

**Honeywell**

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**HSOM660**  
**Installation guide.**

*Contains Information proprietary to*  
***Honeywell, Inc.***

## Dolphin® SOM Installation Description

### 1.0 SYSTEM OVERVIEW

The Dolphin® SOM Radio Module is offered with “Android 7.1” based operating system. The hardware will be made up of the basic system components shown in Figure 1 below. The unit will be available per the following matrix:

The SOM module has radios for LTE (+ 2G, 3G, 4G), GPS, 802.11a/b/g/n/ac WLAN and Bluetooth 2.0/4.0/5.0. The WLAN and Bluetooth radio modules in the product will have a shared antenna. Similar to a Smartphone, the device can be used up to head or in speakerphone mode.

### 2.0 Baseline Terminal Features

The following is a detailed list of the base terminal features.

- Operating System Android 7.1 or later
- Qualcomm® SDM660 Octa Core 2.2GHz Processor
- RAM Memory: 4GB LPDDR4 SDRAM (discrete)
- FLASH Memory: 32 GB MLC eMMC Managed NAND
- 4-bit micro Secure Digital Card Interface
- Dual SIM Support
- High Speed USB Client / High Speed USB Host / Charging Connector (IO connector - 10 pos)
- Integrated gyroscope
- Bluetooth Radio with Internal Antenna
- 802.11a/b/g/n/ac Radio with Internal Antenna
- GPS Support with Internal Antenna
- WWAN Radio features air interface support for a single global SKU with support for voice & internal antennas:

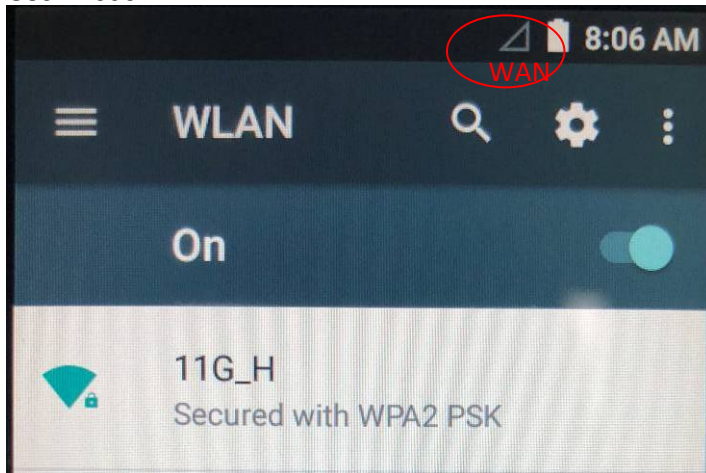
### 3.0 Regulatory Compliance

This product regulatory compliance information is shown in Regulatory sheet document.

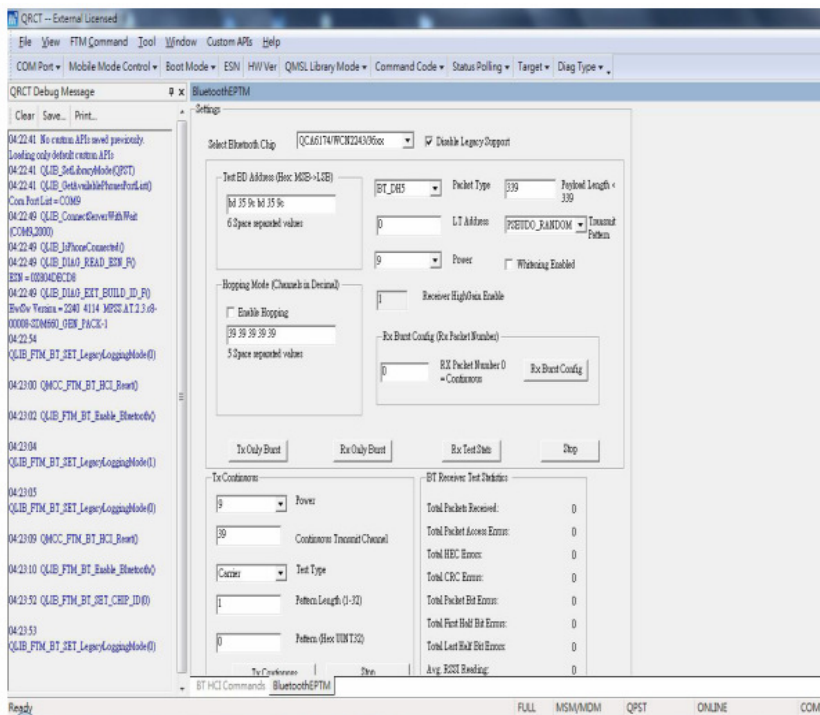
## 4.0 User Utility

Support end user mode and RF continuous transmit mode with the driver and tool.

