

Honeywell

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:

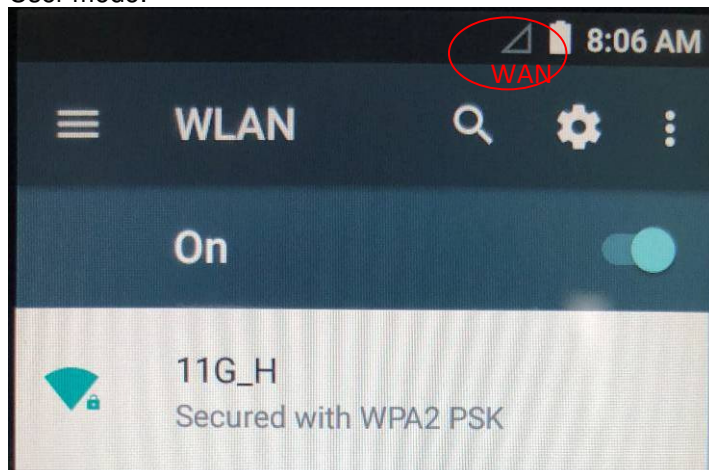
3.0 Regulatory Compliance

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

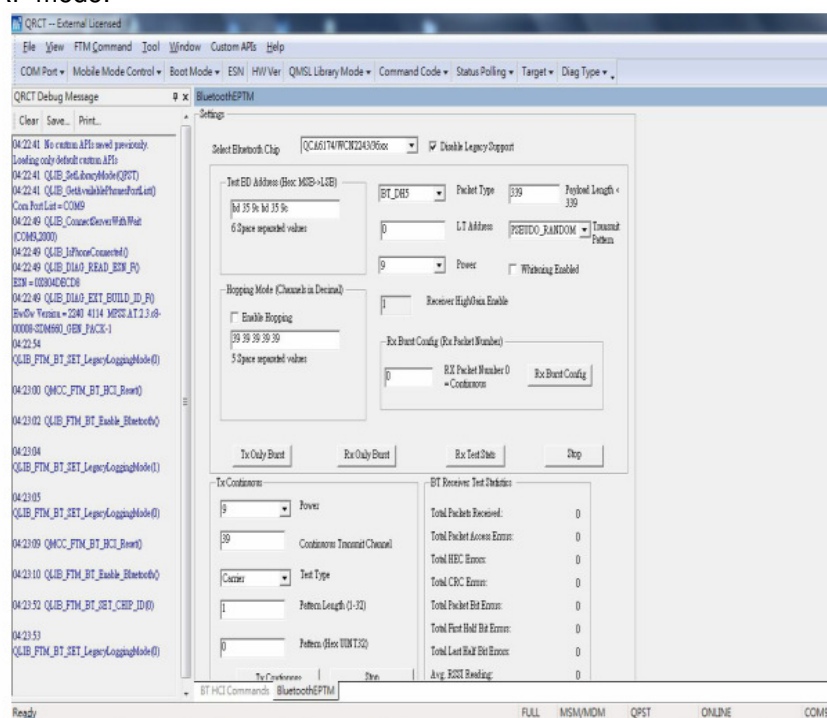
4.0 User Utility

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

User mode:



RF mode:



