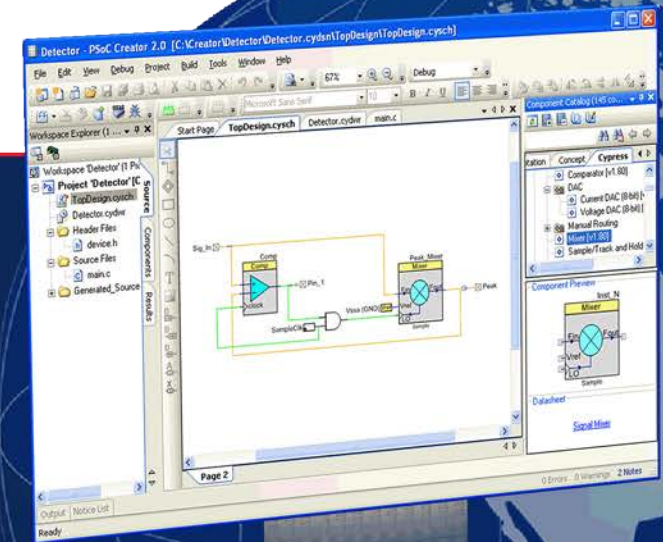


Cypress Roadmap: Wireless Solutions for The IoT

IoT = Internet of Things

Q1 2017



Wireless Portfolio

↑
Integration and Performance

Bluetooth	Wi-Fi	Wi-Fi + Bluetooth Combo	Automotive
		IEEE 802.11a/b/g/n/ac WLAN¹ + Bluetooth Up to 867 Mbps Wi-Fi, 1-3 Mbps Bluetooth Dual Band (2.4/5 GHz), 2x2 MIMO ²	IEEE 802.11a/b/g/n/ac WLAN + Bluetooth Up to 867 Mbps, Dual Band (2.4/5 GHz), 2x2 MIMO, 1+1RSDB ³
		IEEE 802.11a/b/g/n WLAN + Bluetooth Up to 300 Mbps Wi-Fi, 1-3 Mbps Bluetooth Dual Band (2.4/5 GHz), 2x2 MIMO	IEEE 802.11a/b/g/n/ac WLAN + Bluetooth Up to 433 Mbps PHY rate Dual Band (2.4/5 GHz), 1x1
	IEEE 802.11a/b/g/n WLAN + MCU Up to 150 Mbps ARM® Cortex®-R4/-M3 MCU		
	IEEE 802.11a/b/g/n WLAN Up to 150 Mbps 2x2 MIMO		
Bluetooth (BR⁴ + EDR⁵ + BLE⁶) + MCU 1-3 Mbps, Class 1/2/3 ⁷ , ARM Cortex®-M4/-M3 MCU			Bluetooth (BR + EDR) 1-3 Mbps Class 1/2/3
Bluetooth Low Energy (BLE) + MCU 1-2 Mbps, ARM Cortex®-M3 MCU			

¹ Wireless Local Area Network
² Multiple-input multiple-output
³ Read simultaneous dual band

⁴ Basic Rate
⁵ Enhanced Data Rate
⁶ Bluetooth Low Energy

⁷ Class 1 (100 m)/2 (10 m)/3 (1 m)
⁸

Status
 Availability

Concept 
 Development 
 Sampling 
 Production 

Concept 
 Development 
 Sampling 
 Production 

Wireless Solutions for The Internet of Things (IoT) Roadmap

BLE PORTFOLIO

Bluetooth Low Energy (BLE) Portfolio



BLE + MCU

BCM20719 Q217
 CM4¹, SPI, UART, I²C²,
 IR TX/RX³, ADC, 6 PWM,
 KB Scanner⁴, Mouse QD⁵,
 Crypto⁶, 4 TRIAC Control,
 40 GPIO, 1MB Flash,
 512KB RAM, BT⁷ 4.2,
 2 Mbps support, WICED SDK⁸

BCM20737
 CM3, SPI, UART, I²C,
 IR TX/RX, ADC, 4 PWM,
 LE Audio, NFC⁹, Crypto,
 14 GPIO, 60KB RAM,
 BT 4.1, WICED SDK

BCM20736
 CM3, SPI, UART, I²C,
 IR TX/RX, ADC, A4WP¹⁰,
 4 PWM, 40 GPIO, 60KB RAM,
 BT 4.1, WICED SDK

Integration and Flexibility

- ¹ ARM® Cortex®-M0/M0+/M3/M4
- ² Broadcom serial communications block
- ³ Infrared transmit and receive
- ⁴ Keyboard scanner
- ⁵ Mouse quadrature decoder

- ⁶ Cryptographic accelerator block for security
- ⁷ Bluetooth Specification
- ⁸ Software development kit
- ⁹ Out-of-Band pairing with NFC
- ¹⁰ Alliance for Wireless Power BLE Profile



BCM20737

Bluetooth Low Energy Connectivity MCU with Security and Wireless Charging



Applications

Wearables, medical, home automation, toys

Features

Industry's Most-Widely-Deployed BLE Stack

Bluetooth Low Energy (BLE) Features

- Bluetooth 4.1 compliant
- Simultaneous multiple Master and Slave (1M, 3S)
- Alliance for Wireless Charging (A4WP) support
- Proprietary low-energy audio (LE Audio) support
- Out-of-band (OOB) pairing using near-field communication (NFC)
- Secure over-the-air (OTA) firmware upgrade

Security Engine

RSA, X.509, SHA, AES128

Packages

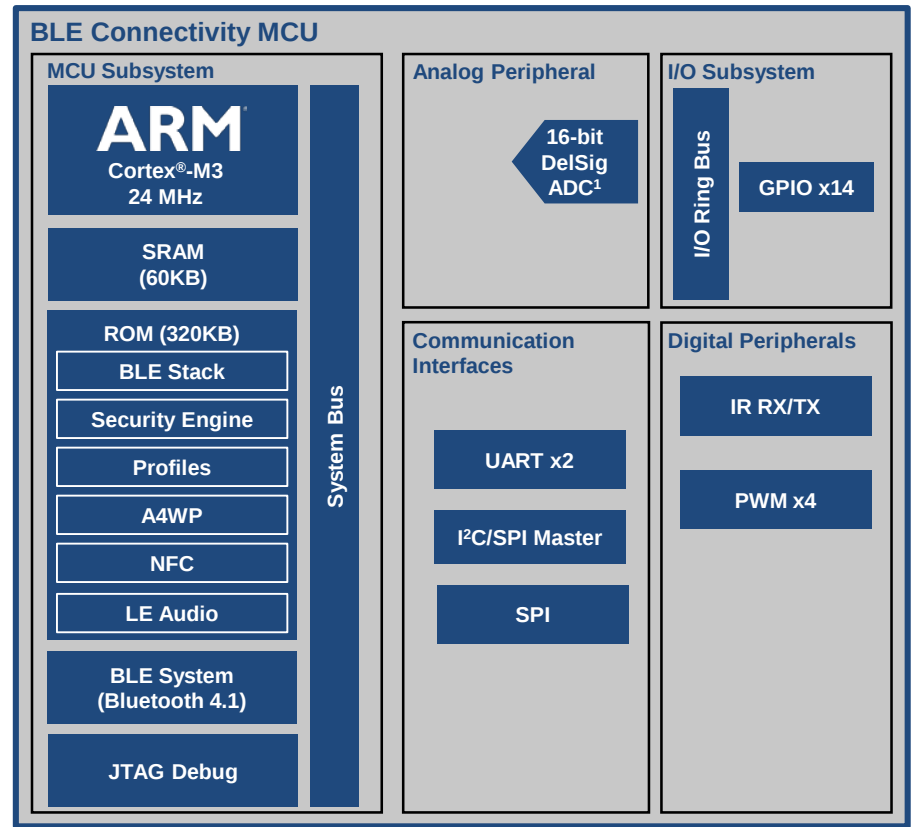
32-pin QFN (5 x 5 mm), 80-ball WLCSP (2.2 x 2.2 mm)
FCC and CE-certified 6.5 x 6.5 x 1.2-mm modules with antenna

WICED™ SMART SDK 2.1 (and later)

Collateral

Datasheet: [BCM20737](#)
Software: [WICED SMART SDK](#)
Quick Start Guide: [WICED SMART SDK 2.x](#)
[BCM92073x_LE_TAG4](#)

Block Diagram



Availability

Production: Now

¹ Effective number of bits is 10 at 187 kbps

BCM20736

Bluetooth Low Energy Connectivity MCU with Wireless Charging



Applications

Beacons, tags, toys, industrial/home automation

Features

Industry's Most-Widely-Deployed BLE Stack

Bluetooth Low Energy (BLE) Features

Bluetooth 4.1 compliant

Support for all standard Bluetooth 4.1 low-energy profiles including

Alliance for Wireless Charging (A4WP)

Simultaneous multiple Master and Slave (1M, 1S)

Pre-standard BLE mesh

Over-the-air (OTA) firmware upgrade

Packages

32-pin QFN (5 x 5 mm)

80-ball WLCSP (2.2 x 2.2 mm)

FCC and CE-certified 6.5 x 6.5 x 1.2-mm modules with antenna

WICED™ SMART SDK 2.1 (and later)

