

May 2016

Version 0.3



Description

The Avnet BCM4343W SoC Module is a high performance, highly integrated Wi-Fi and Bluetooth/BLE module that includes a programmable ARM® Cortex™ M4 microprocessor for running user application code. The module is ideal for low-power Internet of Things (IoT) enabled sensor and actuator based devices that need wireless connectivity to cloud services. The compact 20 x 35 mm LGA package makes the module a perfect fit for small, embedded applications.

The BCM4343W SoC Module is pre-certified, thus minimizing development time and certification costs. The module combines an advanced Broadcom® 2.4GHz 802.11 b/g/n and Bluetooth® 4.1 SoC with 8Mb of serial Flash and a ST Microelectronics STM32F411 ARM® Cortex™ M4 MCU supporting 512KB Flash and 128KB SRAM. Several of the M4 MCU peripheral functions are made available on the module I/O, allowing for easy connection to user specified interfaces. Advanced security capabilities are available with an optional authentication chip.

The BCM4343W SoC Module includes both on-board dual fractal PCB antennas supporting improved RF performance through antenna diversity, and dual coax connectors supporting external antenna connection.

Applications

- Industrial Automation
- Building Automation
- Smart Home Appliances
- IoT and M2M
- WiFi/BLE Gateway

Features

- Integrated System-on-Chip module
- Broadcom BCM4343W SoC radio Supports WiFi 2.4 GHz 802.11 b/g/n and Bluetooth® 4.1 (with an upgrade path to Bluetooth 4.2)
- ST Microelectronics STM32F411 microcontroller ARM® Cortex™ M4 MCU
 - 512KB Flash and 128KB SRAM
 - External access to peripherals
 - Digital I/O – 6
 - Analog inputs – 4
 - I2C Ports – 2
 - SPI Port – 1
 - UART Ports - 2
 - JTAG programing and debug port
- Additional 8Mb SPI serial Flash
- On-board dual fractal PCB antennas
- Dual coax connectors for optional external antennas
- Supported through Broadcom WICED™ SDK
- 20 x 35 mm 45-pin LGA package
- FCC certified and CE compliant (pending)

Document Control

Document Version:	Version 0.3		
Document Date:	02 May 2016		
Document Author(s):	JB, PF		
Document Classification:	Preliminary ; Initial release		
Document Distribution:	Public		
Prior Version History:	Version:	Date:	Comment:
	0.1	5/2/16	Initial release
	0.2	5/2/16	Updated Module Features
	0.3	5/2/16	Added SPI flash and Antenna details
Comments:			

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2 Functional Overview

This 2.4GHz wireless module provides a complete WiFi/BT and MCU solution for cost-effective embedded-wireless IoT applications. Based on latest-generation Broadcom BCM4343W Wireless SoC silicon, this high performance combo module provides a unique solution with WiFi and Bluetooth/BLE radios (with coexistence support), ARM Cortex-M4 host processor and expansion SPI Flash memory, plus versatile dual onboard and dual external antenna capabilities, all in a compact 35 mm x 20 mm, easy to mount (0.1" pitch LGA) form-factor module, qualified for operation across the full industrial temperature range

2.1 Microcontroller

The AES-BCM4343W-M1-G module includes an on-board microcontroller (MCU) that interfaces with the Broadcom BCM4343W radio for communication and acts as the system controller for user applications. Based on the ST Microelectronics STM32F411, the MCU supports the following features:

- STM32F411 ARM 32-bit Cortex™-M4 with FPU, @ 100 MHz
- On-chip memory: 512 kbytes Flash, 128 Kbytes SRAM
- Multiple serial communication interfaces: SPI, USART, PCM
- Sensor applications support: ADC, I2C, I2S, GPIO, Timers
- Broadcom WICED SDK and ZentriOS SDK based cloud connected application examples are provided (AWS IoT, IBM Bluemix, ThingSpeak and others...)
- Debug support: JTAG interface

Application code for the module can be developed using Broadcom's WICED Software Development Kit (SDK) or Zentri's ZentriOS SDK.

Additional details on the STM32F411 MCU features, specifications, and programming modes can be obtained from the STM32F411 datasheet.

2.2 SPI Flash Memory

An 8 Mbit SPI Flash memory (Macronix MX25L800EZUI12G) is included on the module for the storage of BCM4343W firmware, static webpages, built-in documentation, images, etc. The STM32F411 MCU's SPI1 peripheral interface, clocked at 50MHz, is used to communicate with this memory.

The SPI1 interface parameters are defined in the BCM94343W_AVN platform files of the Broadcom WICED SDK development environment. When building an application in WICED SDK, adding the `download_apps` parameter to the make target command string, ensures that the BCM4343W firmware is written to- and loaded from this SPI flash

	MCU	WICED SDK
SPI1 Signal Name	Pin Name	Pin Name
SPI_FLASH_CS	PA4	WICED_GPIO_5
SPI_FLASH_CLK	PA5	WICED_GPIO_6
SPI_FLASH_MISO	PA6	WICED_GPIO_7
SPI_FLASH_MOSI	PA7	WICED_GPIO_8

