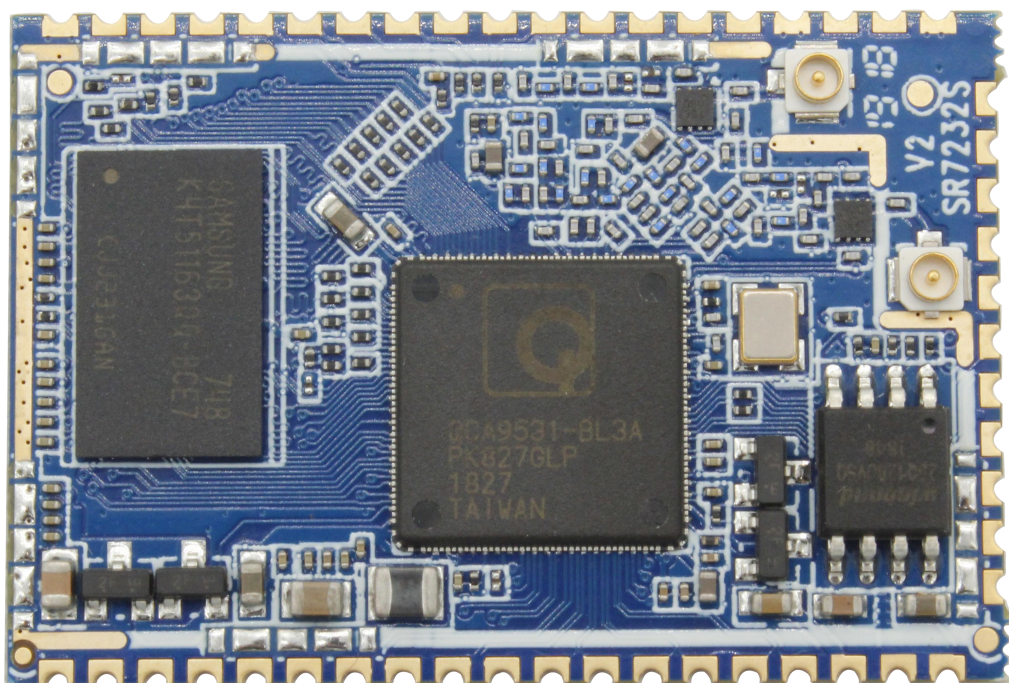


ComIoT 06

802.11b/g/n 无线路由核心模组

产品规格书



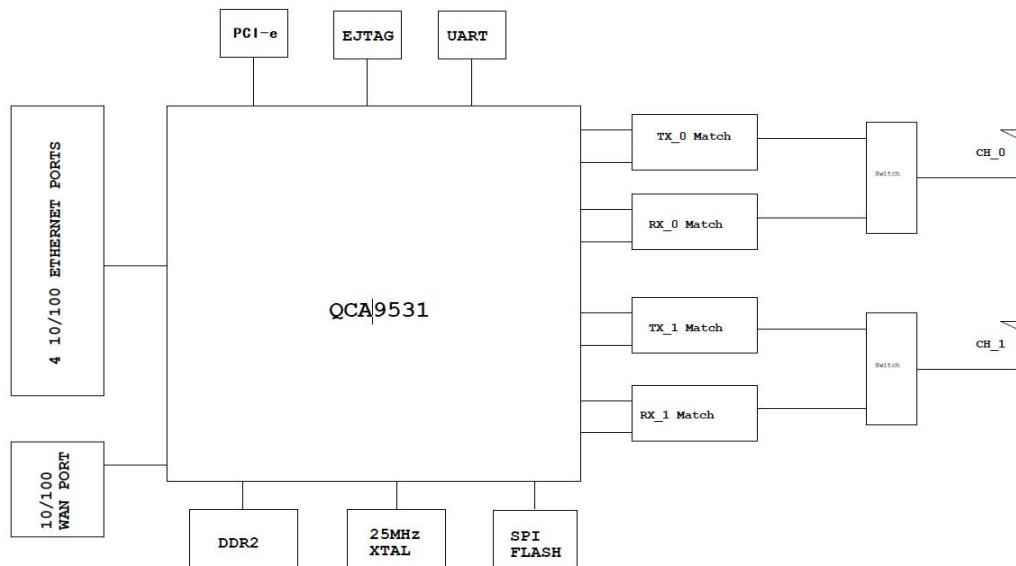
- 低功耗
- 高通方案
- 支持 Mesh
- LCC 封装
- 300M 无线传输速率
- 支持 OpenWRT 方案