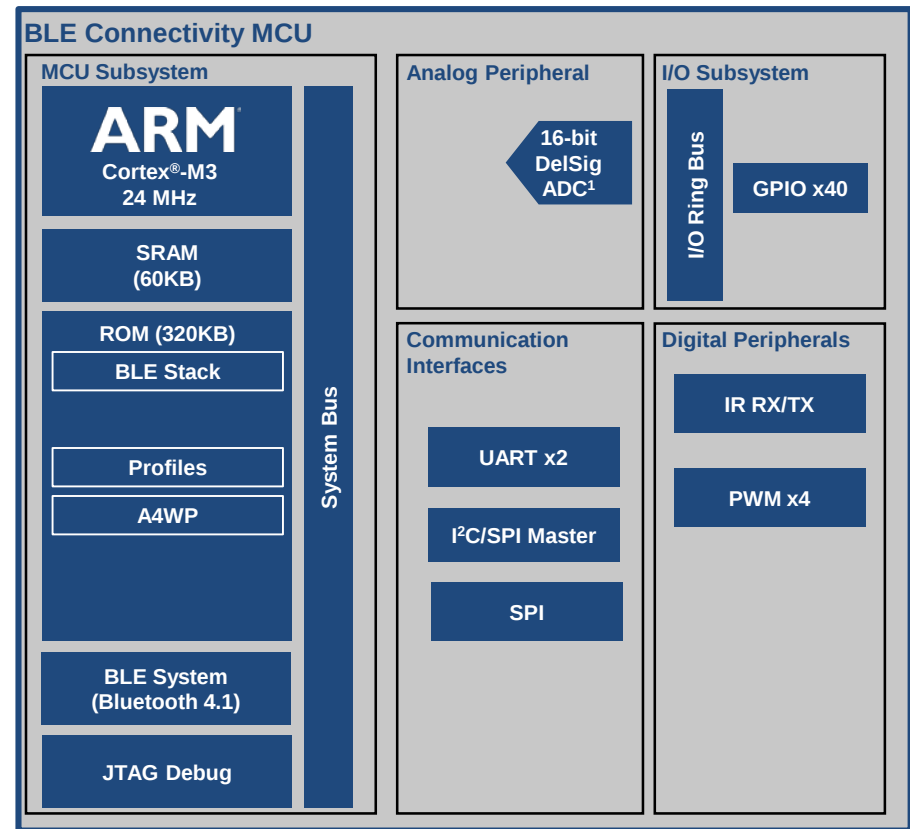
Collateral

Datasheet: [BCM20736](#)

Software: [WICED SMART SDK](#)

Quick Start Guide: [WICED SMART SDK 2.x](#)
[BCM92073x_LE_TAG4](#)

Block Diagram



Availability

Production: Now

¹ Effective number of bits is 10 at 187 kbps

BCM20719

Ultra Low Power Bluetooth Smart Ready Connectivity Secure MCU



Applications

Medical, home automation, wearables, POS

Features

Industry's Most-Widely-Deployed Bluetooth Stack

Bluetooth Low Energy (BLE) Features

Bluetooth 4.2-compliance with LE privacy 1.2, LE data length extension, LE secure connections

Industry's lowest-power radio

Proprietary low energy audio (LE Audio) support

2-Mbps proprietary BLE support

ARM® Cortex®-M4 CPU with Floating-Point Unit, Digital-Signal Processing Logic and 1MB Flash

MIPI-Compliant Display Driver

Security Engine

Public key accelerator (PKA), SHA, AES, RSA, Elliptic Curve Diffie Hellman (ECDH)

Packages

40-pin QFN (5 x 5 mm)

80-ball WLCSP (2.2 x 2.2 mm)

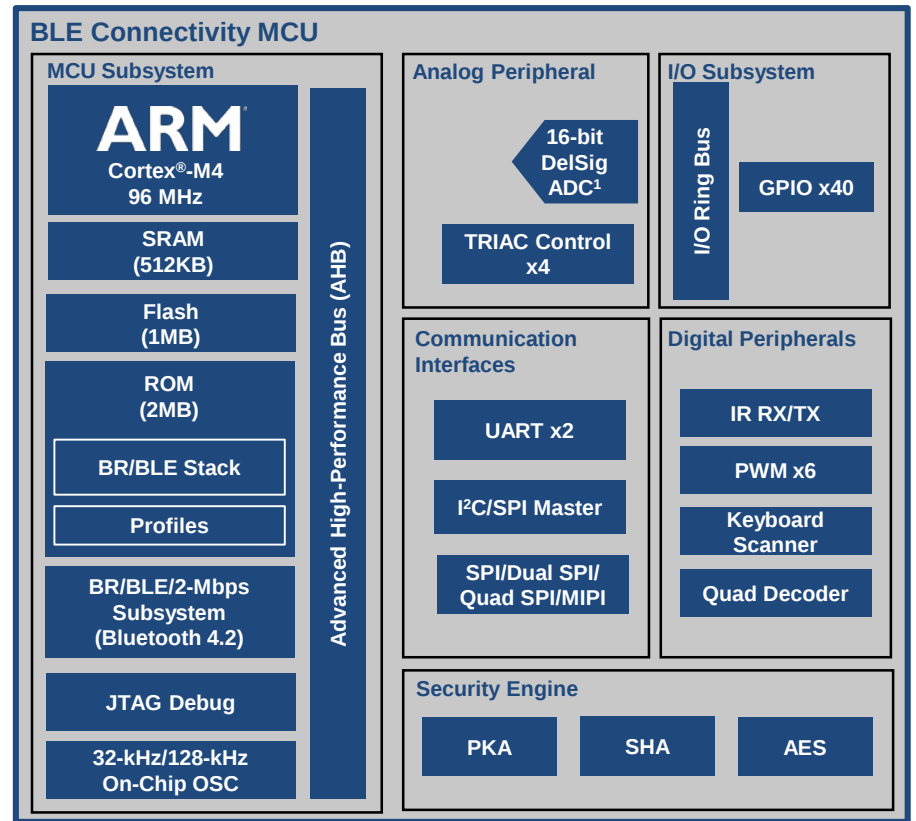
WICED™ SMART Ready SDK

Collateral

Datasheet: [BCM20719 \(Contact Sales\)](#)

Software: [WICED SMART Ready SDK \(Contact Sales\)](#)

Block Diagram



Availability

Sampling: Q416

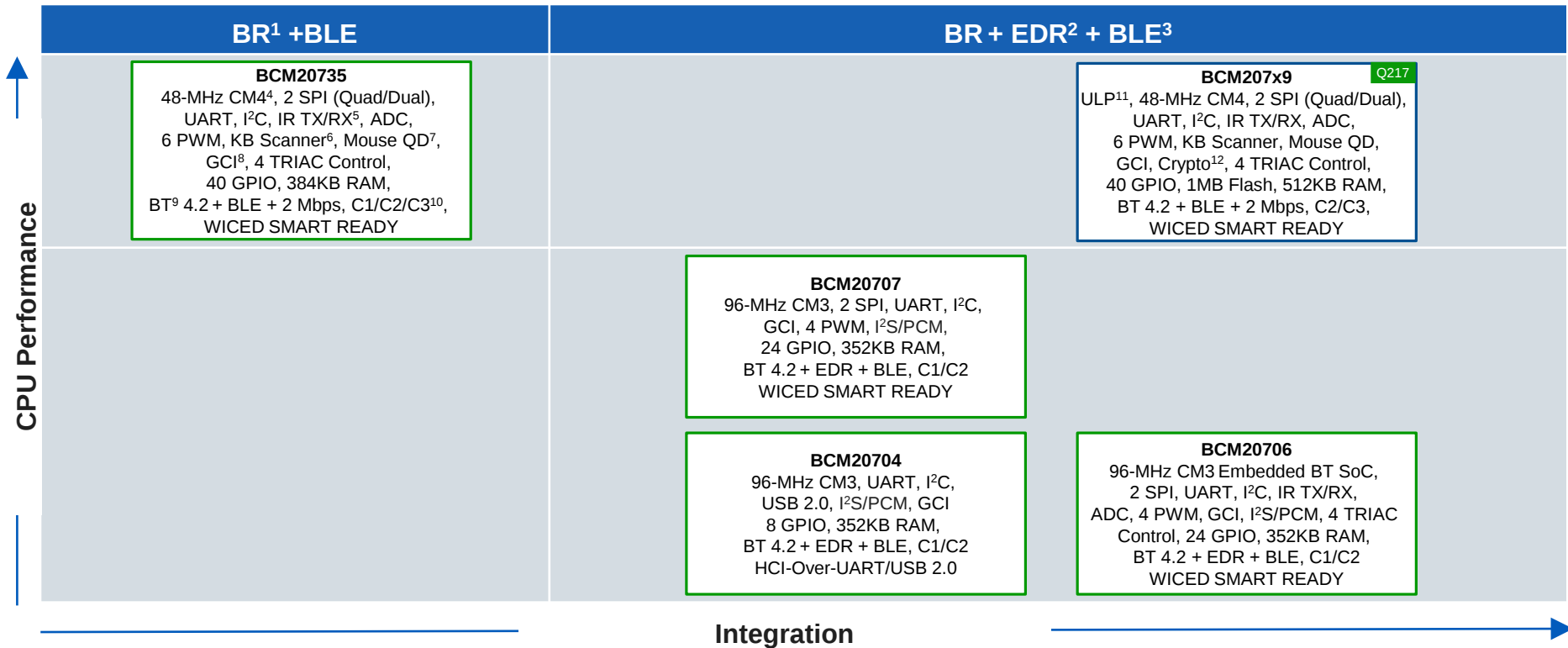
Production: Q117

¹ Effective number of bits is 10 at 187 kbps

Wireless Solutions for The Internet of Things (IoT) Roadmap

BLUETOOTH CLASSIC + BLE PORTFOLIO

Bluetooth Classic + BLE Portfolio



¹ Basic Rate

² Enhanced data rate

³ Bluetooth Low Energy

⁴ ARM® Cortex®-M3/M4

⁵ Infrared transmit and receive

⁶ Keyboard scanner

⁷ Mouse quadrature decoder

⁸ Global coexistence interface

⁹ Bluetooth Specification 3.0/4.1/4.2

¹⁰ Class 1 (100 m)/2 (10 m)/3 (1 m)

¹¹ Ultra-low power

¹² Cryptographic accelerator block for security

¹³ 3D Glass shutter control

¹⁴ Application Development Kit



BCM20707

Bluetooth Connectivity MCU



Applications

HCI-based Bluetooth and dongles

Features

Industry's Most-Widely-Deployed Bluetooth Stack

Bluetooth Features

Bluetooth 4.2 + high-speed stack with BR¹/EDR²/BLE³
 Class 1 (100 meters), Class 2 (10 meters) support
 Global coexistence interface (GCI)
 Wideband speech (16K) support
 Up to 16 LE connections
 Host controller interface (HCI) over UART