2.3 WLAN

- Broadcom BCM4343W combo single-chip MAC, Baseband and RF device (includes ARM Cortex-M3 processor)
- Frequency Band: Single-band, 2.4 GHz only
- WLAN Network Standards supported: 802.11b, 802.11g, 802.11n (single stream)
- Modulation Modes: CCK and OFDM with BPSK, QPSK, 16QAM, 64QAM, 256QAM
- Supported Data Rates:
 - IEEE 802.11b 1 – 11 Mbps
 - IEEE 802.11g 6 – 54 Mbps
 - IEEE 802.11n 7.2 – 150 Mbps (2.4 GHz only)
- Hardware Encryption
 - WEP, WPA / WPA2 Personal
- Advanced 1x1 802.11n Features:
 - Full/Half Guard Interval
 - Frame Aggregation
 - Space Time Block Coding (STBC)
 - Low Density Parity Check (LDPC) Encoding
- SDIO host interface for WLAN subsystem (between BCM4343W and STM32F411 MCU)
- Optional WLAN Debug Interfaces:
 - WLAN JTAG and WLAN Debug UART interfaces are pinned-out to support special cases (most application development will not require this)

2.4 Bluetooth

- Bluetooth 4.1 (supporting Bluetooth Low Energy) as well as backward compatibility and an upgrade path to Bluetooth 4.2
- Bluetooth Smart Ready (supports for Dual-mode Bluetooth Classic and BLE operation)
- Advanced Algorithmic for support of Bluetooth/BLE and WiFi coexistence (ie. simultaneous BT/WLAN reception)
- Dedicated high-speed UART for Bluetooth host interface

2.5 Antennas

- Onboard dual fractal PCB antennas (Broadcom patented PCB antennas)
- Miniature switched RF connectors for optional higher gain dual external antennas
- Transmit and Receive antenna diversity

3 Block Diagram

Figure 1 shows a functional block diagram of the AES-BCM4343W-M1-G module.

