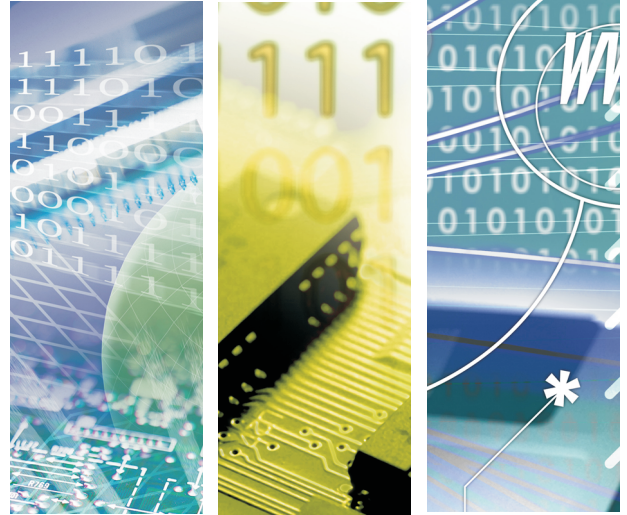
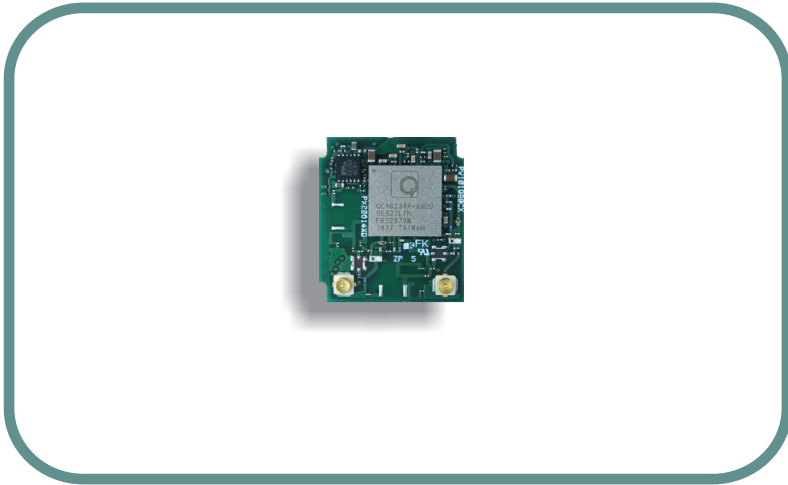




# CFN906A

IEEE 802.11a/b/g/n Wi-Fi SiP Module



CFN906A

2.4GHz & 5GHz Dual Band IEEE802.11abgn, Bluetooth 4.0+LE Dual mode and SDIO2.0

## Introduction of Products

CFN906A is the radio module which supports Dual Band IEEE802.11abgn radio module, supporting Bluetooth 4.0+LE Dual mode and SDIO2.0. It has both the board to board (B2B) and direct solder mount (SMT) options for connections to the host board.

This module complies with EU RoHS Directive 2011/65/EC(Lead Free). It features the QCA6234X SiP module which contains a MAC/BBP chipset, 2.4GHz and 5GHz RF front end circuits. Also this module supports high speed 2x2 MIMO and 40MHz band width mode for only 5GHz.

## Product Highlight

- IEEE 802.11a/b/g/n conformity (2.4GHz & 5GHz)
- Supports IEEE802.11e, IEEE802.11d and IEEE 802.11h
- 2 spatial data stream system (2T2R)
- 2.4 GHz : Support 20 MHz bandwidth mode ( 150 Mbps)
- 5 GHz : Support 20/40 MHz bandwidth mode (300 Mbps)
- Bluetooth 4.0 BR/EDR/LE Smart Ready compatible. Backward-compatible to 1.x, 2.x, 3.0.
- SDIO2.0 as the Wireless LAN host interface
- UART as the Bluetooth host interface
- +3.3V main power supply and selectable +1.8V/+3.3V IO power supply
- EU RoHS directive 2011/65/EC (Lead Free) compliant
- Selectable the ad-on antenna and the chip antenna (Option)



# Specification

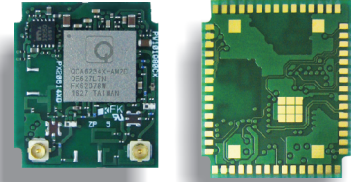
General Specifications				
Items	Specifications		Units	Remarks
Connector Type	SMT:60 pins direct solder pads B2B:40 pins board to board connector		-	B2B connector part number ==>14 5602 040 000829 H+
Antenna Connectors	U.FL Alternative connector x 2		Ω	
Antenna Port	50 +/-20%		-	VSWR<2.6
Device Interfaces	SDIO v2.0		-	For Wireless LAN
	UART		-	For Bluetooth, up to 4Mbps
RF Interface	IEEE802.11 a/b/g/n/e/h		-	IEEE802.11-2012
	Bluetooth 4.0 + LE Smart Ready		-	Max antenna gain +5.0dBi@2.4GHz
Weight	SMT version	1.3+/-0.2	g	Typ.
	B2B version	2.7+/-0.2	g	Typ.
Dimensions	SMT version	19.00x22.00x2.25	mm	WxHxD
	B2B version	24.00x24.00x4.45	mm	
MTBF	90000		h	Min.
Mating Number	10		Times	Max. SX-SDMAN2-2830C
Reflow Number	1		Times	Max. SX-SDMAN2-2830S
ESD Resistance	General pins	1500	V	Max. Human Body Model at RF Port. JESD22-A114F(JS-001-2012) Class 2 device
	Antenna pins	4000		