Application Specific Peripherals

Two independent half-duplex PCM/I²S interfaces

Package

49-pin FBGA (4.5 x 4.0 mm)

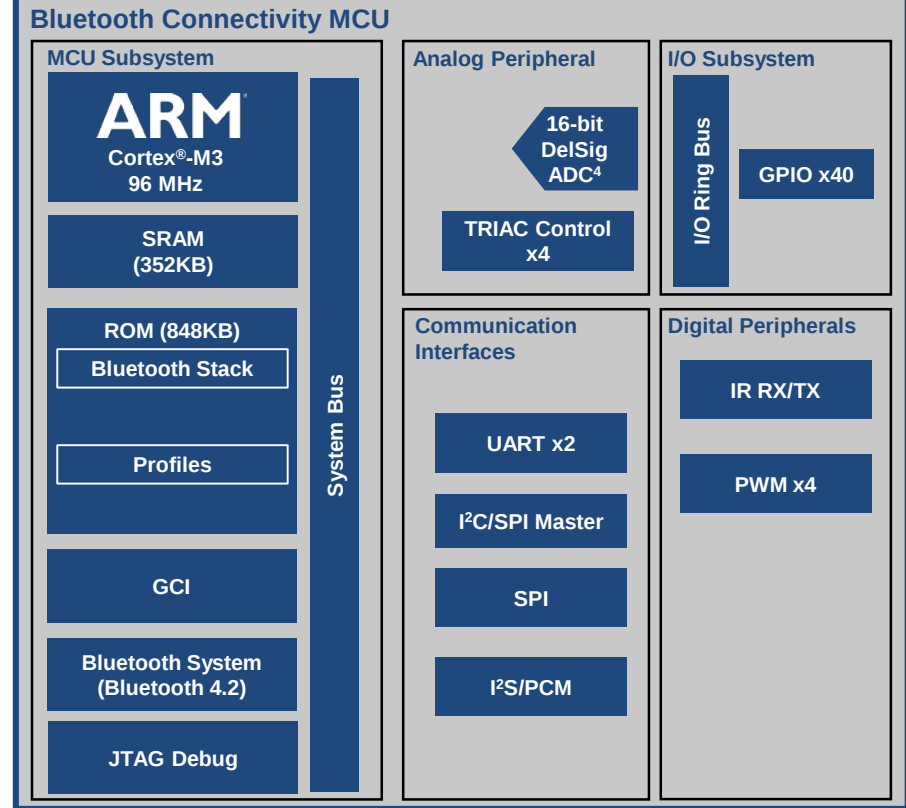
WICED™ SMART READY SDK

Collateral

Datasheet: [BCM20707](#)

Software: [WICED SMART READY SDK \(Contact Sales\)](#)

Block Diagram



Availability

Production: Now

¹ Basic Rate

³ Bluetooth Low Energy

² Enhanced Data Rate

⁴ Effective number of bits is 10 at 187 kbps

BCM20704

Bluetooth Connectivity MCU



Applications

HCI-based Bluetooth and dongles

Features

Industry's Most-Widely-Deployed Bluetooth Stack

Bluetooth Features

Bluetooth 4.2 + high-speed stack with BR¹/EDR²/BLE³
Class 1 (100 meters), Class 2 (10 meters) support
Global coexistence interface (GCI)
Host controller interface (HCI) over UART and USB

Package

49-pin FCBGA (4.5 x 4.0 mm)

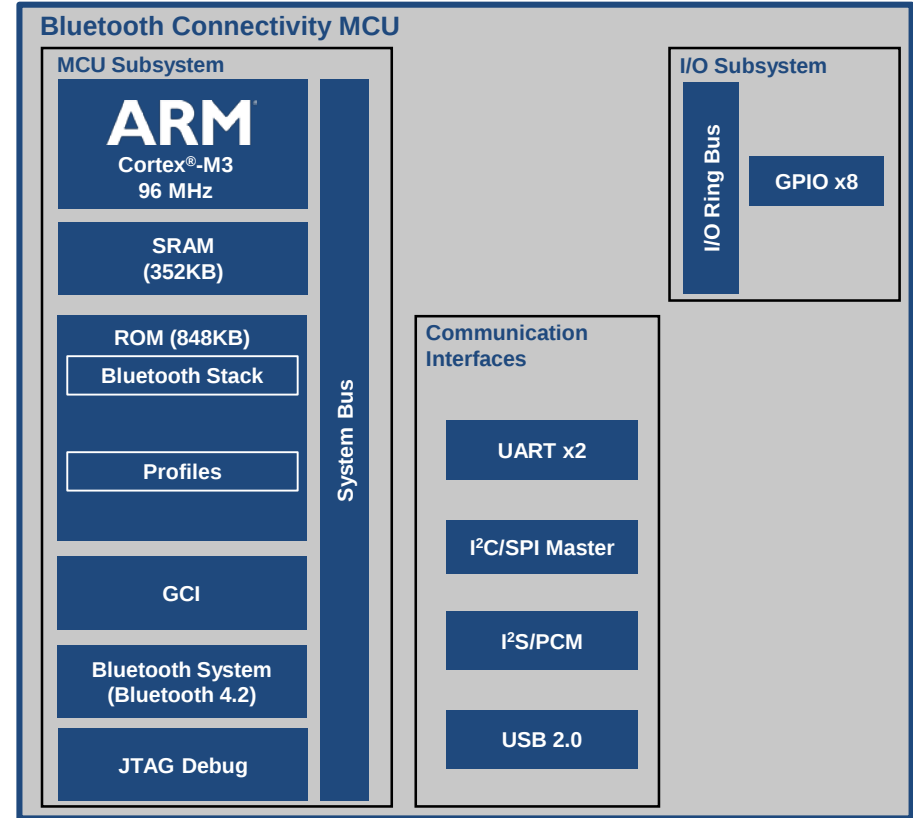
WICED™ SMART READY SDK

Collateral

Datasheet: [BCM20704](#)

Software: [WICED SMART READY SDK \(Contact Sales\)](#)

Block Diagram



Availability

Production: Now

¹ Basic Rate
² Enhanced Data Rate
³ Bluetooth Low Energy

BCM20706

Bluetooth Connectivity MCU



Applications

Speaker/Headset, Bluetooth gateway, automation gateway

Features

Industry's Most-Widely-Deployed Bluetooth Stack

Bluetooth Features

Hostless, complete system-on-chip
 Bluetooth 4.2 stack with BR¹/EDR²/BLE³
 Class 1 (100 meters), Class 2 (10 meters) support
 A2DP, AVRCP, SPP, GATT support
 Global coexistence interface (GCI)

Package

49-pin FBGA (4.5 x 4.0 mm)

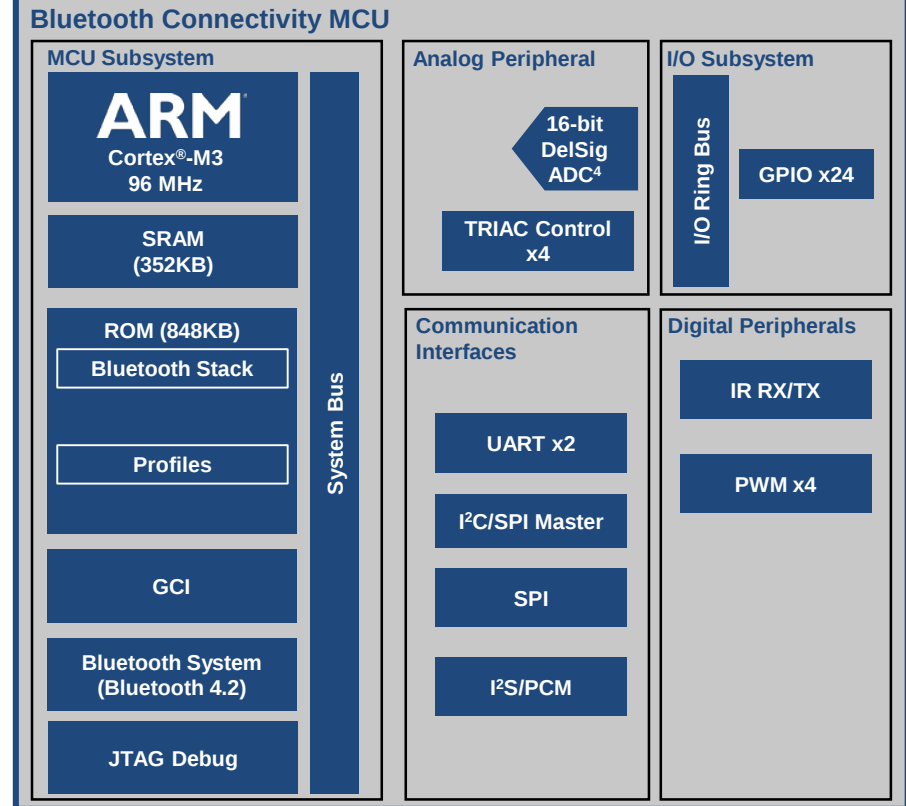
WICED™ SMART READY SDK

Collateral

Datasheet: [BCM20706](#)

Software: [WICED SMART READY SDK \(Contact Sales\)](#)

Block Diagram



Availability

Production: Now

¹ Basic Rate

³ Bluetooth Low Energy

² Enhanced Data Rate

⁴ Effective number of bits is 10 at 187 kbps

BCM20735

Bluetooth Smart and Basic Rate Connectivity MCU



Applications

Remote controls, BR-gateways

Features

Industry's Most-Widely-Deployed Bluetooth Stack

Bluetooth Features

Bluetooth 4.2 stack with basic rate and Bluetooth Low Energy (BLE)
All new Bluetooth 4.2 features: LE privacy 1.2, LE data length extension, LE secure connections
2-Mbps proprietary BLE support
Integrated power amplifier (up to 10 dBm)

