a dual band 802.11ac/a/b/g/n WiFi + Bluetooth 4.2 miniPCle Card. It is a 2T2R (WiFi/BT co-existence supported) technology, with enterprise level security supporting: WPA, WPA2. Bointec DPE108A 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.

Higher throughput wireless networking-- adopting the latest 802.11ac solution, Bointec DPE108A is ideal for next-generation high throughput enterprise networking solution.

Bointec DPE108A incorporated with advanced security encryption, such as WPA, WPA2, and 802.1x for secure wireless connection.

Product Highlight

Wi-Fi Features:

- Operate at ISM frequency Band (2.4/5GHz)
- Support IEEE 802.11ac, 802.11a, 802.11b, 802.11g and 802.11n
- Wi-Fi using low power PCIe (w/ L1 sub-state) interface
- Enterprise level security supporting:
 - HW: 64/128-bit WEP, CKIP, TKIP and AES-CCMP encryption
 - SW: WPA, WPA2, IEEE 802.1x, FIPS140-2
- Support 2 transmission and 2 receiving, Transmission rate can up to 867Mbps(Physical Rate) in up & downstream
- Advanced features including:
 - Maximal Likelihood (ML) decoding
 - Low-Density Parity Check (LDPC)
 - Space Time Block Code (STBC)
 - Tx Beamforming (TxBF)

BT Features:

- Bluetooth V4.2, V4.1, V4.0 LE, V3.0+HS, Bluetooth V2.1+EDR system, backwards compatible with BT version of 1.1, 1.2 and 2.0
- Support Class I (TX power maximum to +10dBm)
- BT transmission 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

Common Features:

- Form Factor: miniPCle
- Support for BT & WLAN Co-existence
- RoHS Compliance
- Halogen Free Compliance



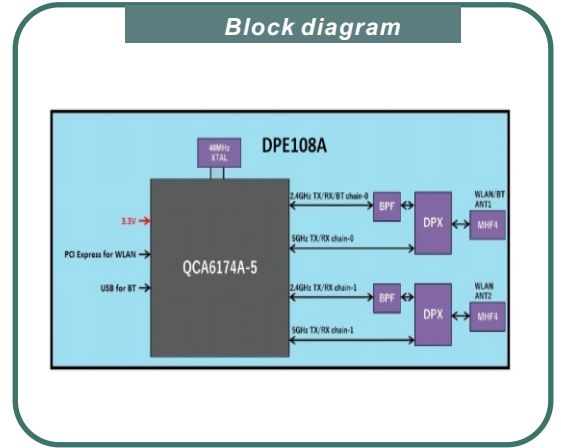
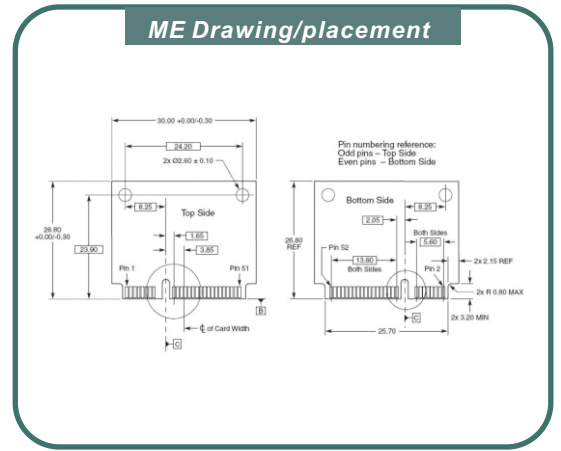
Specification