1. 产品介绍

ComIoT-06 模块是一个完整的小型 802.11 b/g/n Wi-Fi 解决方案，针对低成本、高度集成的高功率消费电子设备进行了优化，该模块是一个高集成的小型 802.11 b/g/n Wi-Fi网关模组。ComIoT-05模组将Wi-Fi功能，网口，串口，USB及路由系统集成在一个封装中，只需要进行简单的几个外部电路就可以把模块完美应用起来。

该模块基于单芯片 QCA9531，集成了 802.11n 2x2 MAC/BB/radio 及内部 PA 和 LNA。它支持 802.11n 操作，20 MHz 和 40 MHz 信道分别高达 144 Mbps 和 300 Mbps，以及 IEEE 802.11b/g 数据速率。

模块同时支持AP模式和客户端模式，包含海量业务应用软件，减少客户的研究和设计工作。一般硬件架构如下图所示：



设计框图

1.1 协议规范

模块支持以下协议规范：

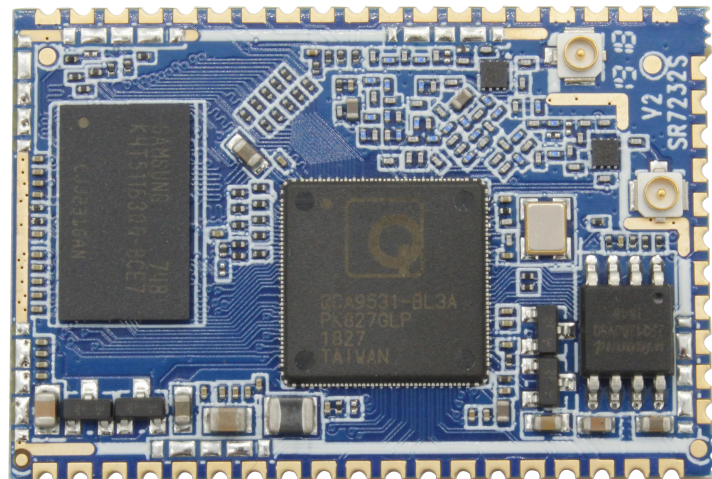
- IEEE Std. 802.11b
- IEEE Std. 802.11g
- IEEE Std. 802.11n

1.2 模块信息

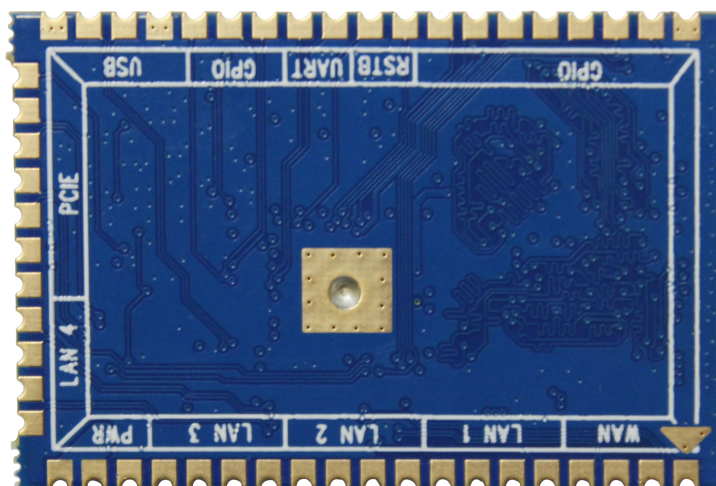
主芯片	QCA9531
射频频率	2.40~2.4835GHz
WiFi 协议	802.11b/g/n(2X2)
调制解调	11b: DBPSK, DQPSK and CCK and DSSS 11g: BPSK, QPSK, 16QAM, 64QAM and OFDM 11n: MCS0~15 OFDM
理论带宽	11b: 1, 2, 5.5 and 11Mbps 11g: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 11n: MCS0~5, up to 300Mbps
封装方式	LCC
主要接口	Ethernet*5, UART*1, USB*1, PCIE*1
PCB	4 层
尺寸	40.5mm(W) x 27.5mm(L) x 1.0mm(T)
天线	标准 ipex
工作温度	-10°C to +70°C
存储温度	-40°C to +150°C
工作电压	3.3V +/-10%
平均功耗	1.5W
GPIO 输出电压	2.5 V +/-10%