ARM® Cortex®-M4 CPU With Floating-Point Unit (FPU) and Digital-Signal Processing (DSP) Logic

MIPI-Compliant Display Driver

Security Engine

PKA, SHA, AES

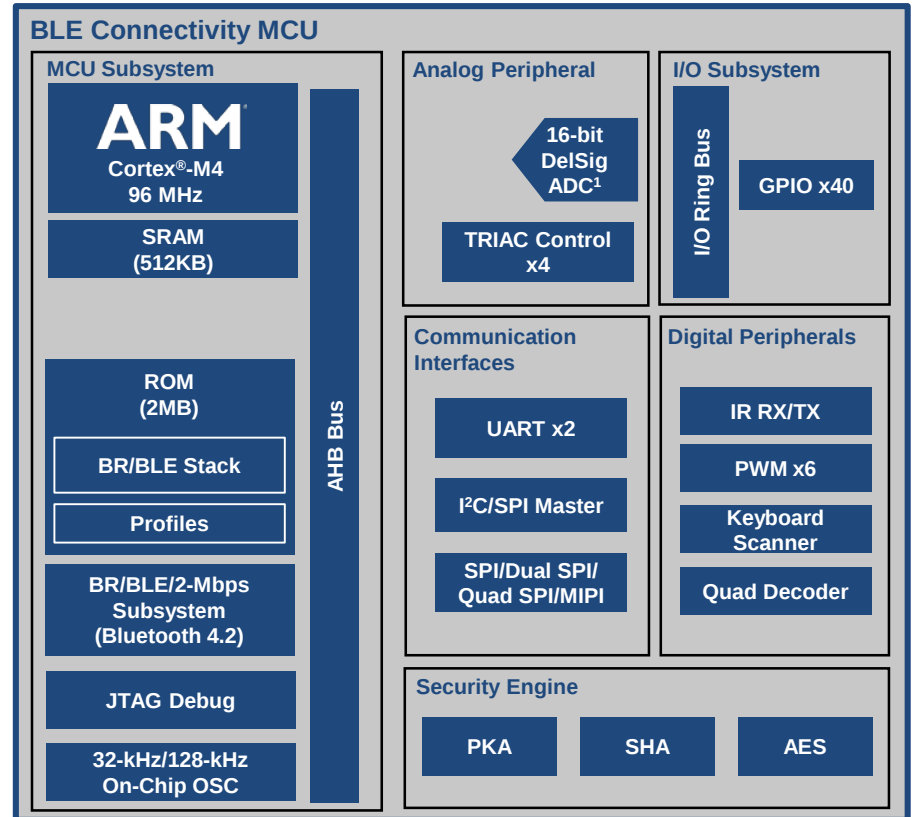
Packages

60-pin QFN (7 x 7 mm)

111-ball FBGA (9 x 9 mm)

WICED™ SMART READY SDK

Block Diagram



Collateral

Datasheet: [BCM20735](#)

Software: [WICED SMART READY SDK \(Contact Sales\)](#)

Availability

Production: Now

¹ Effective number of bits is 10 at 187 kbps

BCM207x9

Ultra Low Power Multi-Protocol Connectivity MCU



Applications

Medical, home automation, wearables, POS input devices

Features

Industry's Most-Widely-Deployed Bluetooth Stack

Bluetooth Features

Industry's lowest power Bluetooth radio

Bluetooth 4.2 stack with BR¹/EDR²/BLE³

All new, Bluetooth 4.2 features: LE privacy 1.2, LE data length extension, LE secure connections
2-Mbps proprietary BLE support
LE audio

802.15.4 ZigBee and Thread Support

ARM® Cortex®-M4 CPU With Floating-Point Unit (FPU),
Digital-Signal Processing (DSP) Logic and 1MB Flash

MIPI-Compliant Display Driver

Security Engine

PKA, SHA, AES, RSA, ECDH⁴

Packages

40-pin QFN (5 x 5 mm)

80-ball WLCSP (2.2 x 2.2 mm)

WICED™ SMART READY SDK

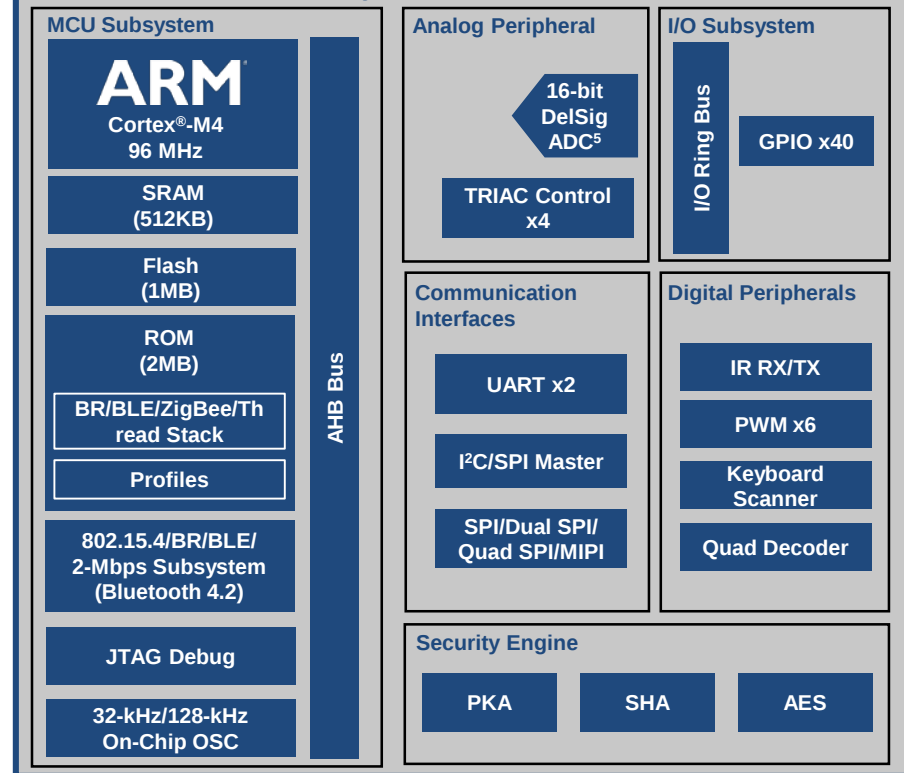
Collateral

Datasheet: [BCM207x9 \(Contact Sales\)](#)

Software: [WICED SMART READY SDK \(Contact Sales\)](#)

Block Diagram

Multi-Protocol Connectivity MCU



Availability

	<u>BCM20719</u>	<u>BCM20729</u>	<u>BCM20739</u>
Sampling:	Now	Q117	Q217
Production:	Q217	Q217	Q217

¹ Basic Rate

³ Bluetooth Low Energy

⁵ Effective number of bits is 10 at 187 kbps

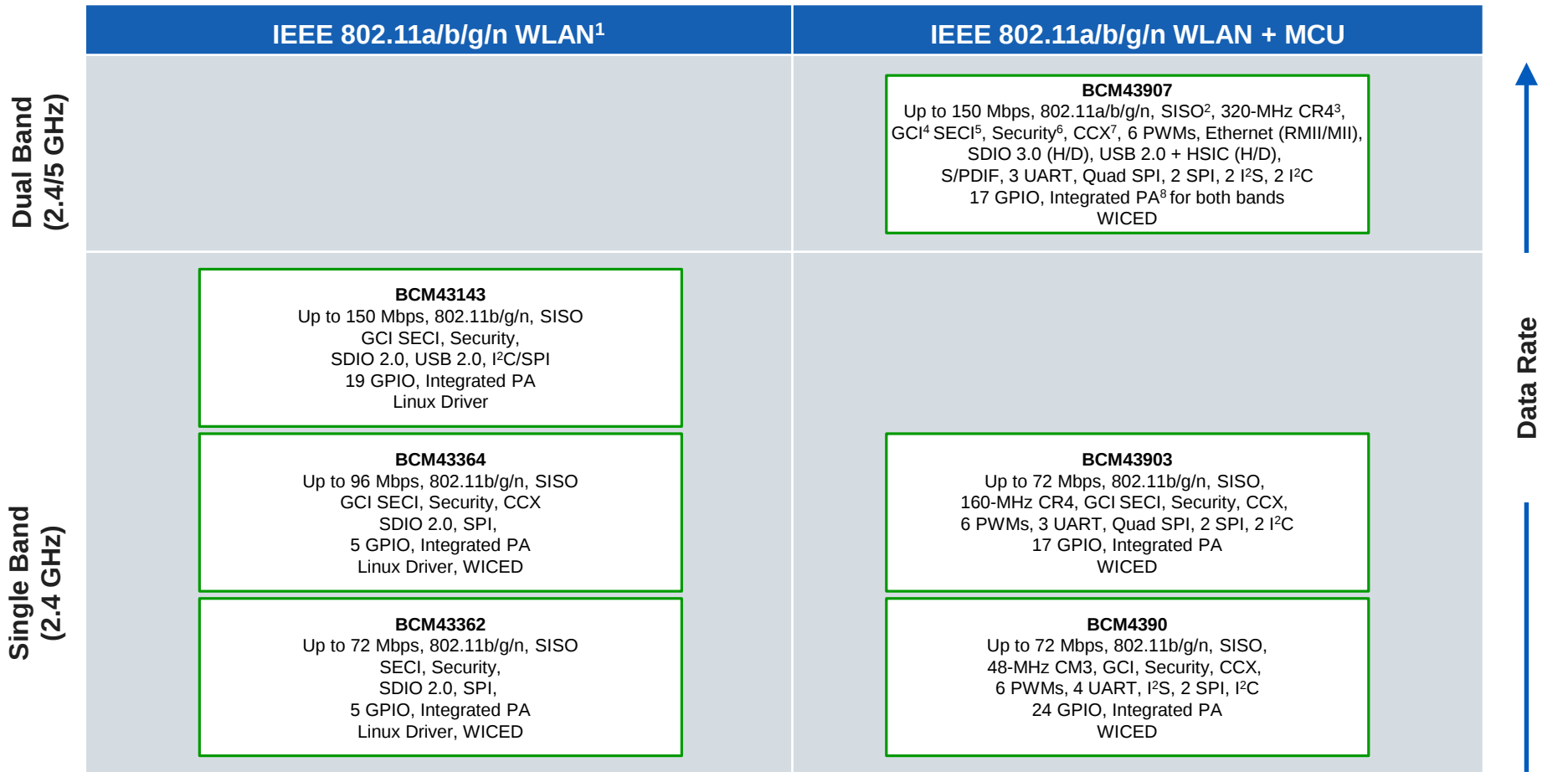
² Enhanced Data Rate

⁴ Elliptic-Curve Diffie Hellman

Wireless Solutions for The Internet of Things (IoT) Roadmap

Wi-Fi PORTFOLIO

Wi-Fi Portfolio



¹ Wireless Local Area Network
² Single-input single-output
³ ARM® Cortex®-M3/R4
⁴ Global coexistence interface