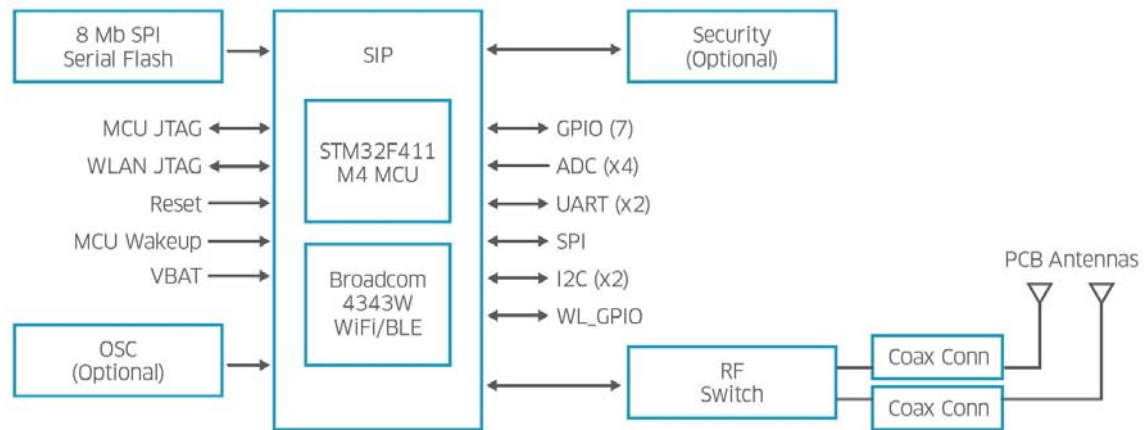


Figure 1 – AES-BCM4343W-M1-G Module Block Diagram

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4 Module Pin Descriptions

4.1 Pin Descriptions

Module			MCU	WICED SDK	
Pin No.	Signal Name	Type	Pin Name	Pin Name	Description*
1	GND	SIG	-	-	Ground
2	MICRO_I2C2_SCL	I/O	PB10	WICED_GPIO_20	I2C #2 SCL
3	MICRO_I2C2_SDA	I/O	PB11	WICED_GPIO_21	I2C #2 SDA
4	MICRO_SPI2_SCK	I/O	PB13	WICED_GPIO_23	SPI #2 SCK
5	MICRO_SPI2_SSN	I/O	PB12	WICED_GPIO_22	SPI #2 SSN
6	MICRO_SPI2_MISO	I/O	PB14	WICED_GPIO_24	SPI #2 MISO
7	MICRO_SPI2_MOSI	I/O	PB15	WICED_GPIO_25	SPI #2 MOSI
8	USART6_TX_I2S2_MCK	I/O	PC6	WICED_GPIO_13	USART #6 TX
9	USART6_RX_I2S2_CK	I/O	PC7	WICED_GPIO_14	USART #6 RX
10	MICRO_UART_TX	I/O	PA9	WICED_GPIO_9	USART #1 TX
11	MICRO_UART_RX	I/O	PA10	WICED_GPIO_10	USART #1 RX
12	MICRO_UART_CTS	I/O	PA11	WICED_GPIO_15	USART #1 CTS
13	MICRO_UART_RTS	I/O	PA12	WICED_GPIO_16	USART #1 RTS
14	WIFI_GPIO_1	I/O	PD13	-	WLAN Tx/Rx Activity (Driven by GPIO_1 of BCM4343W device)
15	GND	SIG	-	-	Ground
16	VDD_3V3_SIP	SIG	-	-	3.3V
17	GND	SIG	-	-	Ground
18	WL_JTAG_TDI	N/C	-	-	No Connect (requires hardware modification for connection)
19	WL_JTAG_TDO	N/C	-	-	No Connect (requires hardware modification for connection)
20	MICRO_JTAG_TMS	I/O	PA13	-	JTAG TMS
21	MICRO_JTAG_TCK	I/O	PA14	-	JTAG TCK
22	MICRO_JTAG_TDI	I/O	PA15	-	JTAG TDI
23	MICRO_JTAG_TDO	I/O	PB3	-	JTAG TDO
24	MICRO_JTAG_TRSTN	I/O	PB4	-	JTAG RESETN
25	GND	SIG	-	-	Ground
26	VBAT_SIP	SIG	-	-	Power supply for backup when VDD_3V3_SIP is not present
27	GND	SIG	-	-	Ground
28	MICRO_I2C1_SCL	I/O	PB6	WICED_GPIO_11	I2C #1 SCL
29	MICRO_I2C1_SDA	I/O	PB7	WICED_GPIO_12	I2C #1 SDA
30	MICRO_GPIO_3	I/O	PC1	WICED_GPIO_27	GPIO 3
31	MICRO_GPIO_2	I/O	PC0	WICED_GPIO_26	GPIO 2
32	MICRO_GPIO_4	I/O	PC2	WICED_GPIO_28	GPIO 4
33	MICRO_GPIO_5	I/O	PC3	WICED_GPIO_17	GPIO 5
34	MICRO_GPIO_6	I/O	PB9	WICED_GPIO_19	GPIO 6
35	MICRO_GPIO_1	I/O	PB8	WICED_GPIO_18	GPIO 1
36	MICRO_RST_N	I/O	NRST	-	RESET_N
37	MICRO_ADC_IN1	I/O	PA1	WICED_GPIO_2	ADC INPUT #1
38	MICRO_WKUP	I/O	PA0	WICED_GPIO_1	MCU WAKEUP
39	GND	SIG	-	-	Ground
40	MICRO_ADC_IN2	I/O	PA2	WICED_GPIO_3	ADC INPUT #2
41	MICRO_ADC_IN3	I/O	PA3	WICED_GPIO_4	ADC INPUT #3
42	MICRO_GPIO_0	I/O	PB0	WICED_GPIO_29	GPIO 0
43	MICRO_ADC_IN15	I/O	PC5	WICED_GPIO_30	ADC INPUT #15
44	GND	SIG	-	-	Ground
45	GND	SIG	-	-	Ground

- Denotes 5V tolerant I/O
- Standard 3.3V I/O
- Bidirection reset pin with embedded weak pullup

* Note the pin descriptions shown are arbitrary for most MCU connected signals



4.2 Pin Definitions

Of the 44 pads located along 3 edges of the module, 8 connect to GND and 2 are power connections. Most of the remaining module pads are internally connected to the STM32F411 MCU. For this reason, the signal definition of these pins is somewhat arbitrary given that the pin modes can be configured via software.

The signal names provided in the Pin Description table shown in section 4.1 align with the names provided in the Broadcom WICED SDK platform.h file. Users have the ability to modify these configurations and definitions as explained in the STM32F411 datasheet.

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5 Electrical Specifications

For electrical characteristics of the module digital I/O's connected to the internal STM32F411 MCU, refer to the STM32F411 datasheet (Document ID 026289 Rev 4 or later).

5.1 Absolute Maximum Ratings

Parameter	Min	Max	Unit
VDD_3V3_SIP	0	4	Volts
VBAT_SIP	0	4	Volts
Voltage on Digital I/Os	-0.3	4	Volts
Voltage on Analog Inputs	-0.3	4	Volts
Supply Ripple	-2	2	%
Storage Temperature	-40	+85	°C
Operating Temperature	-40	+85	°C

5.2 Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
VDD_3V3_SIP	3.0	3.3	3.6	Volts
VBAT_SIP	2.0	3.3	3.6	Volts
Voltage on Digital I/Os	0	3.3	VDD_3V3_SIP	Volts
Voltage on Analog Inputs	0	3.3	VDD_3V3_SIP	Volts
Humidity Range*	0		95	%
Operating Temperature	-40	25	+85	°C

* Non-condensing, relative humidity

5.3 Power Supply Requirements

Parameter	Min	Typ	Max	Unit
VDD_3V3_SIP	3.0	3.3	3.6	Volts
VDD_3V3_SIP	TBD	TBD	TBD	mA
VBAT_SIP	2.0	3.3	3.6	Volts
VBAT_SIP	TBD	TBD	TBD	mA

5.4 WLAN Power Consumption

Parameter	Test Condition (+25 °C, 3.3V)	Min	Typ	Max	Unit
11b Tx Mode	11 Mbps	-	400	TBD	mA
11g Tx Mode	54 Mbps	-	260	TBD	mA
11n Tx Mode	MCS7	-	200	TBD	mA
11b Rx Mode	11 Mbps	-	46	TBD	mA
11g Rx Mode	54 Mbps	-	46	TBD	mA
11n Rx Mode	MCS7	-	46	TBD	mA

5.5 Bluetooth Power Consumption

Parameter	Test Condition (+25 °C, 3.3V)	Min	Typ	Max	Unit
Tx Mode	3DH5	-	35	TBD	mA
Rx Mode	3DH5	-	16	TBD	mA

5.6 Bluetooth Low Energy Power Consumption

Parameter	Test Condition (+25 °C, 3.3V)	Min	Typ	Max	Unit
Tx Mode	Transmitter and baseband @ 100%	-	35	TBD	mA
Rx Mode	Receiver and baseband @ 100%	-	16	TBD	mA

5.7 Sleep Mode Power Consumption

Parameter	Test Condition (+25 °C, 3.3V)	Min	Typ	Max	Unit
Idle, Unassociated	-	-	TBD	TBD	mA
Power Down	-	-	TBD	TBD	mA

6 RF Specifications

6.1 WLAN RF Characteristics

The AES-BCM4343W-M1-G module complies with the following WLAN features and standards.