2. 结构尺寸

2.1 外观

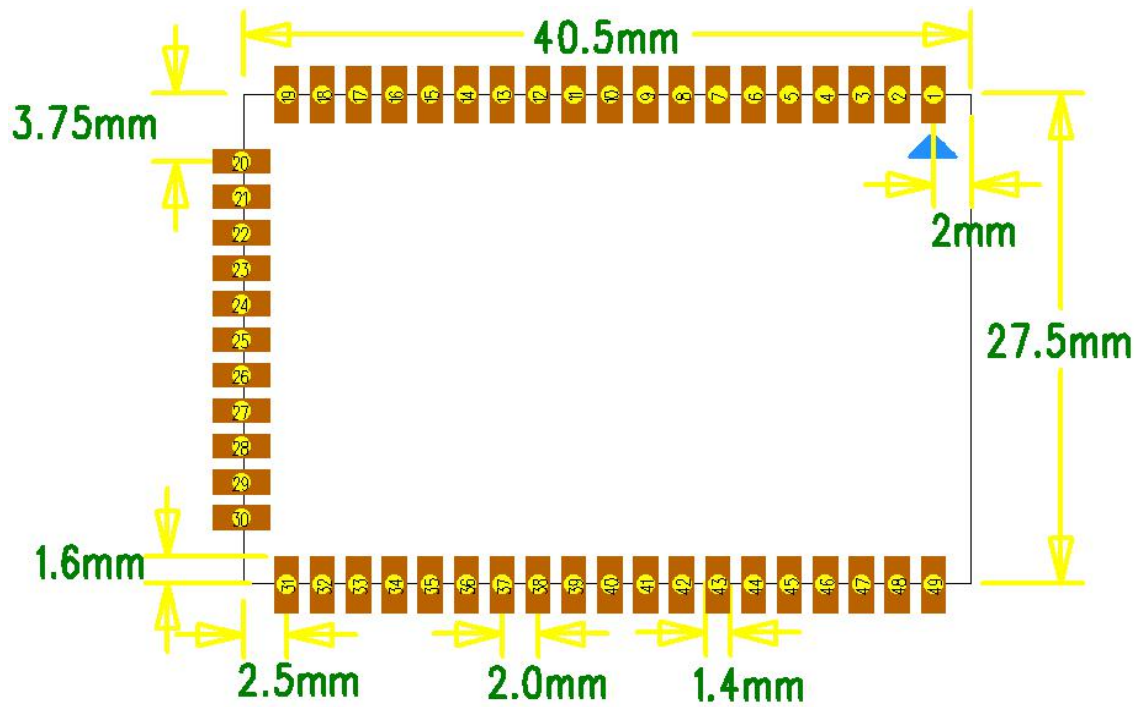


正面



背面

2.2 尺寸



2.3 引脚定义

PIN 脚	名称	描述
1	WAN_RX+	Ethernet port
2	WAN_RX-	Ethernet port
3	WAN_TX+	Ethernet port
4	WAN_TX-	Ethernet port
5	LAN_P0_TX+	Ethernet port
6	LAN_P0_TX-	Ethernet port
7	LAN_P0_RX+	Ethernet port
8	LAN_P0_RX-	Ethernet port
9	LAN_P1_RX+	Ethernet port
10	LAN_P1_RX-	Ethernet port
11	LAN_P1_TX+	Ethernet port
12	LAN_P1_TX-	Ethernet port
13	LAN_P2_TX+	Ethernet port
14	LAN_P2_TX-	Ethernet port