⁵ Serial-enhanced coexistence interface
⁶ WPA, WAPI STA, WPA2, AES, TKIP security features
⁷ Cisco-compatible extensions
⁸ Power amplifier



BCM43362

Single-Chip IEEE 802.11n MAC/Baseband/Radio + SDIO Connectivity Solution



Applications

Consumer and commercial internet-of-things (IoT), sensors and control

Features

Industry's Most-Widely-Deployed Wi-Fi IP

Wi-Fi Features

802.11b/g/n compliant

72-Mbps data rate

Single band (2.4 GHz)

SDIO 2.0 and SPI support

3-/4-wire serial enhanced coexistence interface (SECI)

Security Engine¹

WPA and WPA2

AES in hardware

Packages

69-ball WLPGA (4.52 x 2.92 mm)

WICED™ Wi-Fi SDK, Linux Driver

Collateral

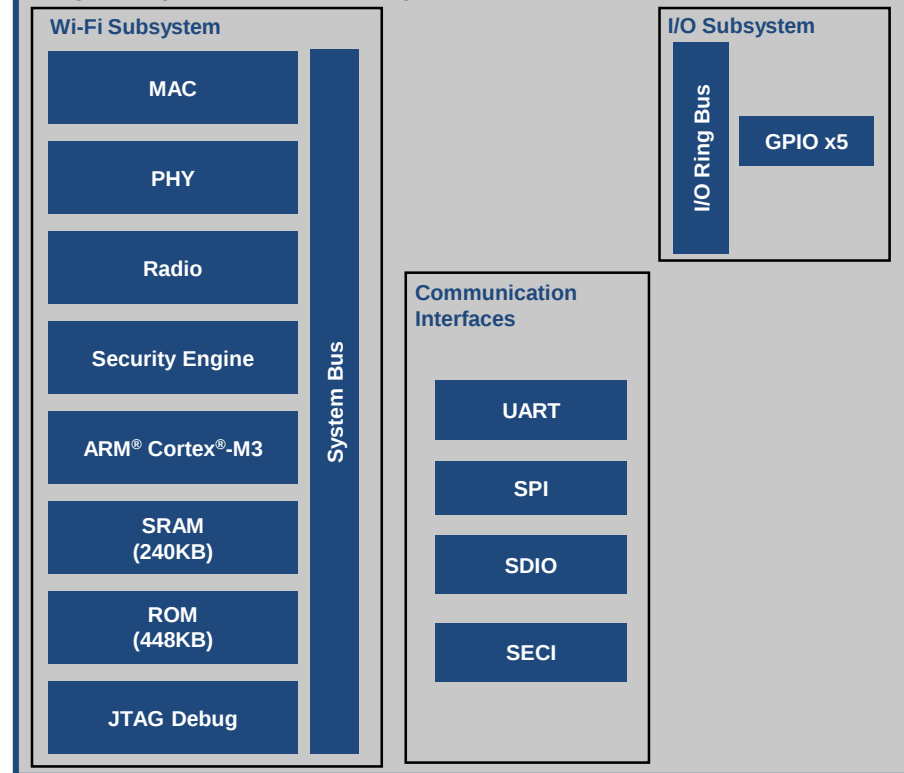
Datasheet: [BCM43362](#)

Software: [WICED Wi-Fi SDK](#)
[Linux Driver](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi Connectivity Solution



Availability

Production: Now

¹ WPA, WAPI STA, WPA2, AES, TKIP security features

BCM43364

Single-Chip IEEE 802.11n MAC/Baseband/Radio



Applications

Low-cost WLAN connectivity for consumer/commercial IoT

Features

Industry's Most-Widely-Deployed Wi-Fi IP

Wi-Fi Features

802.11b/g/n compliant

96-Mbps data rate

Single band (2.4 GHz)

SDIO 2.0 and SPI support

2-/3-/4-wire global coexistence interface (GCI) SECI¹

Security Engine²

WPA and WPA2

AES in hardware

Cisco-compatible extensions

Packages

74-ball WLPGA (4.87 x 2.87 mm)

WICED™ Wi-Fi SDK, Linux Driver

Collateral

Datasheet: [BCM43364](#)

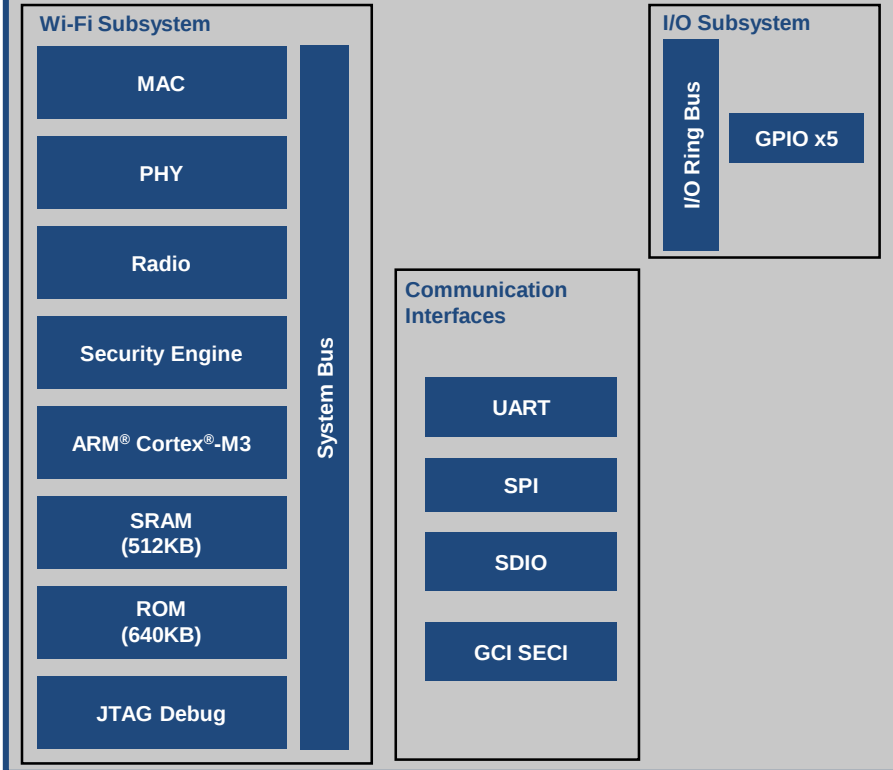
Software: [WICED Wi-Fi SDK](#)

[Linux Driver](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi Connectivity Solution



Availability

Production: Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

BCM43143

Single-Chip IEEE 802.11n MAC/Baseband/Radio + SDIO/USB Connectivity Solution



Applications

Consumer electronics, printers

Features

Industry's Most-Widely-Deployed Wi-Fi IP

Wi-Fi Features

802.11b/g/n compliant
150-Mbps data rate
Single band (2.4 GHz)
SDIO 2.0 and USB 2.0 support
2-/3-/4-wire global coexistence interface (GCI) SECI¹

Security Engine²

WPA and WPA2
AES in hardware
Cisco-compatible extensions

Packages

56-pin QFN (7 x 7 mm)

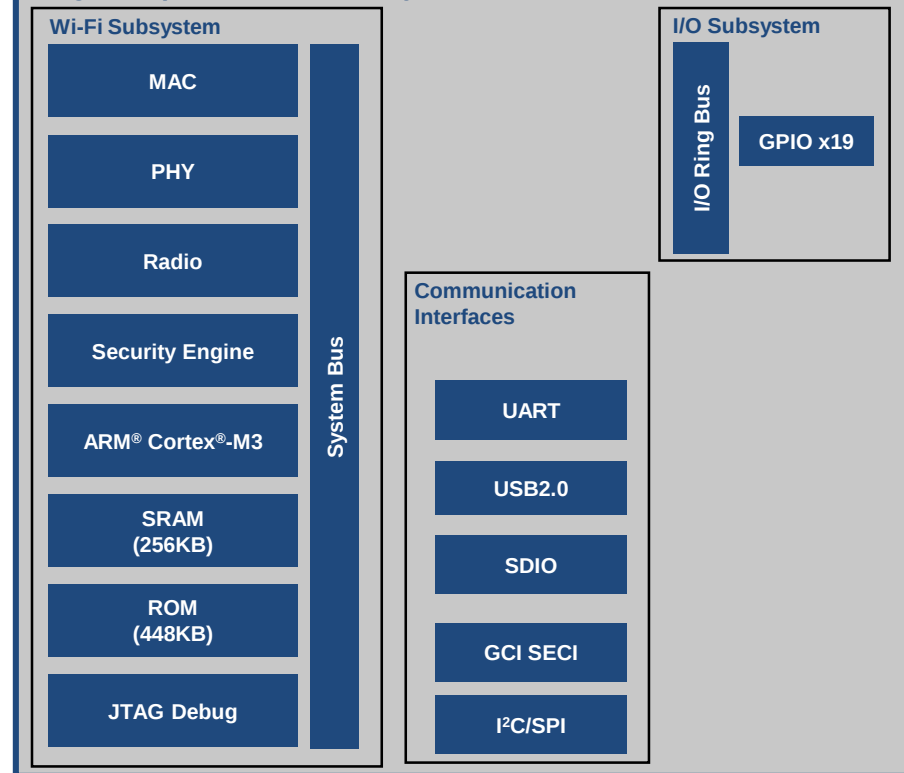
Linux Driver

Collateral

Datasheet: [BCM43143](#)
Software: [Linux Driver](#)
Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi Connectivity Solution