Wireless LAN General Specification					
Items	Specifications		Units	Remarks	
Chipset	QCA6234X Core chip AR6004X CSP (Qualcomm Atheros)		-		
Country/Domain Code	0x0000		-	NOTE1	
Operating Frequency Range	Bands	Modes	Min.	Max.	
		11b	2412	2472	MHz
	2.4GHz	11g/n 20MHz	2412	2472	MHz
		5GHz	11a/n 20MHz	5180	5825
Frequency Step	2.4GHz	11b/g/n	5	MHz	
	5GHz	11a/n 20MHz	20	MHz	
Link Data Rate	11b	1, 2, 5, 5L, 5, 5S, 11L, 11S		Mbps	
	11a/g	6, 9, 12, 18, 24, 36, 48, 54		Mbps	
Modulation Type	11n	MCS 0, 1, 2, 3, 4, 5, 6, 7		-	
	11b	DSSS (DBPSK, DQPSK, CCK)		-	
Board Data	Film Name	bdata_SX-SDMAN2_20160314.bin		-	
	MD5 HASH	63dd182e83df7e95ee2caa2f90a602d5		-	
Encryption	RC4	128 bits		-	
	AEC	128 bits		-	

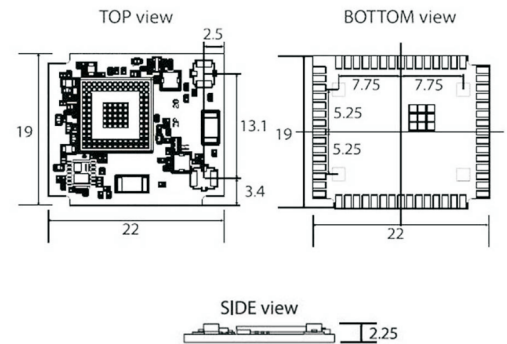
Bluetooth LAN General Specification				
Items	Specifications		Units	Remarks
Chipset	AR6234X Core chip AR3002X CSP (Qualcomm Atheros)		-	V2.2.1
Core Specification	Bluetooth 4.0		-	
Operating Frequency Range	Modes	Min.	Max.	
	BR/EDR/LE	2402	2480	MHz
Frequency Step	BR/EDR	1		MHz ch.1- ch.79
	LE	2		MHz ch.0- ch.39
Modulation Type	GFSK(1 Mbps), TT/4 DQPSK (2 Mbps), 8DQPSK (3 Mbps)			-
	Common	NULL, POLL, FHS		-
Packet Type	ACL	DM1, DM3, DM5, AUX1, DH1, DH3, DH5, 2DH1, 2DH3, 2DH5, 3DH1, 3DH3		-
	SCO	HV1, HV2, HV3, DVN EV3, 2EV3		-
	Board Data	Film Name	PS_ASIC_SDMAN2_20150806.pst	
Encryption	MD5 HASH	654E87D66EA880741752E37E18D08298		-
	E0	128	bits	BR/EDR
	AEC	128	bits	LE

Environmental Specifications					
Items	Specifications			Units	Remarks
	Min.	Typ.	Max.		
Operating Temperature	-20	-	85	°C	Case temperature After assembled with powered
Operating Humidity	15	-	95	%RH	Non condensing After assembled with powered
Assembled Storage Temperature	-40	-	85	°C	After assembled with no-powered
Assembled Storage Humidity	15	-	95	%RH	Non condensing After assembled with no-powered

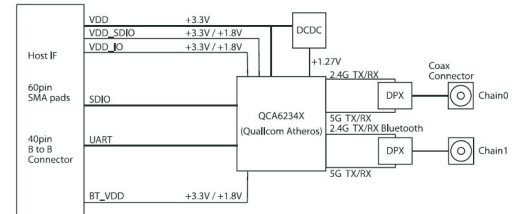
## Product quick glance



## ME Drawing/placement



## Block Diagram



## Ordering Information

PART NUMBER	DESCRIPTION
T.CFN906A-DK	CFN906A-DK, Single packed, development kit packed
TFGA-CFN905A0-52	finished non packing, CFN906A
TFGA-CEV90600-52	finished non packing, CFN906A EV BOARD

Bointec Authorized Distributer



TAIJET BOINTEC CO LTD  
4F, #114, ZHOUSHI ST., NEIHU-TAIPEI 11493, TAIWAN  
TEL: +886-2-2759-0081 EMAIL: contact@bointec.com  
WWW.BOINTEC.COM

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