15	LAN_P2_RX+	Ethernet port
16	LAN_P2_RX-	Ethernet port
17	VDD2.0_OUT	外部网络变压器电源输出
18	DC 3.3V	3.3V input 1000mA, recommended voltage 3.3V, Min2.97V, MAX 3.63V
19	DC 3.3V	3.3V input 1000mA, recommended voltage 3.3V, Min2.97V, MAX 3.63V
20	LAN_P3_RX+	Ethernet port
21	LAN_P3_RX-	Ethernet port
22	LAN_P3_TX+	Ethernet port
23	LAN_P3_TX-	Ethernet port
24	PCIE0_TX_N	Differential transmit.
25	PCIE0_TX_P	Differential transmit.
26	PCIE0_RX_P	Differential receive.
27	PCIE0_RX_N	Differential receive.
28	PCIE0_CLK_P	Differential reference clock (100Mhz).
29	PCIE0_CLK_N	Differential reference clock (100Mhz).
30	PCIE0_RST_L	PCI Express reset, open drain, should be pulled up to vdd33 through 1k resistor.
31	GND	
32	USB_DM	USB signal, carries USB data to and from the USB 2.0 PHY
33	USB_DP	USB signal, carries USB data to and from the USB 2.0 PHY
34	GND	
35	GPIO_11	LAN_PORT0_LED
36	GPIO_12	2.4G_wifi_LED
37	GPIO_13	SYSTEM_LED
38	UART_RX	Serial data in
39	UART_TX	Serial data out
40	RESET	external power on reset, it has an internal 10 K pull up resistance, the external pull low effective.
41	GPIO_14	LAN_PORT1_LED
42	GPIO_15	LAN_PORT2_LED
43	GPIO_16	LAN_PORT3_LED
44	GPIO_17	JUMPSTART
45	VDD2.5_OUT	I/O Voltage ouput
46	GPIO_2	GPIO
47	GPIO_1	GPIO
48	GPIO_4	LED7/WAN LED, do not pull up.
49	GND	Ground

3. 射频规格

3.1 802.11b

Feature	Description
WLAN Standard	IEEE 802.11b, Wi-Fi Compliant
Number of Channels	CH1~CH13 (DSSS/CCK)
Output Power	802.11b@1Mbps: 18dBm \pm 1.5dB@EVM \leq -10dB
	802.11b@2Mbps: 18dBm \pm 1.5dB@EVM \leq -10dB
	802.11b@5.5Mbps: 18dBm \pm 1.5dB@EVM \leq -10dB
	802.11b@11Mbps: 18dBm \pm 1.5dB@EVM \leq -10dB
Receive Sensitivity (PER \leq 8%)	802.11b@1Mbps: PER @ -93dBm, Typical
	802.11b@2Mbps: PER @ -93dBm, Typical
	802.11b@5.5Mbps: PER @ -91dBm, Typical
	802.11b@11Mbps: PER @ -86dBm, Typical

3.2 802.11g

Feature	Description
WLAN Standard	IEEE 802.11g, Wi-Fi Compliant
Number of Channels	CH1~CH13 (OFDM)
Output Power	802.11g@6Mbps: 17dBm \pm 1.5dB@EVM \leq -5dB
	802.11g@9Mbps: 17dBm \pm 1.5dB@EVM \leq -8dB
	802.11g@12Mbps: 17dBm \pm 1.5dB@EVM \leq -10dB
	802.11g@18Mbps: 17dBm \pm 1.5dB@EVM \leq -13dB
	802.11g@24Mbps: 17dBm \pm 1.5dB@EVM \leq -16dB
	802.11g@36Mbps: 16dBm \pm 1.5dB@EVM \leq -19dB
	802.11g@48Mbps: 14dBm \pm 1.5dB@EVM \leq -22dB
	802.11g@54Mbps: 14dBm \pm 1.5dB@EVM \leq -25dB
Receive Sensitivity	802.11g@6Mbps: PER @ -90dBm, Typical

	802.11g@9Mbps: PER @ -89dBm, Typical
	802.11g@12Mbps: PER @ -88dBm, Typical
	802.11g@18Mbps: PER @ -87dBm, Typical
	802.11g@24Mbps: PER @ -86dBm, Typical
	802.11g@36Mbps: PER @ -83dBm, Typical
	802.11g@48Mbps: PER @ -75dBm, Typical
	802.11g@54Mbps: PER @ -72dBm, Typical

