

Change Description

Product Name	EZ-BLE Module with HomeKit
FCC ID	WAP3136
IC	7922A-3136
Model No.	CYBLE-413136-01 CYBLE-473142-01 CYBLE-413149-01 CYBLE-473148-01

- Change Description

Model No.	Description
CYBLE-413136-01	Original certification module, based on CYW20719 B0 chip
CYBLE-413149-01	Remove Apple Authentication Chip based on CYBLE-413136-01
CYBLE-473142-01	Change CYW20719 B0 to CYW20719 B1 based on CYBLE-413136-01
CYBLE-473148-01	Remove Apple Authentication Chip based on CYBLE-473142-01

- Details about difference

Cypress Modules CYBLE-413136-01 and CYBLE-473142-01 have the same PCB, peripheral parts and the same encapsulation of the main chip.

Modules **CYBLE-413149-01/ CYBLE-473148-01** have the same PCB, RF IC and peripheral parts as CYBLE-413136-01/CYBLE-473142-01, with the lone exception of removal of the Apple Authentication Chip. The Apple Authentication Chip is an isolated circuit on the board and only interacts with the I2C connection of the main IC on the module solution.

Module	RF IC	Apple Authentication IC	RAM Size (KB)	Flash Size (KB)	Package	Supported Bluetooth Standard	Supported Bluetooth version
CYBLE-413136-01	CYW20719B0	YES	512k	1M	QFN40	BLE Only	LE 4.2 Qualified
CYBLE-473142-01	CYW20719B1	YES	512k	1M	QFN40	BLE Only	LE 4.2 Qualified
CYBLE-413149-01	CYW20719B0	NO	512k	1M	QFN40	BLE Only	LE 4.2 Qualified

CYBLE-473148-01	CYW20719B1	NO	512k	1M	QFN40	BLE Only	LE 4.2 Qualified
-----------------	------------	----	------	----	-------	----------	------------------

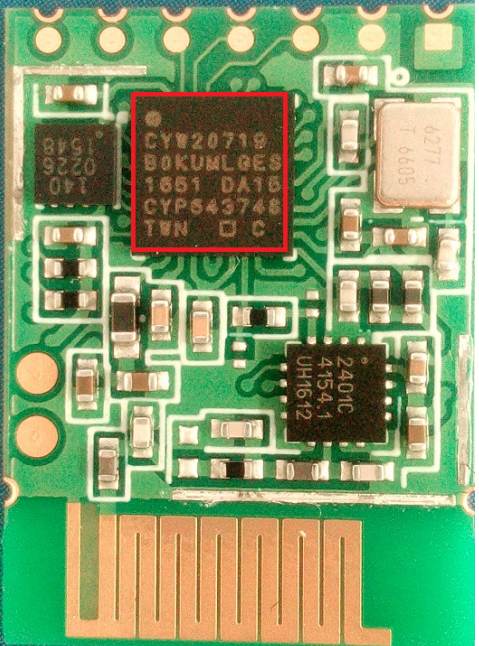
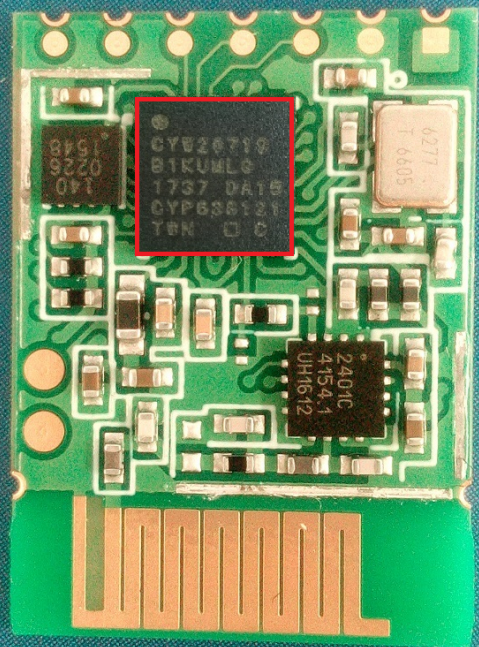
The ROM firmware in the CYW20719B0 and CYW20719B1 has differences related to Bluetooth Classic (EDR/BR) operation. NOTE that the module solutions stated above are qualified and certified for Bluetooth Low Energy (BLE) operation only. Bluetooth Classic (BR/EDR) support is not supported for these modules. RF characteristics for the Bluetooth Low Energy operation of the CYW20719B0 and CYW20719B0 silicon devices are identical.