Features	Description
WLAN Standards	IEEE 802 Part 11b/g/n (802.11b/g/n single stream n)
Antenna Port	Supports single antenna for WiFi
Frequency Band	2.400 - 2.484 GHz

The RF performance of the AES-BCM4343W-M1-G module is given as follows (@ 3.3V):

Features	Description
Frequency band	2.4000 - 2.497 GHz (2.4 GHz ISM Band)
Number of selectable sub-channels	14 Channels
Modulation	OFDM, DSSS (Direct Sequence Spread Spectrum), DBPSK, DQPSK, CCK, 16QAM, 64QAM, 256QAM
Supported rates	1, 2, 5.5, 11, 6, 9, 12, 24, 36, 48, 54 Mbps & HT20 MCS 0~7
Maximum receive input level	-10dBm (with PER < 8% @ 11 Mbps) -20dBm (with PER < 10% @ 54 Mbps) -20dBm (with PER < 10% @ MCS7)
Output power	17dBm @ 802.11b 13dBm @ 802.11g 12dBm @ 802.11n 10dBm @ 802.11n (256QAM)
Carrier frequency accuracy	+/- 20 ppm (crystal: 26 MHz +/- 10 ppm @ 25 °C)

6.1.1 Transmitter Specification

6.1.1.1 802.11b Transmitter Specification

Parameter	Test Condition	Min	Typ	Max	Unit
Transmit Output Power Level	1/2/5.5/11 Mbps	-	17	-	dBm
Transmit Center Freq. Tolerance	-	-20	0	20	ppm
Transmit Spectrum Mask	$F_c - 22\text{MHz} < F < F_c - 11\text{MHz}$ & $F_c + 11\text{MHz} < F < F_c + 22\text{MHz}$ (1/2/5.5/11 Mbps; Channel 1~13)	-	-	-30*	dBr
	$F < F_c - 22\text{MHz}$ & $F > F_c + 22\text{MHz}$ (1/2/5.5/11 Mbps; Channel 1~13)	-	-	-50*	dBr
Transmit Power-On	10% ~ 90%	-	0.3	2*	us
Transmit Power-Down	90% ~ 10%	-	1.5	2*	us
Transmit Modulation Accuracy	1/2/5.5/11 Mbps	-	-17	-10	dB

Note 1 - "*" Indicates IEEE802.11 specification

6.1.1.2 802.11g Transmitter Specification

Parameter	Test Condition	Min	Typ	Max	Unit
Transmit Output Power Level	6/9/12/18/24/36/48/54 Mbps	-	13	-	dBm
Transmit Center Freq. Tolerance	-	-20	0	20	ppm
Transmit Modulation Accuracy	6 Mbps	-	-	-5*	dB
	9 Mbps	-	-	-8*	dB
	12 Mbps	-	-	-10*	dB
	18 Mbps	-	-	-13*	dB
	24 Mbps	-	-	-16*	dB
	36 Mbps	-	-	-19*	dB
	48 Mbps	-	-	-22*	dB
	54 Mbps	-	-	-25*	dB
Transmit Spectrum Mask	@ 11 MHz	-	-	-20*	dBr
	@ 20 MHz	-	-	-28*	dBr
	@ 30 MHz	-	-	-40*	dBr

Note 1 - "*" Indicates IEEE802.11 specification

6.1.1.3 802.11n Transmitter Specification

Parameter	Test Condition	Min	Typ	Max	Unit
Transmit Output Power Level	HT20 MCS 0~7	-	12	-	dBm
	HT20 MCS 7 (Turboqam)	-	10	-	dBm
Transmit Center Freq. Tolerance	-	-20	0	20	ppm
Transmit Modulation Accuracy	HT20, MCS0~7	-	-	-27*	dB
	HT20 MCS 7 (Turboqam)	-	-	-32*	dB
Transmit Spectrum Mask	@ 11 MHz	-	-	-20*	dBr
	@ 20 MHz	-	-	-28*	dBr
	@ 30 MHz	-	-	-40*	dBr

Note 1 - "*" Indicates IEEE802.11 specification

6.1.2 Receiver Specification

6.1.2.1 802.11b Receiver Specification

Parameter	Test Condition	Min	Typ	Max	Unit
Receiver Minimum Input Level Sensitivity (PER < 8%)	1 Mbps	-80*	-93	-	dBm
	2 Mbps	-80*	-91	-	dBm
	5.5 Mbps	-76*	-89	-	dBm
	11 Mbps	-76*	-86	-	dBm
Receiver Maximum Input Level Sensitivity (PER < 8%)	1/2/5.5/11 Mbps	-10*	-	-	dBm