WiFi							
Standard	IEEE 802.11ac, IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n						
Bus Interface	Low power PCI Express (w/ L1 sub-state)						
Operating Frequency Range	2.4GHz	Band	Modes	Min	Max	Units	Remarks
		11b		2412	2472	MHz	US: 2412~2462MHz
		11g/n/ac 20MHz		2412	2472	MHz	EU: 2412~2472MHz
	11g/n/ac 40MHz		2422	2462	MHz	JP: 2412~2472MHz	
	5GHz	11a/n/ac 20MHz		5180	5825	MHz	US: W52/W53/W56/W58
		11n/ac 40MHz		5190	5795	MHz	EU: W52/W53/W56
11ac 80MHz			5210	575	MHz	JP: W52/W53/W56	
Frequency Step	2.4GHz	11b/g/n	5		MHz		
		11a/n/ac 20MHz	20		MHz		
	5GHz	11n/ac 40MHz	40		MHz		
		11ac 80MHz	80		MHz		
Data Rate	11b	1,2,5,5L,5,5S,11L,11S			Mbps		
	11a/g	6,9,12,18,24,36,48,54			Mbps		
	11n	MCS0,1,2,3,4,5,6,7			—	1 Stream for HT20/HT40MHz	
	11n	MCS8,9,10,11,12,13,14,15			—	2 Stream for HT20/HT40MHz	
	11ac	MCS0,1,2,3,4,5,6,7,8,9			—	MCS0~8 for HT20MHz; MCS0~9 for HT40/HT80MHz	
Modulation Type	11b	DSSS(DBPSK, DQPSK, CCK)			—		
	11a/g/n	OFDM(BPSK, QPSK, 16QAM, 64QAM)			—		
	11ac	OFDM(BPSK, QPSK, 16QAM, 64QAM, 256QAM)			—		
Encryption	RC4	128		bits			
	AES	128		bits			
Media Access Control	CSMA/CA with ACK						
Network Architecture	Ad-hoc mode (Peer-to-Peer); Infrastructure mode						
Security	HW	64/128-bit WEP, CKIP, TKIP and AES-CCMP encryption					
	SW	WPA, WPA2, IEEE 802.1x, FIPS 140-2					

Bluetooth					
Standard	Bluetooth V4.2, V4.1, V4.0LE, V3.0+HS, V2.1+EDR				
Bus Interface	USB 1.1				
Operating Frequency Range	Mode	Min	Max	Units	Remarks
	BR/EDR/LE	2402	2480	MHz	
Frequency Step	BR/EDR	1		MHz	Ch 1~ Ch 79
	LE	2		MHz	Ch 0~ Ch 39
Data Rate	1Mbps, 2Mbps and up to 3Mbps			Mbps	
Modulation Type	GFSK(1Mbps), π/4-DQPSK(2Mbps) and 8-DPSK(3Mbps)				
Packet Type	Common	NULL, POLL, FHS			—
	ACL	DM1, DM3, DM5, AUX1, DH1, DH3, DH5, 2DH1, 2DH3, 2DH5, 3DH1, 3DH3, 3DH5			—
		SCO			HV1, HV2, HV3, DV, EV3, 2EV3
	Encryption	E0	128		bits
AES		128		bits	LE

Electronics Characteristics	
Operating Voltage	3.3 V ±5% I/O supply voltage
OS Supported	Microsoft Windows/Linux/Android
Antenna Type	Dual IPEX Antenna Connectors

Environmental characteristics					
Items	Specifications			Units	Remark
	Min.	Typ.	Max.		
Operating Temperature	-20	—	+70	°C	Ambient temperature after assembled with powered
Operating Humidity	5	—	90	%RH	Non condensing after assembled with powered
Assembled storage temperature	-40	—	+80	°C	After assembled with no-powered
Assembled storage humidity	5	—	95	%RH	Non condensing after assembled with no-powered
Storage temperature	+5	—	+35	°C	Packaged. Apply MSL after unpackaged
Storage humidity	20	—	60	%RH	Non condensing Packaged. Apply MSL after unpackaged
Moisture Sensitivity Level	3			—	Comply with IPC/JEDEC-STD-033C



Ordering Information	
PART NUMBER	DESCRIPTION
T.DPE108A-DK	DPE108A development kit packed
T.DPE108A	DPE108A, single packed
TFGA-DPE108A0-11	Finished non packaging, DPE108A

Bointec Authorized Distributer



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