The Apple Authentication Chip is used for Apple HomeKit authentication during operation. This chip will be replaced with a FW Authentication scheme recently announced by Apple.

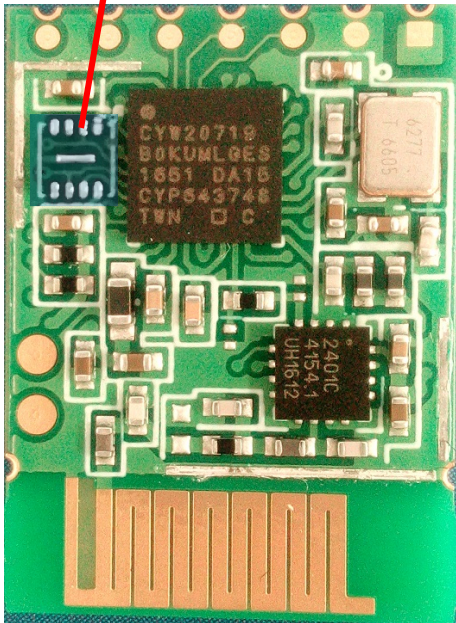
The RF characteristics of these four modules are the same.

Operation Frequency	2402 MHz – 2480 MHz
No. of Channel	40
Channel Spacing	2 MHz
Modulation	GFSK
Transmit power (ERP)	7.5 dBm (5.6mW)
Data Rate	1 Mbps
Antenna Type	PCB Trace Antenna
No. of Antenna(s)	One
Antenna Gain	-0.5 dBi
Supply Voltage	3.0V to 3.6V (test under 3.3V)
Dimension	17.7mm*20mm
Working Environment	-30 °C to +105 °C

Picture of modules are as below:

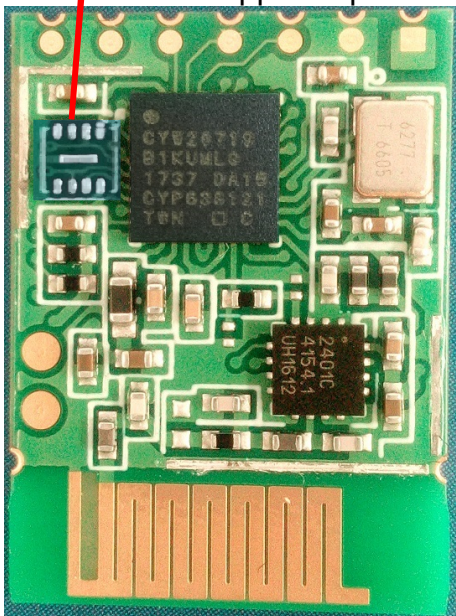
 A photograph of a green printed circuit board (PCB) for the CYBLE-413136-01 module. The board features a central black integrated circuit (IC) with a red rectangular border. The IC is labeled with the following text: CYW20719, B0KUMLGES, 1661 DA16, CYP643746, and T0N □ C. Other components on the board include a silver capacitor labeled 4277, a silver capacitor labeled 1.6605, a black IC labeled 2401C, and a black IC labeled 4154.1 UH1612. The board has a gold-plated edge connector at the bottom.	<p>CYBLE-413136-01</p>
 A photograph of a green printed circuit board (PCB) for the CYBLE-473142-01 module. The board features a central black integrated circuit (IC) with a red rectangular border. The IC is labeled with the following text: CYW20719, B1KUMLG, 1737 DA16, CYP638121, and T0N □ C. Other components on the board include a silver capacitor labeled 4277, a silver capacitor labeled 1.6605, a black IC labeled 2401C, and a black IC labeled 4154.1 UH1612. The board has a gold-plated edge connector at the bottom.	<p>CYBLE-473142-01</p>

Remove apple chip



CYBLE-413149-01

Remove apple chip



CYBLE-473148-01

Yedan LI

Yedan LI / System engineer
Cypress Semiconductor