

Difference Description

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

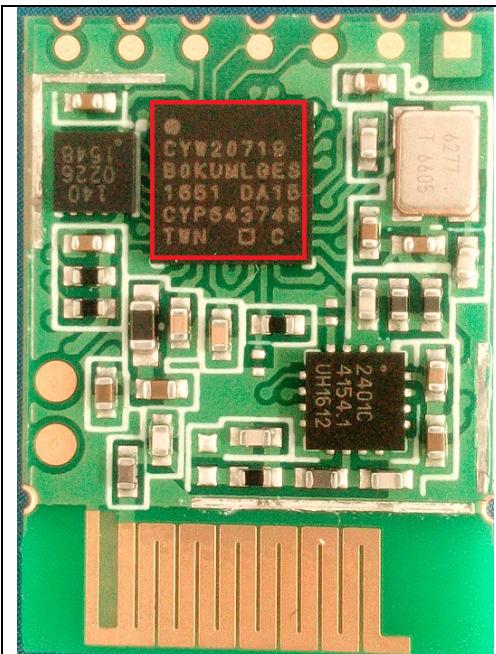
The ROM firmware in the CYW20719B0 and CYW20719B1 has differences related to Bluetooth Classic (EDR/BR) operation. NOTE that the module solutions stated above are qualified and certified for Bluetooth Low Energy (BLE) operation only. Bluetooth Classic (BR/EDR) support is not supported for these modules.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

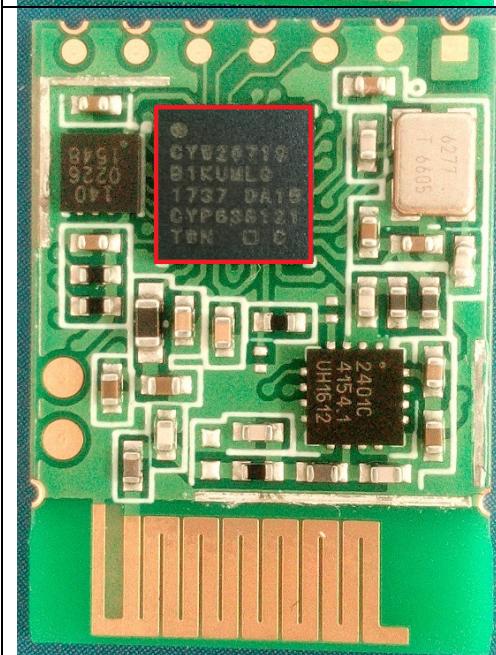
The RF characteristics of these four modules are the same.