Availability

Production: Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

BCM4390

IEEE 802.11n System-on-Chip with Embedded Application Processor



Applications

Consumer, home automation, health, smart energy

Features

Industry's Most-Widely-Deployed Wi-Fi IP

Wi-Fi Features

802.11b/g/n compliant

72-Mbps data rate

Single band (2.4 GHz)

2-/3-/4-wire global coexistence interface (GCI) SECI¹

32-bit ARM Cortex-M3 Application MCU Subsystem

Security Engine²

WPA and WPA2

AES in hardware

Cisco-compatible extensions

Packages

286-ball WLCSP (4.87 x 5.413 mm)

WICED™ Wi-Fi SDK

Collateral

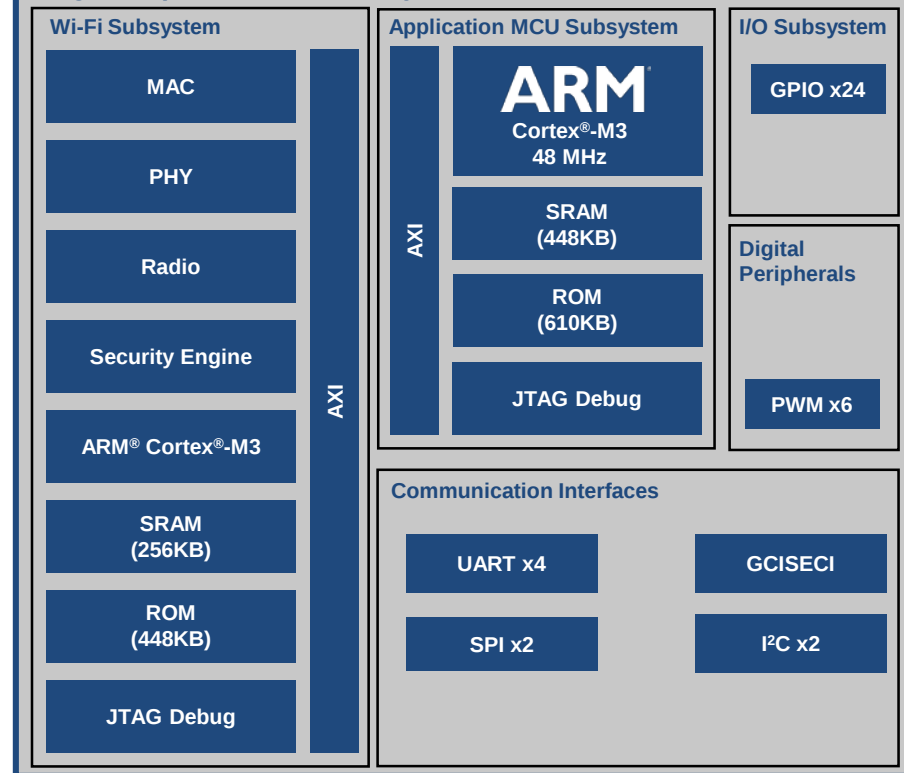
Datasheet: [BCM4390](#)

Software: [WICED Wi-Fi SDK](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi Connectivity Solution



Availability

Production: Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

BCM43907

IEEE 802.11n System-on-Chip with Embedded Application Processor



Applications

Appliances, HID, embedded audio, health/medical

Features

Industry's Most-Widely-Deployed Wi-Fi IP

Wi-Fi Features

802.11a/b/g/n compliant

150-Mbps data rate

Dual band (2.4/5 GHz)

2-/3-/4-wire global coexistence interface (GCI) SECI¹

32-bit ARM Cortex-R4 Application MCU Subsystem

Ethernet (RMII/MII)

Security Engine²

WPA and WPA2

AES in hardware

Cisco-compatible Extensions

Packages

316-ball WLCSP (4.58 x 5.53 mm)

WICED™ Wi-Fi SDK

Collateral

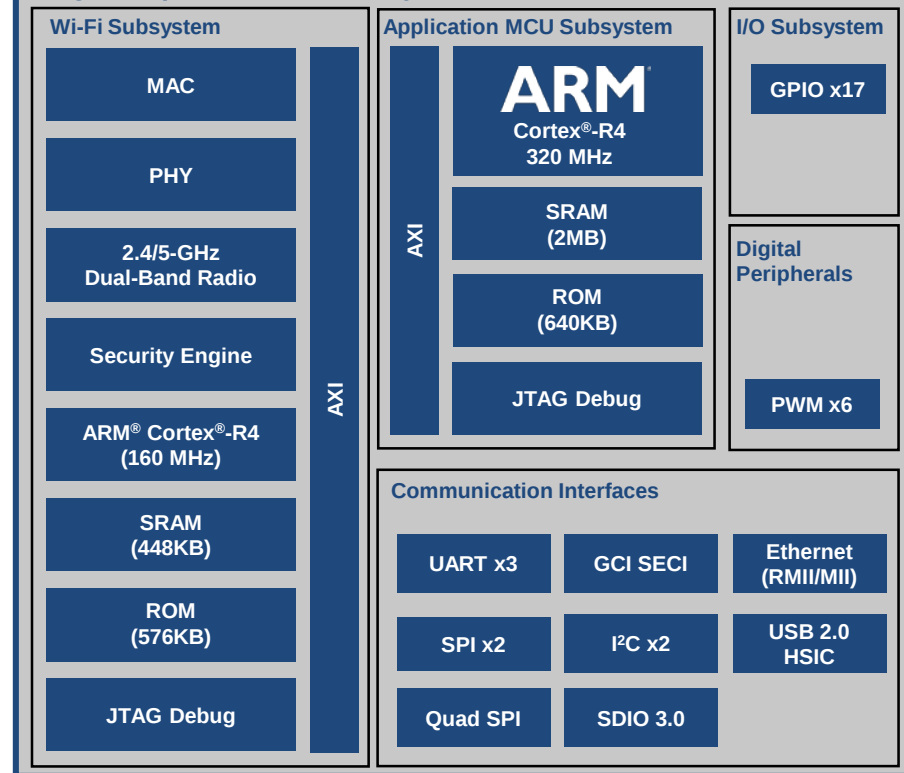
Datasheet: [BCM43907](#)

Software: [WICED Wi-Fi SDK](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi Connectivity Solution



Availability

Production: Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

BCM43903

IEEE 802.11n System-on-Chip with Embedded Application Processor



Applications

Consumer/home appliances, HID

Features

Industry's Most-Widely-Deployed Wi-Fi IP

Wi-Fi Features

802.11b/g/n compliant

72-Mbps data rate

Single band (2.4 GHz)

2-/3-/4-wire global coexistence interface (GCI) SECI¹

32-bit ARM Cortex-R4 Application MCU Subsystem

Security Engine²

WPA and WPA2

AES in hardware

Cisco-compatible extensions

Packages

151-ball WLBGA (4.91 x 5.85 mm)

WICED™ Wi-Fi SDK

Collateral

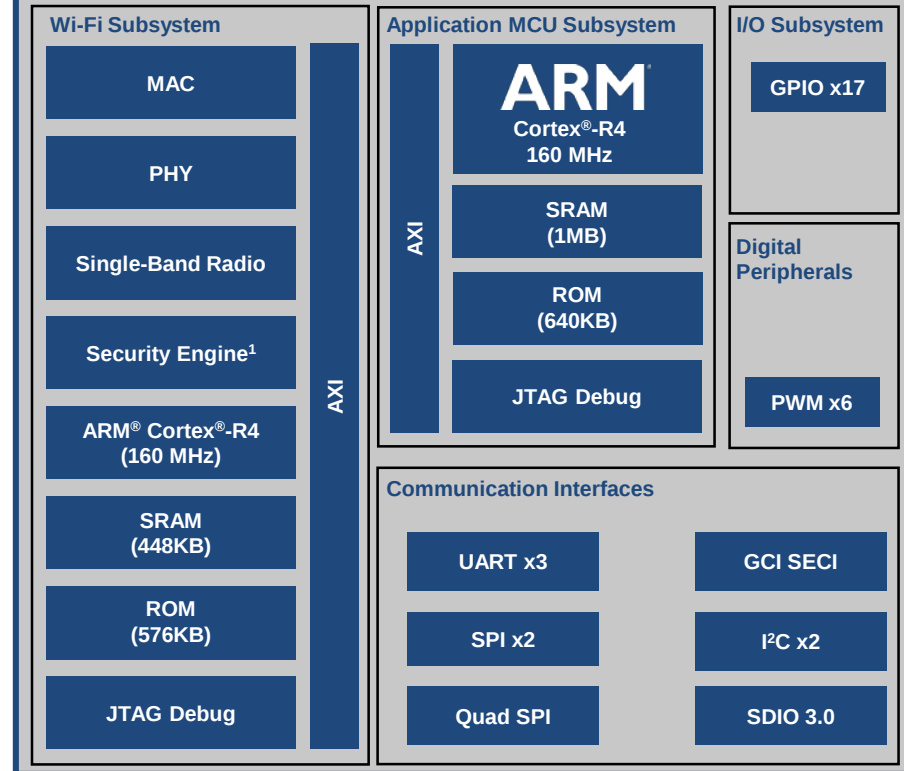
Datasheet: [BCM43903](#)

Software: [WICED Wi-Fi SDK](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi Connectivity Solution