User mode:



RF mode:



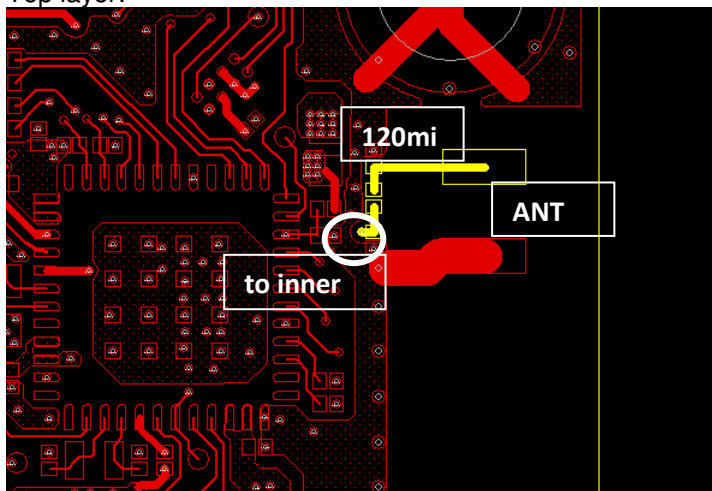
## 5.0 Layout Instruction and Antenna

OEM Integrators must follow the instructions and limitations for the chosen antenna schemes exactly as stated below..

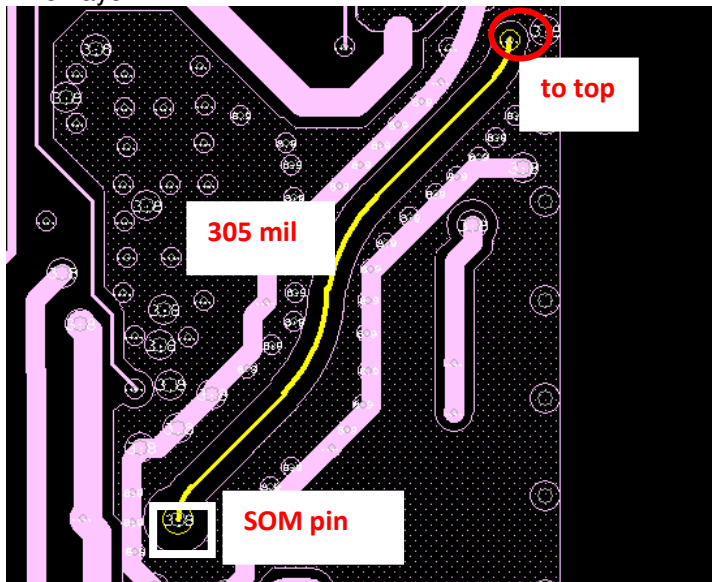
Antenna	PIFA antenna
RF trace	Corresponding 50-ohm characteristic impedance, the length and routing as following structure.

### WLAN chain0/BT:

Top layer:

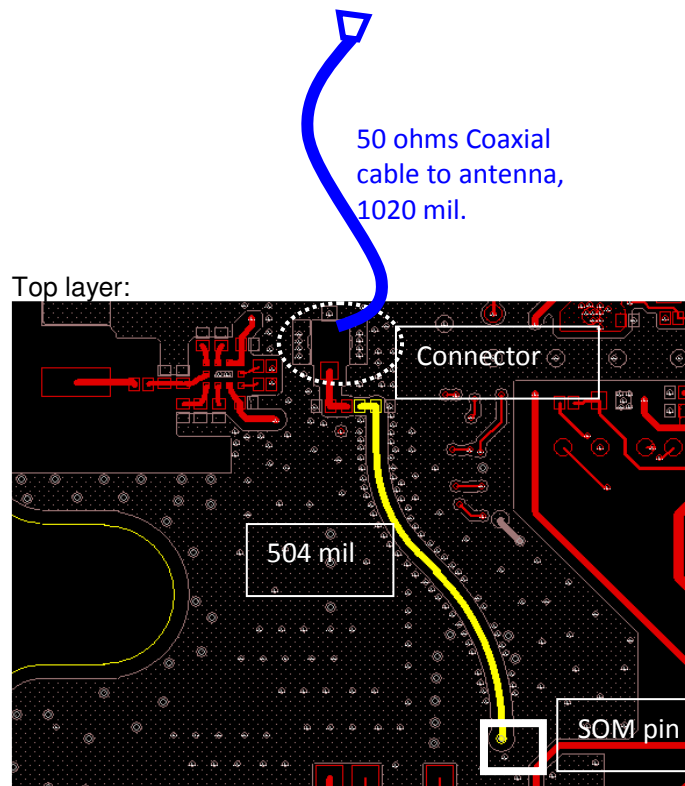


Inner layer



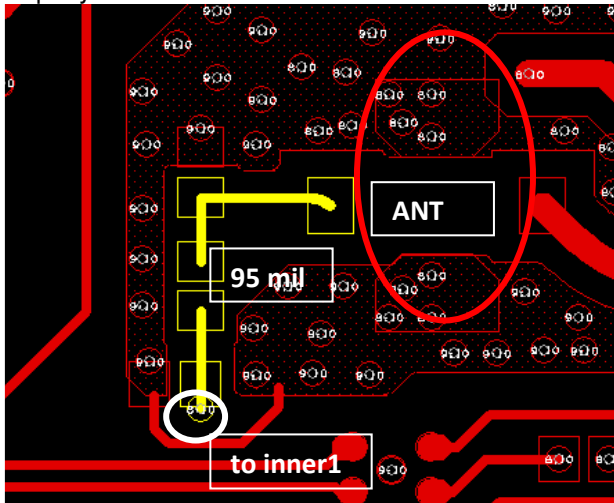
Maintains a solid ground plane under the RF signal trace, and use strip-line structure for inner layer of the PCB, and ensure the ground return path is uninterrupted.