Note 1 - "*" Indicates IEEE802.11 specification

6.1.2.2 802.11g Receiver Specification

Parameter	Test Condition	Min	Typ	Max	Unit
Receiver Min. Input Level Sensitivity (PER < 10%)	6 Mbps	-82*	-88	-	dBm
	9 Mbps	-81*	-87	-	dBm
	12 Mbps	-79*	-85	-	dBm
	18 Mbps	-77*	-83	-	dBm
	24 Mbps	-74*	-80.5	-	dBm
	36 Mbps	-70*	-78.5	-	dBm
	48 Mbps	-66*	-74	-	dBm
	54 Mbps	-65*	-72	-	dBm
Receiver Max. Input Level Sensitivity (PER < 10%)	6/9/12/18/24/36/48/54 Mbps	-20*	-	-	dBm

Note 1 - "*" Indicates IEEE802.11 specification

6.1.2.3 802.11n Receiver Specification

Parameter	Test Condition	Min	Typ	Max	Unit
Receiver Min. Input Level Sensitivity (PER < 10%)	HT20, MSC0	-82*	-87.5	-	dBm
	HT20, MSC1	-79*	-84	-	dBm
	HT20, MSC2	-77*	-82	-	dBm
	HT20, MSC3	-74*	-80.5	-	dBm
	HT20, MSC4	-70*	-77	-	dBm
	HT20, MSC5	-66*	-72	-	dBm
	HT20, MSC6	-65*	-71	-	dBm
	HT20, MSC7	-64*	-70	-	dBm
	256-QAM R=3/4		-68	-	dBm
	256-QAM R=5/6		-66	-	dBm
Receiver Max. Input Level Sensitivity (PER < 10%)	MSC0 ~ MSC7	-20*	-	-	dBm

Note 1 - "*" Indicates IEEE802.11 specification

6.2 Bluetooth RF Characteristics

6.2.1 Transmitter Specification

Parameter	Mode and Condition	Min	Typ	Max	Unit
Transmitter Section					
Frequency Range	-	2402.0	-	2480	MHz
Output Power	GFSK	-	10	-	dBm
	QPSK	-	6	-	dBm
	BPSK	-	6	-	dBm
Power Control Step		2	4	8	dB
Lo Performance					
Initial Carrier Freq. Tolerance	-	-	+/-25	+/-75	KHz
Lock Time	-	-	72	-	uS
Frequency Drift					
DH1 Packet	-	-	+/-8	+/-25	KHz
DH3 Packet	-	-	+/-8	+/-40	KHz
DH5 Packet	-	-	+/-8	+/-40	KHz
Drift Rate	-	-	5	20	KHz/50 us
Frequency Deviation					
00001111 Sequence in Payload (a)	-	140	155	175	KHz
10101010 Sequence in Payload (b)	-	115	140	-	KHz
Channel Spacing	-	-	1	-	MHz

(a) This pattern represents an average deviation in payload

(b) Pattern represents the maximum deviation in payload for 99.9% of all frequency deviations

6.2.2 Receiver Specification

Parameter	Mode and Condition	Min	Typ	Max	Unit
Receiver Section					
Frequency Range	-	2402	-	2480	MHz
Output Power	GFSK, 0.1% BER, 1 Mbps	-	-91	-	dBm
	$\pi/4$ -DQPSK, 0.01% BER, 2 Mbps	-	-93	-	dBm
	8-DPSK, 0.01% BER, 3 Mbps	-	-87	-	dBm
Input IP3		-16	-	-	dBm
Maximum Input	-	-	-	-20	dBm

6.3 BLE RF Characteristics

Parameter	Mode and Condition	Min	Typ	Max	Unit
Frequency Range	-	2402	-	2480	MHz
Rx Sense (a)	GFSK, 0.1% BER, 1 Mbps	-	-94	-	dBm
TX Power	-	-	8	-	dBm
Mod Char: Delta f1 Average	-	225	225	275	KHz
Mod Char: Delta f2 max (b)	-	99.9	-	-	%
Mod Char: Ratio	-	0.8	0.95	-	%

Note (a) - The Bluetooth tester is set so that Dirty TX is on

Note (b) - At least 99.9% of all delta F2 max. frequency values recorded over 10 packets must be greater than 185 KHz

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7 Mechanical Specifications

7.1 Mechanical Size

The module dimensions are 35 mm x 20 mm x 2.59 mm (max) as shown in the figures below.