3.3 802.11n HT20

Feature	Description
WLAN Standard	IEEE 802.11n HT20, Wi-Fi Compliant
Number of Channels	CH1~CH13 (OFDM)
Output Power	802.11n@MCS0: 17dBm ± 1.5dB@EVM ≤ -5dB
	802.11n@MCS1: 17dBm ± 1.5dB@EVM ≤ -10dB
	802.11n@MCS2: 17dBm ± 1.5dB@EVM ≤ -13dB
	802.11n@MCS3: 17dBm ± 1.5dB@EVM ≤ -16dB
	802.11n@MCS4: 16dBm ± 1.5dB@EVM ≤ -19dB
	802.11n@MCS5: 15dBm ± 1.5dB@EVM ≤ -22dB
	802.11n@MCS6: 14dBm ± 1.5dB@EVM ≤ -25dB
	802.11n@MCS7: 14dBm ± 1.5dB@EVM ≤ -27dB
Receive Sensitivity (PER ≤ 10%)	802.11n@MCS0: PER @ -90dBm, Typical
	802.11n@MCS1: PER @ -88dBm, Typical
	802.11n@MCS2: PER @ -86dBm, Typical
	802.11n@MCS3: PER @ -82dBm, Typical
	802.11n@MCS4: PER @ -79dBm, Typical
	802.11n@MCS5: PER @ -75dBm, Typical
	802.11n@MCS6: PER @ -73dBm, Typical
	802.11n@MCS7: PER @ -70dBm, Typical

3.4 802.11n HT40

Feature	Description
---------	-------------

WLAN Standard	IEEE 802.11n HT40, Wi-Fi Compliant
Number of Channels	CH3~CH11 (OFDM)
Output Power	802.11n@MCS0: 16dBm \pm 1.5dB@EVM \leq -5dB
	802.11n@MCS1: 16dBm \pm 1.5dB@EVM \leq -10dB
	802.11n@MCS2: 16dBm \pm 1.5dB@EVM \leq -13dB
	802.11n@MCS3: 16dBm \pm 1.5dB@EVM \leq -16dB
	802.11n@MCS4: 15dBm \pm 1.5dB@EVM \leq -19dB
	802.11n@MCS5: 14dBm \pm 1.5dB@EVM \leq -22dB
	802.11n@MCS6: 13dBm \pm 1.5dB@EVM \leq -25dB
	802.11n@MCS7: 13dBm \pm 1.5dB@EVM \leq -27dB
Receive Sensitivity (PER \leq 10%)	802.11n@MCS0: PER @ -88dBm, Typical
	802.11n@MCS1: PER @ -85dBm, Typical
	802.11n@MCS2: PER @ -83dBm, Typical
	802.11n@MCS3: PER @ -80dBm, Typical
	802.11n@MCS4: PER @ -75dBm, Typical
	802.11n@MCS5: PER @ -72dBm, Typical
	802.11n@MCS6: PER @ -70dBm, Typical
	802.11n@MCS7: PER @ -68dBm, Typical

想要了解更多深圳星恒讯科技的产品

请浏览我们的官网：www.movingcomm.com

阿里巴巴店铺：<https://movingcomm.1688.com/>

注意

您购买的产品、服务或特性等应受星恒讯公司商业合同和条款的约束，本档中描述的全部或部分产品、服务或特性可能不在您的购买或使用范围之内。除非合同另有约定，本公司对本档内容不做任何明示或默示的声明或保证。

由于产品版本升级或其他原因，本档内容会不定期进行更新。除非另有约定，本档仅作为使用指导，本档中的所有陈述、信息和建议不构成任何明示或暗示的担保。

提供的信息可随时更改而不事先通知。深圳星恒讯科技可以随时在不发通知的情况下修改产品生命周期、规格和产品说明。以上信息是按“原样”提供，深圳星恒讯科技对该信息的准确性、产品的特性、可用性、功能或列出产品的兼容性不做任何形式的声明或担保。请联系我们，了解关于上述特定产品或系统的更多信息。

Copyright © 2017 Shenzhen MovingComm Technology. All rights reserved.

深圳星恒讯科技有限公司

SHENZHEN MOVINGCOMM

TECHNOLOGY CO., LTD.

地址：深圳市宝安区石岩街道水田社区
长城路同富康水田工业区5号楼
4楼 邮编：518108

电话：86-755-23125215

传真：86-755-23125215-802

邮箱：marketing@movingcomm.com