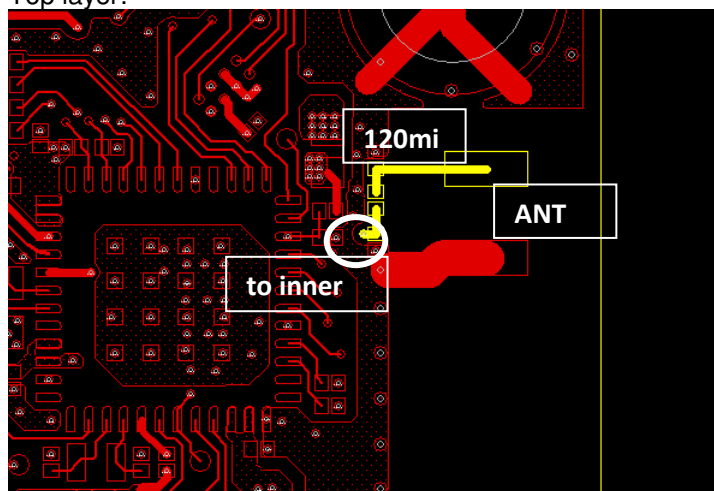
5.0 Layout Instruction and Antenna

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

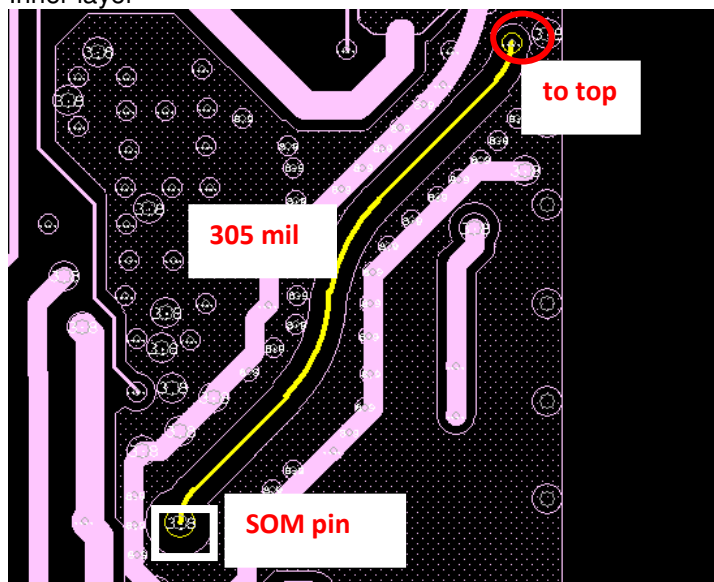
Antenna	PIFA antenna
RF trace	Corresponding 50-ohm characteristic impedance, the length and routing as following structure.

WLAN chain0/BT:

Top layer:

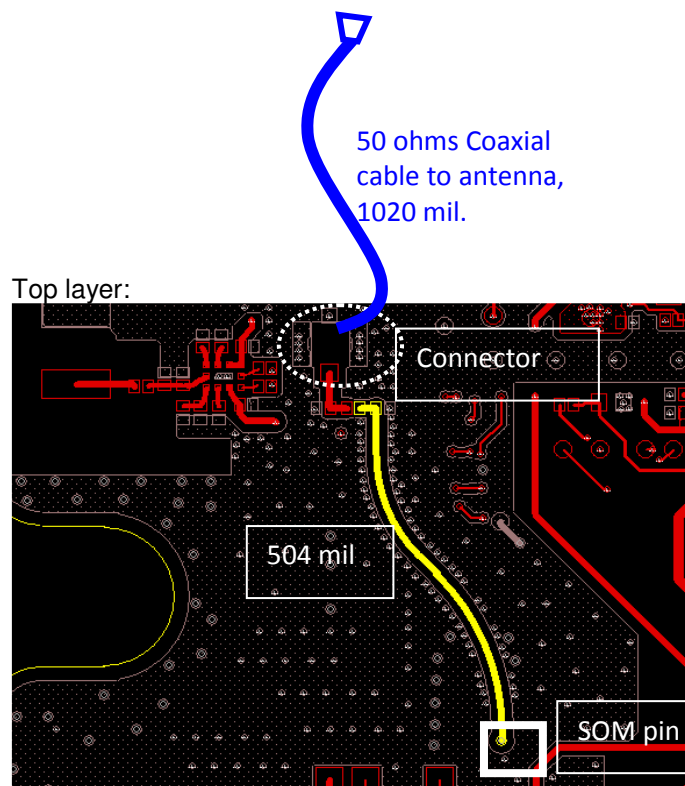


Inner layer



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.

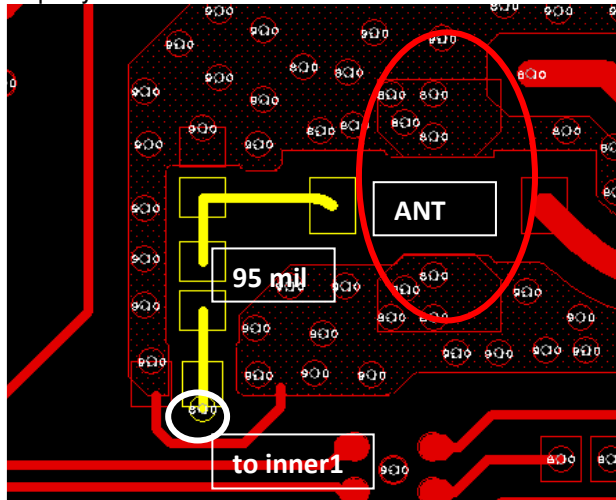
WLAN chain1:



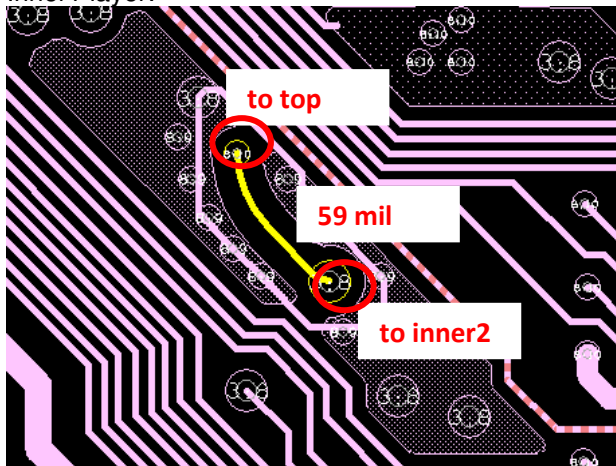
Maintains a solid ground plane under the RF signal trace, and use strip-line structure for inner layer of the PCB, and ensure the ground return path is uninterrupted.

WAN main:

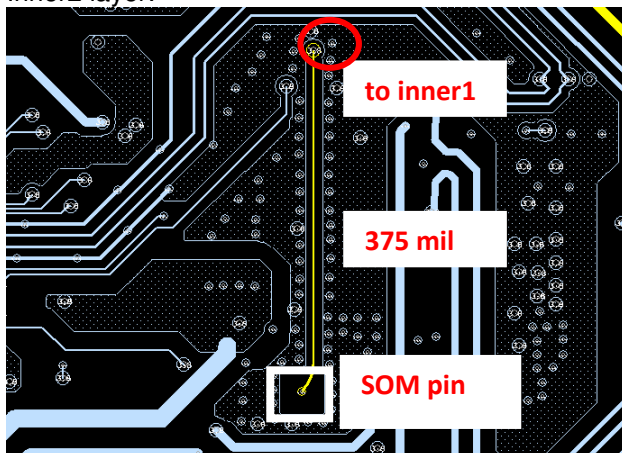
Top layer:



Inner1 layer:



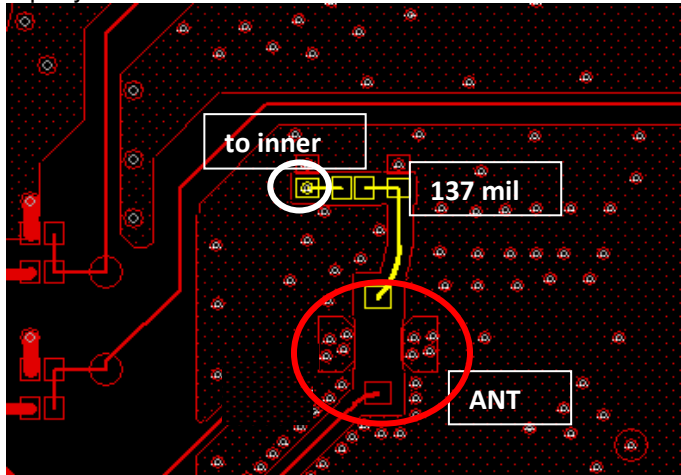
Inner2 layer:



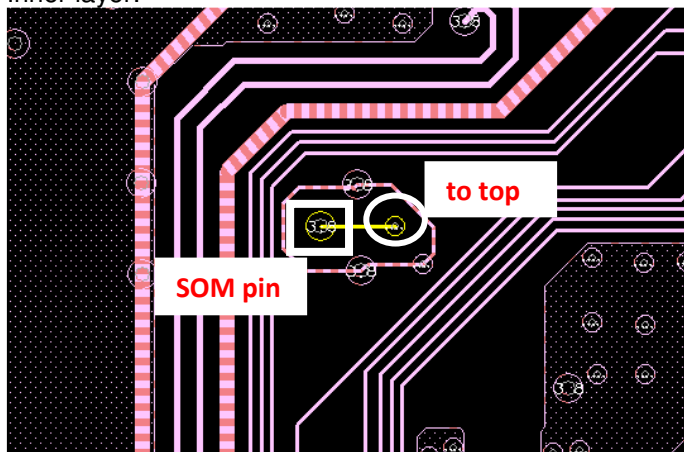
Maintains a solid ground plane under the RF signal trace, and use strip-line structure for inner layer of the PCB, and ensure the ground return path is uninterrupted.

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.