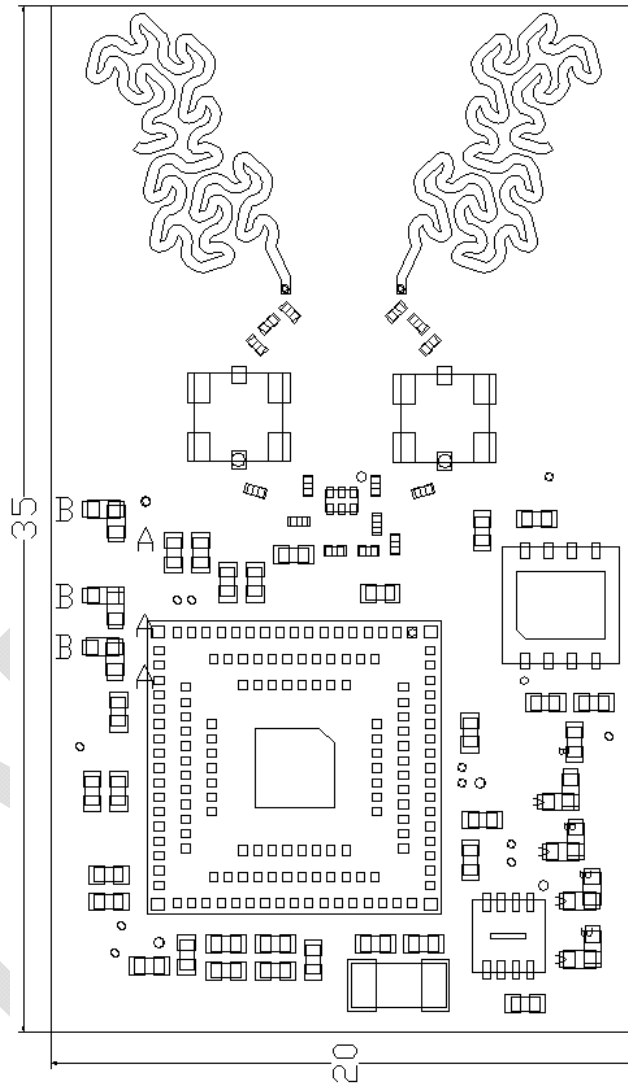


Figure 2 – AES-BCM4343W-M1-G Module Top View

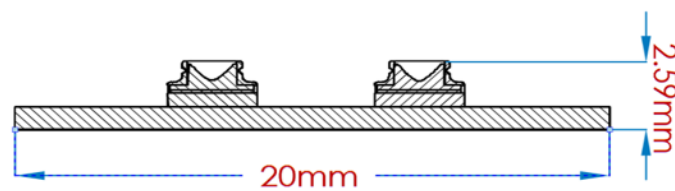


Figure 3 – AES-BCM4343W-M1-G Module Side View

7.2 Module PCB Footprint

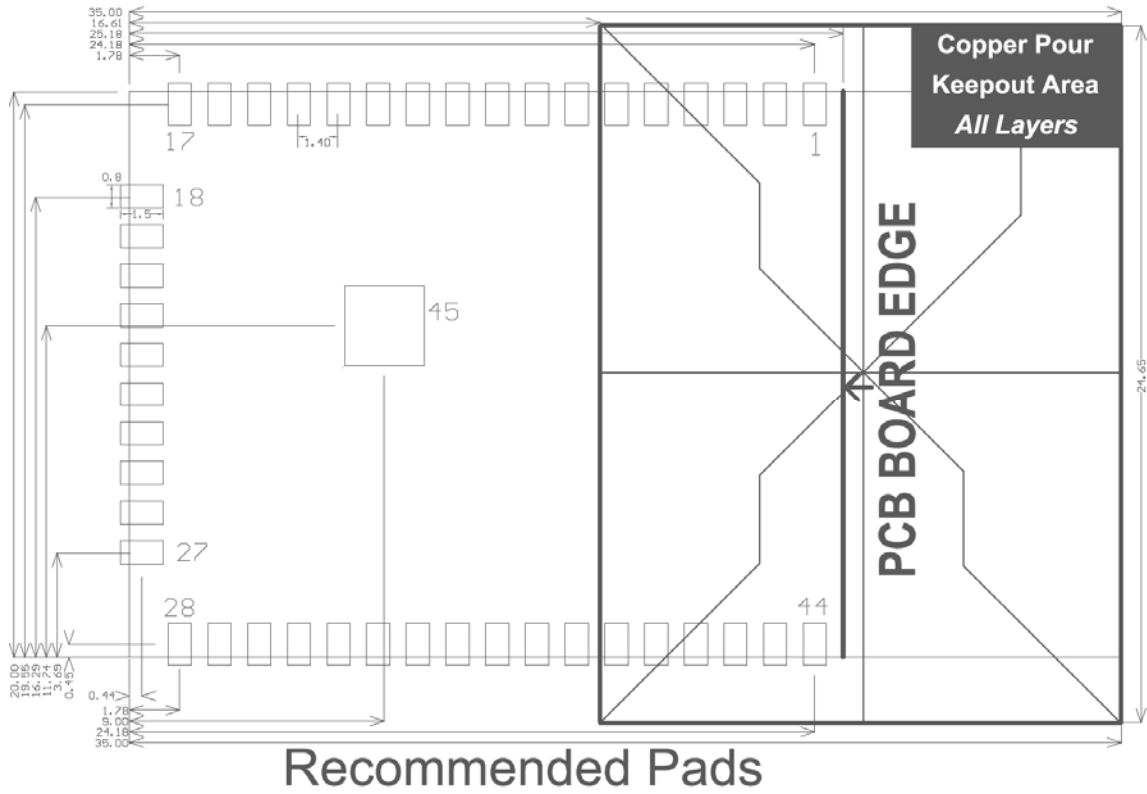


Figure 4 – AES-BCM4343W-M1-G Module PCB Footprint

7.3 Module Pad Size

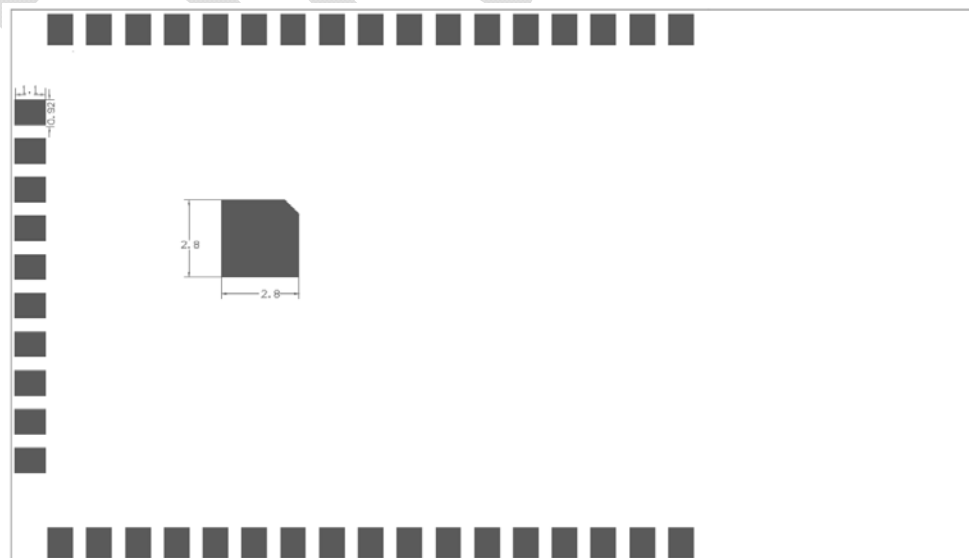


Figure 5 – AES-BCM4343W-M1-G Module Pad Size

7.4 Recommended Solder Paste Mask

