

Single Chip For WLAN/BLUETOOTH/FM Radio Tuner

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1 General Description

RDA5990 integrates industry-lead WLAN, Bluetooth and FM radio tuner into one chip and is optimized for mobile applications. WLAN, Bluetooth and FM can work simultaneously and independently, with low power consumption levels target to battery powered devices. For the highest integration level, the required board space has been minimized and customer cost has been reduced. Manufacturers can easily and fast integrate RDA5990 on their product to enable a rapid time to market.

RDA5990 uses CMOS process with a compact 6*6mm 48-pin QFN package.

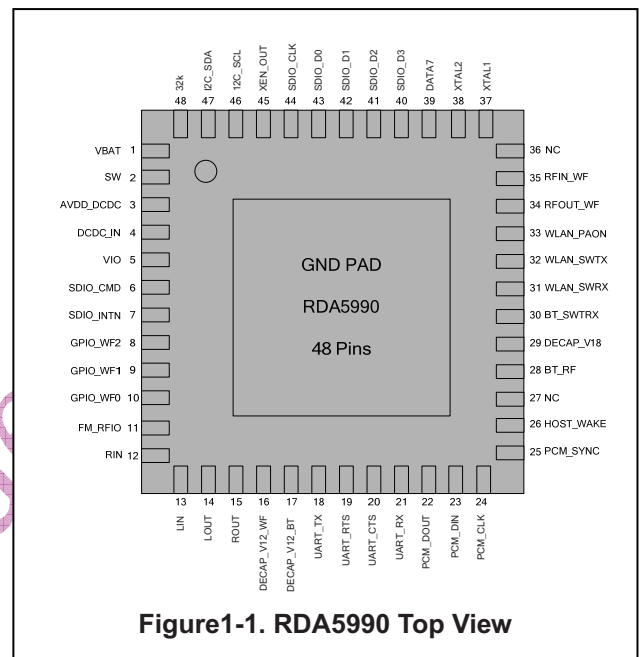


Figure1-1. RDA5990 Top View

1.1 WLAN Features

- CMOS single-chip fully-integrated radio, PHY and MAC
- Single-band 2.4GHz IEEE 802.11b/g
- Support WEP, WPA/WPA2, WAPI
- WAPI hardware accelerated
- Wi-Fi Protected Setup support
- Wi-Fi Peer to Peer support
- Industry Standard QoS schemes(802.11e,WMM) support

- Shared Bluetooth and WLAN receive signal path
- Shared Bluetooth and WLAN crystal
- Build-In IEEE 802.15.2 coexistence scheme
- Support host interfaces: SDIO v1.2, SPI
- Advance sleep and wakeup for power saving
- Smallest WLAN solution footprint
- No external EEPROM needed
- Support battery voltage range from 3v to 5v

1.2 Bluetooth Features

- CMOS single-chip fully-integrated radio and baseband
- Compliant with Bluetooth 2.1 + EDR specification
- Bluetooth Piconet and Scatternet support
- ARM7-based mcu with on-chip ROM and RAM
- Meet class 2 and class 3 transmitting power requirement, support class1 operation with external power amplifier
- Provides +10dbm transmitting power
- NZIF receiver with -90dBm sensitivity