WLAN chain1:

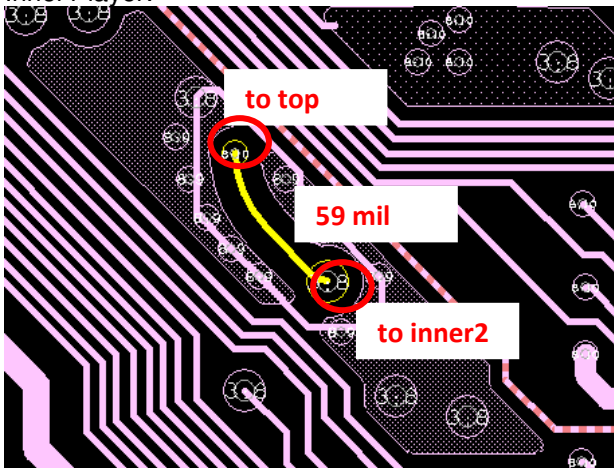


Maintains a solid ground plane under the RF signal trace, and use strip-line structure for inner layer of the PCB, and ensure the ground return path is uninterrupted.

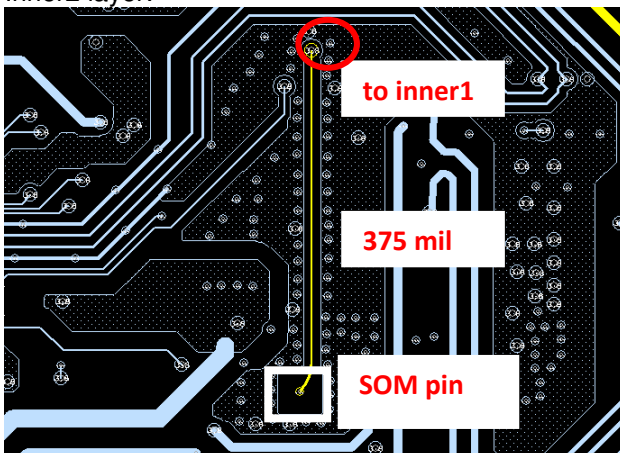
WAN main:  
Top layer:



Inner1 layer:



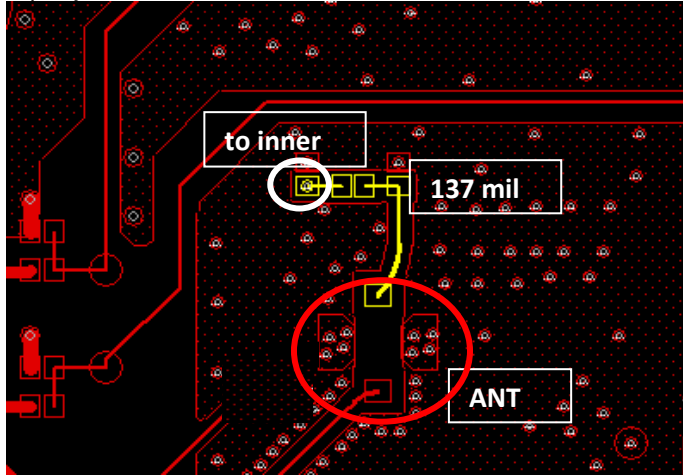
Inner2 layer:



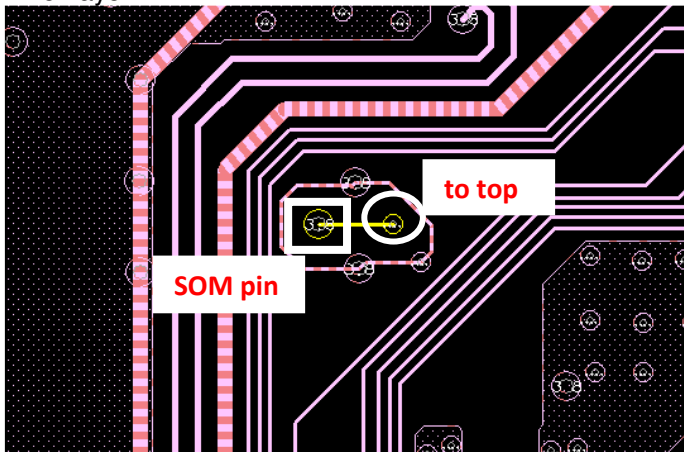
Maintains a solid ground plane under the RF signal trace, and use strip-line structure for inner layer of the PCB, and ensure the ground return path is uninterrupted.

WAN Aux (RX only):

Top layer:



Inner layer:



Maintains a solid ground plane under the RF signal trace, and use strip-line structure for inner layer of the PCB, and ensure the ground return path is uninterrupted.