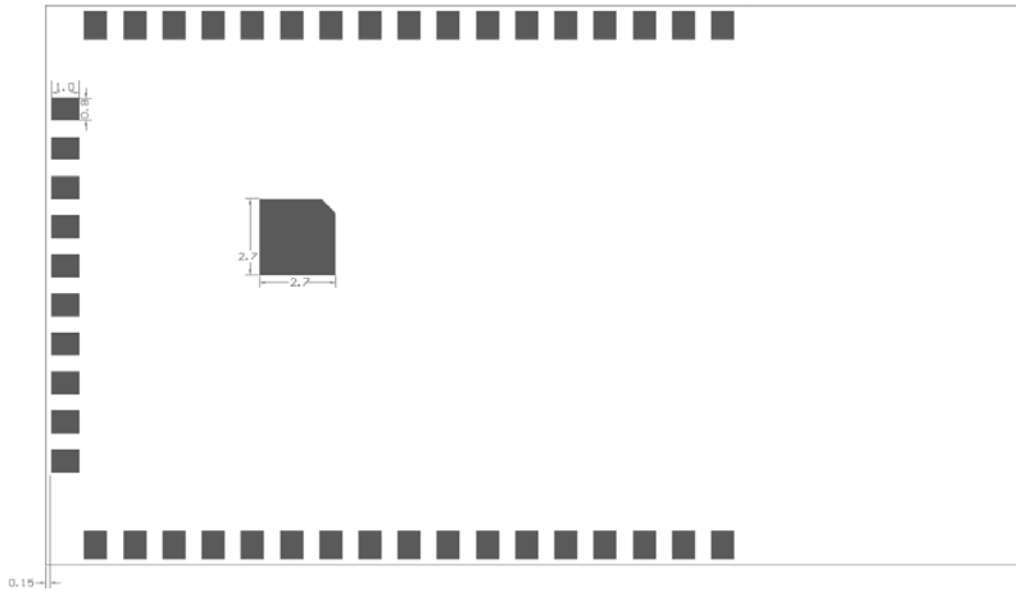


Figure 6 – Recommended Solder Paste Mask Size

7.5 Recommended Solder Mask

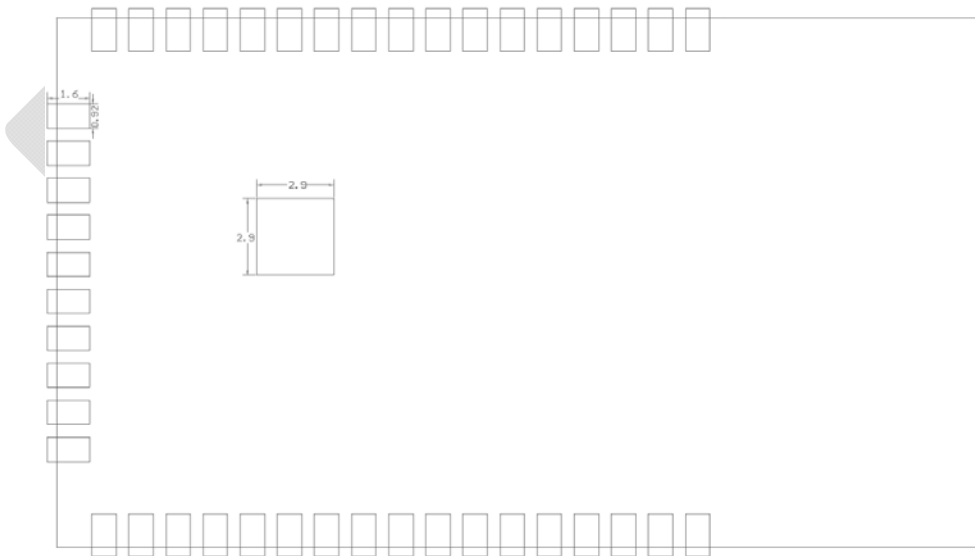


Figure 7 – Recommended Solder Mask Size

7.6 Tape and Reel Packaging

The AES-BCM4343W-M1-G module is available in tape and reel packaging at quantities of 600 units. The reel dimensions are 13 inches x 56 mm. The 56 mm tape conforms to the Electronic Components Association Standard EIA-481-D.