Availability

Production: Now

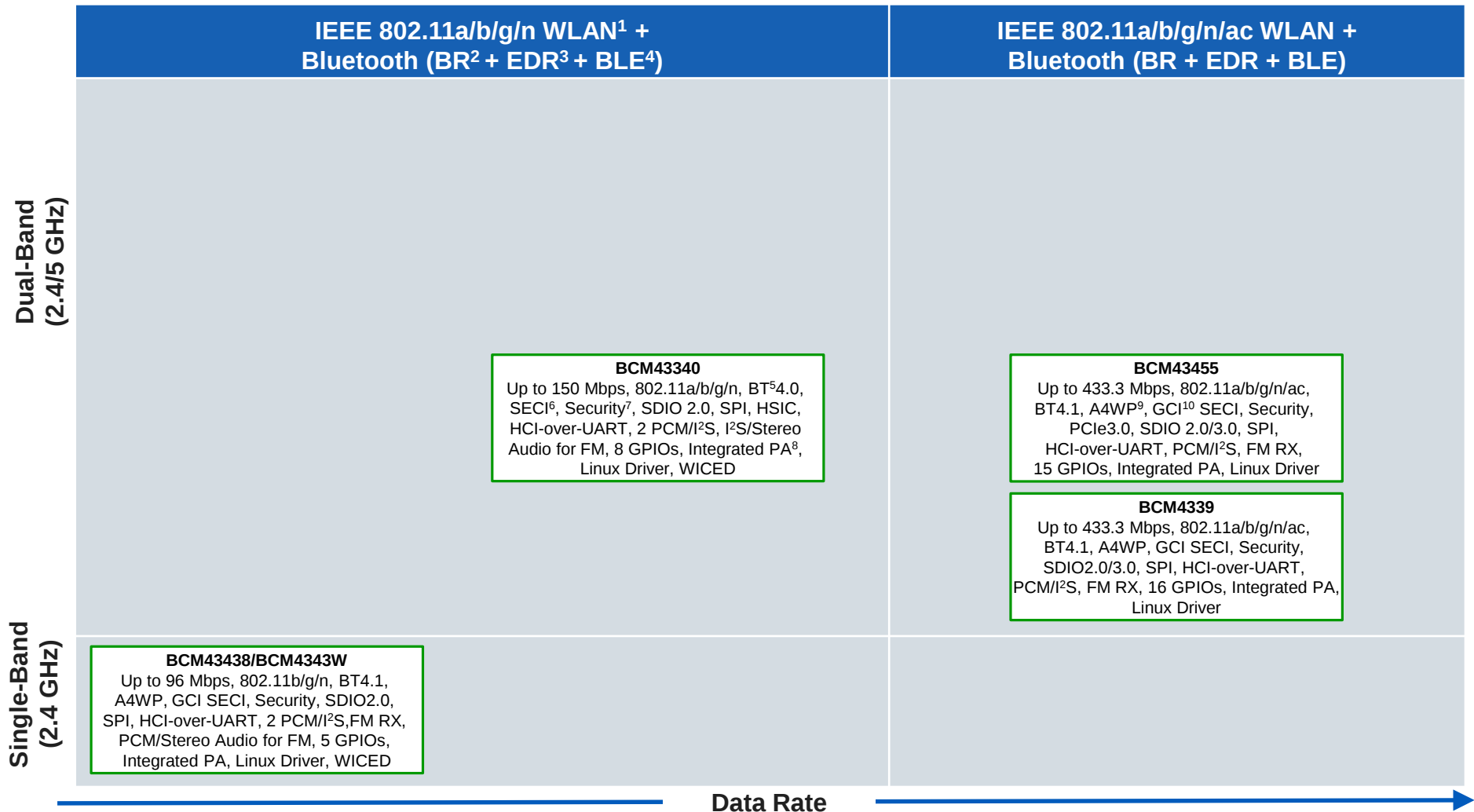
¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

Wireless Solutions for The Internet of Things (IoT) Roadmap

Wi-Fi + BLUETOOTH COMBO PORTFOLIO

Wi-Fi + Bluetooth Combo Portfolio



¹ Wireless Local Area Network
² Basic Rate
³ Enhanced Data Rate
⁴ Bluetooth Low Energy

⁵ Bluetooth Specification
⁶ Serial-enhanced coexistence interface
⁷ WPA, WAPI STA, WPA2, AES, TKIP
⁸ Power amplifier

⁹ Alliance for Wireless Power BLE Profile
¹⁰ Global coexistence interface

Status
 Availability

Concept	Development	Sampling	Production
			
		QQYY	QQYY

BCM43438/BCM4343W

Single chip IEEE 802.11n with Integrated Bluetooth 4.1 and FM Receiver



Applications

Portable consumer/commercial IoT and wearables

Features

Industry's Most-Widely-Deployed Wi-Fi IP and Bluetooth Stack

Wi-Fi Features

802.11b/g/n compliant
96-Mbps data rate
SDIO 2.0 and SPI support
2-/3-/4-wire global coexistence interface (GCI) SECI¹

Bluetooth Features

Bluetooth 4.0 compliant
Class 1 (100 m) and Class 2 (10 m) operation
Host controller interface (HCI)-over-UART

FM Features

FM receiver

Packages

63-ball WLPGA (4.87 x 2.87 mm)
74-ball WLPGA (4.87 x 2.87 mm)
153-ball WLCSP (4.87 x 2.87 mm)

WICED™ Wi-Fi SDK, Linux driver

Collateral

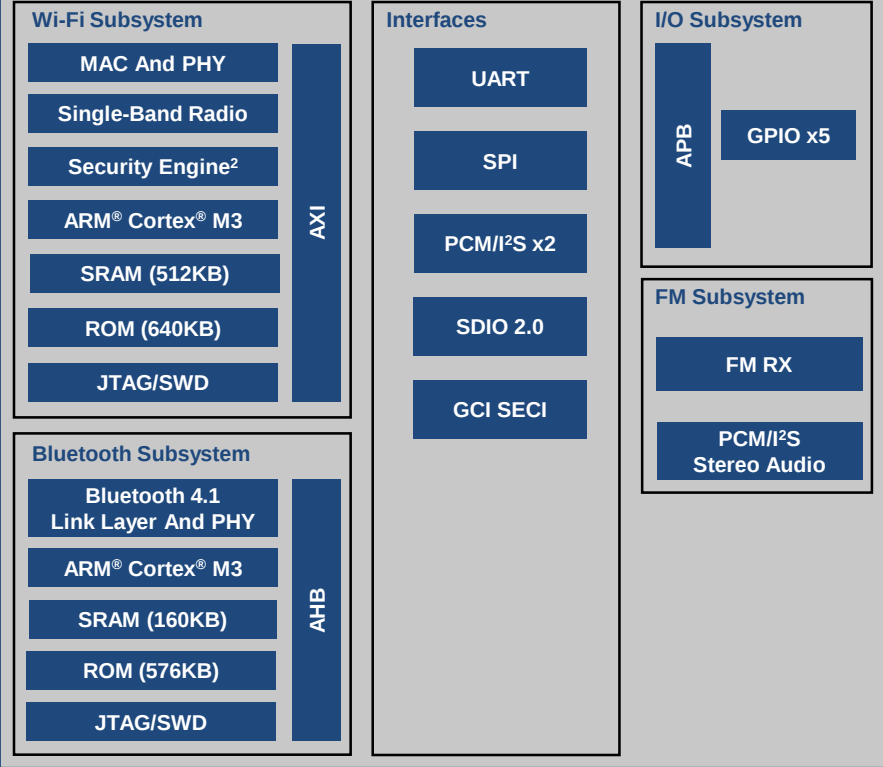
Datasheets: [BCM43438](#), [BCM4343W](#)

Software: [WICED Wi-Fi SDK](#)
[Linux Driver](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi and Bluetooth Connectivity Solution



Availability

	BCM43438	BCM4343W
Production:	Now	Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

BCM43340

Single chip IEEE 802.11n with Integrated Bluetooth 4.0 and FM Receiver



Applications

Portable consumer/commercial IoT applications

Features

Industry's Most-Widely-Deployed Wi-Fi IP and Bluetooth Stack

Wi-Fi Features

802.11a/b/g/n compliant
150-Mbps data rate
Dual band (2.4/5 GHz)
SDIO 2.0, SPI, HSIC support

Bluetooth Features

Bluetooth 4.0 compliant
Class 1 (100 m) and Class 2 (10 m) operation
Host controller interface (HCI)-over-UART

FM Features

FM receiver

Package

141-ball WLPGA (5.67 x 4.47 mm)

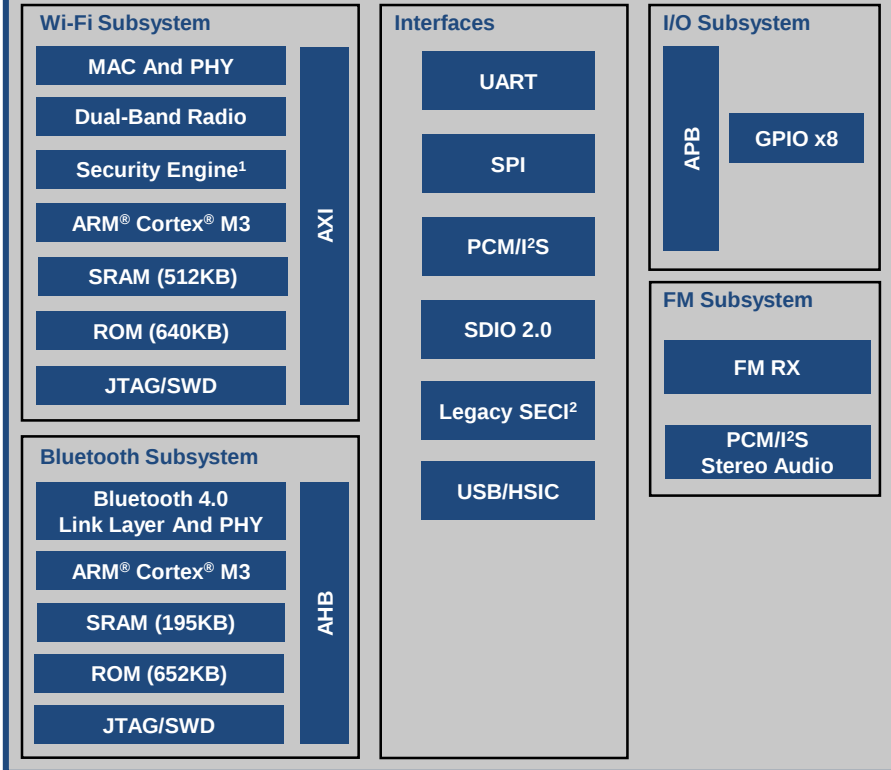
WICED™ Wi-Fi SDK, Linux Driver

Collateral

Datasheet: [BCM43340](#)
Software: [WICED Wi-Fi SDK](#)
[Linux Driver](#)
Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi and Bluetooth Connectivity Solution