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

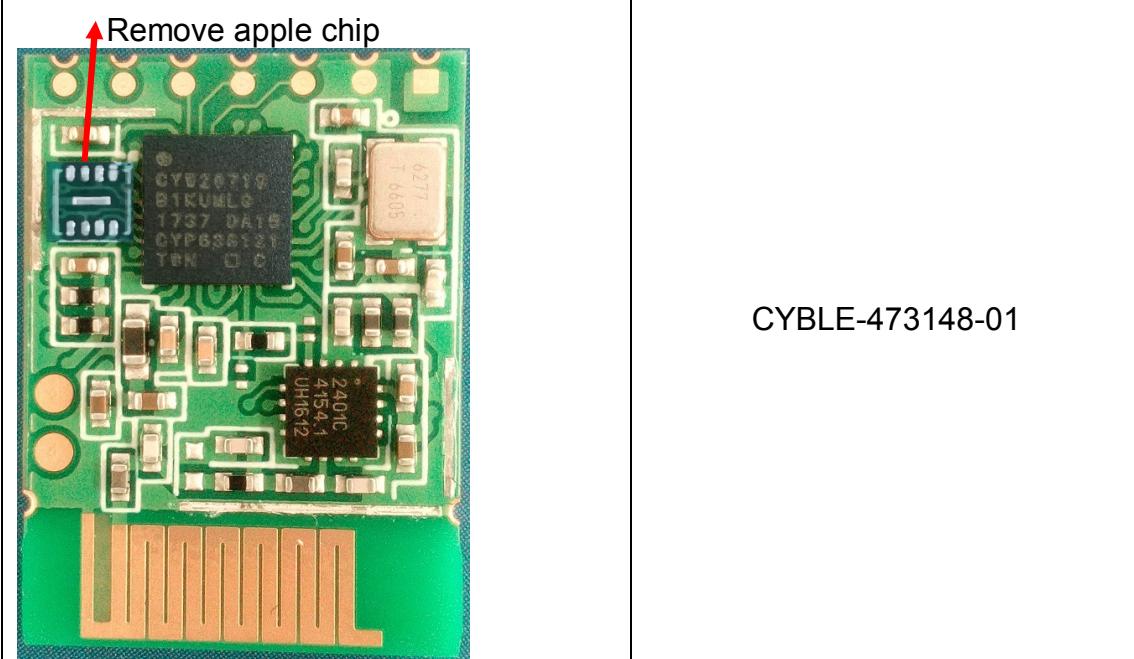
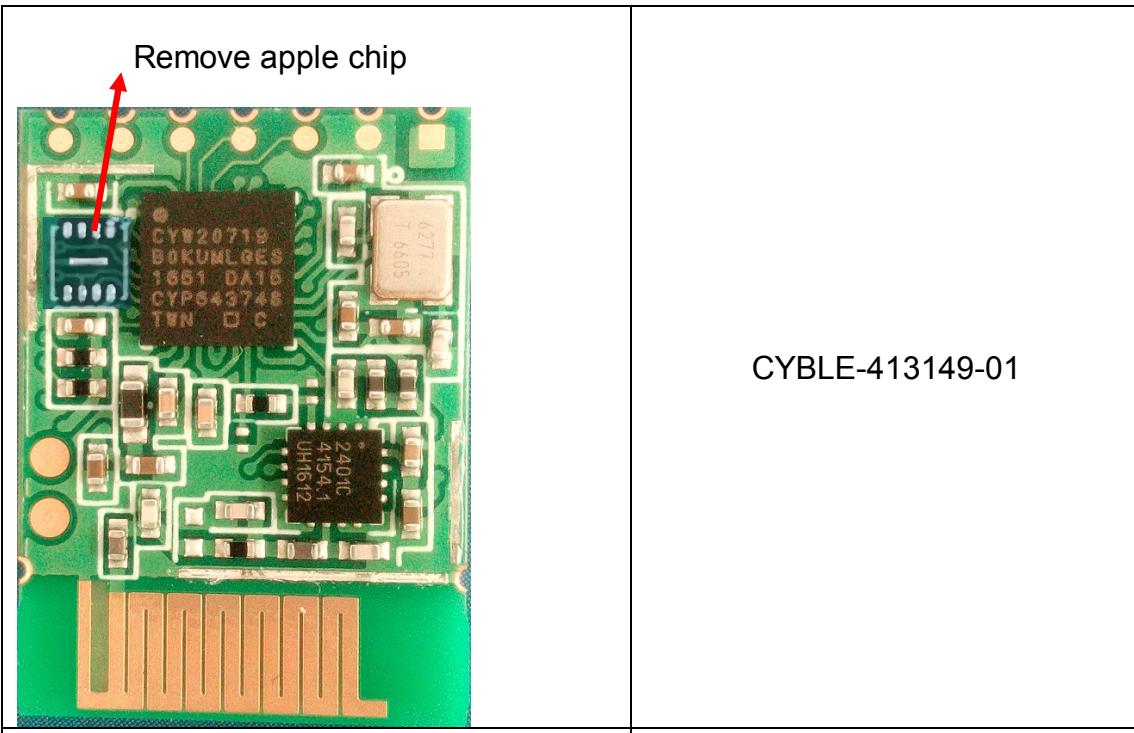
Picture of modules are as below:



CYBLE-413136-01



CYBLE-473142-01



yedan LI

Yedan LI / System engineer
Cypress Semiconductor