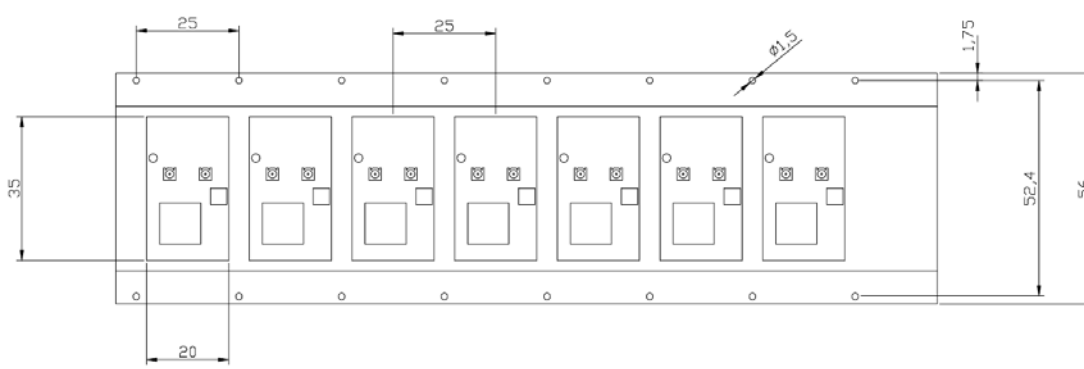
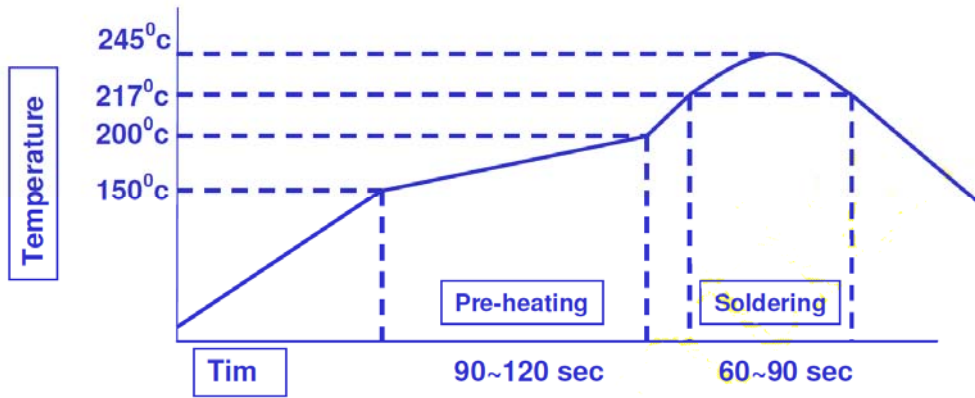


Figure 8 – Tape Dimensions

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8 Recommended Reflow Profile

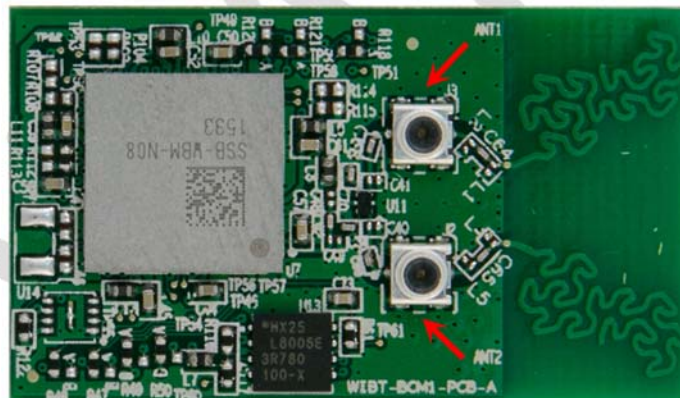


9 Antenna Options

The default antenna configuration uses two onboard fractal PCB antennas. This Broadcom patented PCB antenna trace pattern typically achieves a gain of 3dBi



Miniature switched RF connectors (Murata p/n: MM8430-2610RA1) are also included onboard, to facilitate the addition of optional dual external antennas



External antenna and cable assemblies are available from various supplier partners eg.

- Pulse (p/n W1010) quarter wavelength dipole antenna and
- TE Connectivity (p/n TBD) UMCC to R/P SMA BHD Jack Cable Assembly

10 Certifications

10.1 RoHS

The AES-BCM4343W-M1-G module is lead-free and RoHS compliant.

10.2 Bluetooth

TBD

10.3 Agency

TBD

10.4 Agency Statements

TBD

10.5 OEM Responsibilities

TBD

10.6 OEM Labeling Requirements

TBD

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11 Handling and Storage

The AES-BCM4343W-M1-G module contains sensitive electronic circuitry that required proper ESD protection when handling. Failure in following these procedures may result in permanent damage to the module.

The module should not be subjected to excessive mechanical shock.

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12 Ordering Information

Part Number	Description
AES-BCM4343W-M1-G	802.11 b/g/n WLAN, Bluetooth & BLE SoC Module

12.1 Module Accessories

Manuf.	Part Number	Description
Pulse	W1010	2.4 GHz Dipole Antenna with Reverse Polarity SMA Connector
TE	TBD	UMCC to R/P SMA BHD Jack Cable Assembly
Avnet	AES-EVB-BCM4343W-G	BCM4343W IoT Starter Kit

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13 Contact Information

For further details, contact your local Avnet representative or e-mail us at:

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Asia: TBD

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