Availability

Production: Now

¹ WPA, WAPI STA, WPA2, AES, TKIP security features

² Serial-enhanced coexistence interface

BCM4339

Single-Chip IEEE 802.11ac with Integrated Bluetooth 4.1 and FM Receiver



Applications

High-performance, space-constrained consumer IoT applications

Features

Industry's Most-Widely Deployed Wi-Fi IP and Bluetooth Stack

Wi-Fi Features

802.11b/g/n/ac compliant

433.3-Mbps data rate

Dual band (2.4/5 GHz)

2-/3-/4-wire global coexistence interface (GCI) SECI¹

Bluetooth Features

Bluetooth 4.1 compliant

Class 1 (100 m) and Class 2 (10 m) operation

Host controller interface (HCI)-over-UART

FM Receiver

Packages

160-ball FCFBGA (8 x 8 mm)

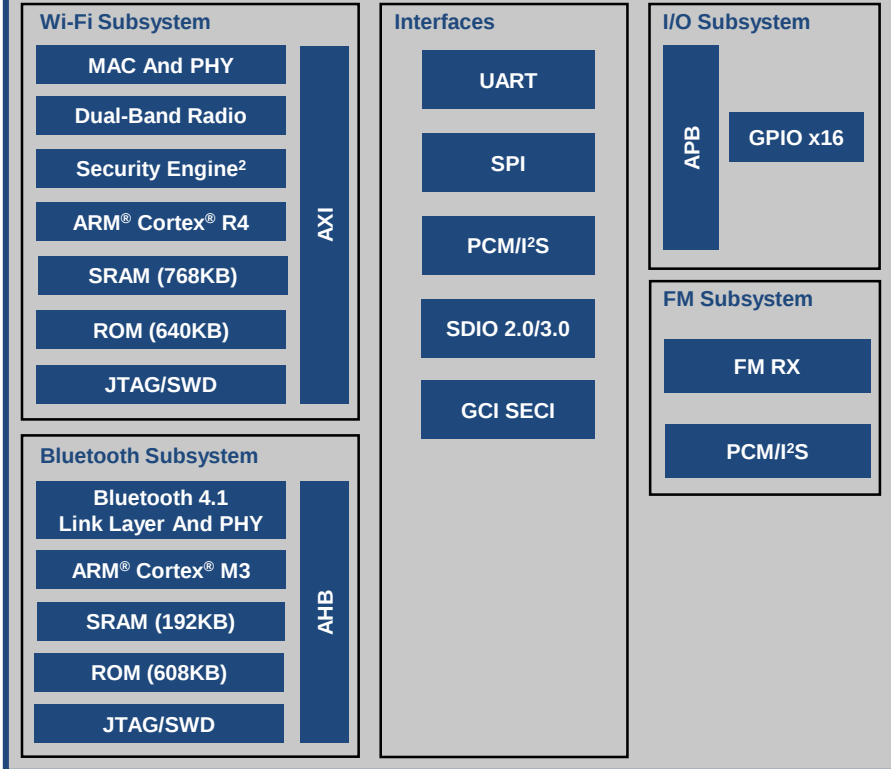
145-ball WLPGA (4.87 x 5.41 mm)

286-ball WLCSP (4.87 x 5.41 mm)

Linux Driver

Block Diagram

Single-Chip Wi-Fi and Bluetooth Connectivity Solution



Collateral

Datasheet: [BCM4339](#)

Software: [Linux Driver](#)

Modules: [IoT Solutions Guide](#)

Availability

Production: Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

BCM43455

Single-Chip IEEE 802.11ac with Integrated Bluetooth 4.1 and FM Receiver



Applications

High-performance, space-constrained consumer/commercial IoT

Features

Industry's Most-Widely-Deployed Wi-Fi IP and Bluetooth Stack

Wi-Fi Features

802.11b/g/n/ac compliant

433.3-Mbps data rate

Dual band (2.4/5 GHz)

2-/3-/4-wire global coexistence interface (GCI) SEC¹

Bluetooth Features

Bluetooth 4.1 compliant

Class 1 (100 m) and Class 2 (10 m) operation

Host controller interface (HCI)-over-UART

FM Receiver

Package

140-ball WLPGA (4.47x5.27 mm)

Linux Driver

Collateral

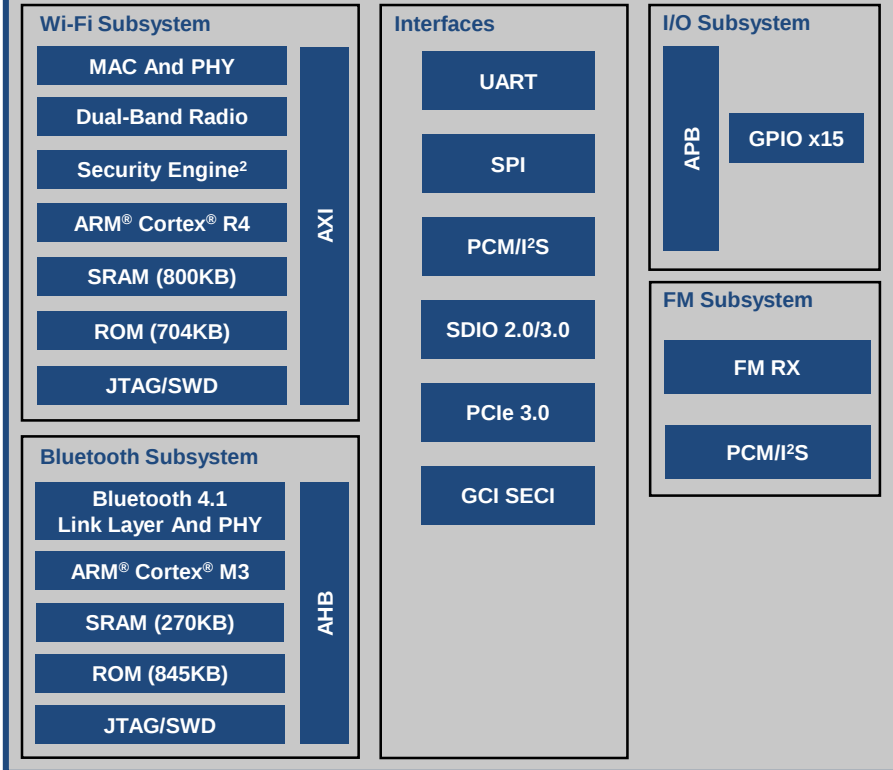
Datasheet: [BCM43455](#)

Software: [Linux Driver](#)

Modules: [IoT Solutions Guide](#)

Block Diagram

Single-Chip Wi-Fi and Bluetooth Connectivity Solution



Availability

Production: Now

¹ Serial-enhanced coexistence interface

² WPA, WAPI STA, WPA2, AES, TKIP security features

Wireless Solutions for The Internet of Things (IoT) Roadmap

AUTOMOTIVE WIRELESS PORTFOLIO

Automotive Wireless Portfolio



↑
Performance/Integration

Bluetooth (BR¹ + EDR²)

BCM89071

24-MHz ARM7TDMI-S⁴, SPI, UART, I²C,
I²S/PCM, GCI⁵ SECI⁶,
HCI⁷-over-UART/SPI,
8 GPIO, 112KB RAM,
BT⁸ 4.1 BR + EDR, C1/C2/C3⁹

BCM20713

24-MHz ARM7TDMI-S, SPI, UART, I²C,
I²S/PCM, GCI SECI, HCI-over-UART/SPI,
8 GPIO, 16KB RAM,
BT 4.0 BR + EDR, C1/C2/C3

IEEE 802.11a/b/g/n/ac WLAN³ + Bluetooth

BCM89359

Q117

Up to 867 Mbps, 802.11a/b/g/n/ac,
2x2 MIMO¹⁰ w/RSDB¹¹, BT 4.2 BR + EDR + BLE,
GCI SECI, SDIO 3.0, PCIe, UART, USB, I²C,
SPI, HCI-over-UART, PCM/I²S, Security¹²,
20 GPIO, C1/C2,
Linux Driver

BCM88335/BCM89359

Up to 433.3 Mbps, 802.11a/b/g/n/ac, SISO¹³,
BT4.1 BR + EDR + BLE, GCI SECI,
SDIO2.0/3.0,
SPI, HCI-over-UART, PCM/I²S, Security,
9 GPIO, C1/C2,
Linux Driver

Status
Availability

Concept	Development	Sampling	Production
		QQYY	QQYY

¹ Basic Rate
² Enhanced Data Rate
³ Wireless Local Area Network
⁴ ARM 7 Family CPU
⁵ Global coexistence interface

⁶ Serial-enhanced coexistence interface
⁷ Host controller interface
⁸ Bluetooth Specification
⁹ Class 1 (100 m)/2 (10 m)/3 (1 m)
¹⁰ Multiple-input multiple-output

¹¹ Real Simultaneous Dual Band
¹² WPA, WAPI STA, WPA2, AES, TKIP, Cisco
Compatible Extensions security features
¹³ Single-input single-output