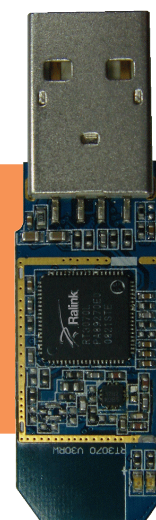




RT3070/RT3071/RT3072

802.11n 1T1R/1T2R/2T2R USB Single Chip Family



- CMOS single chip
- Low power
- Small footprint

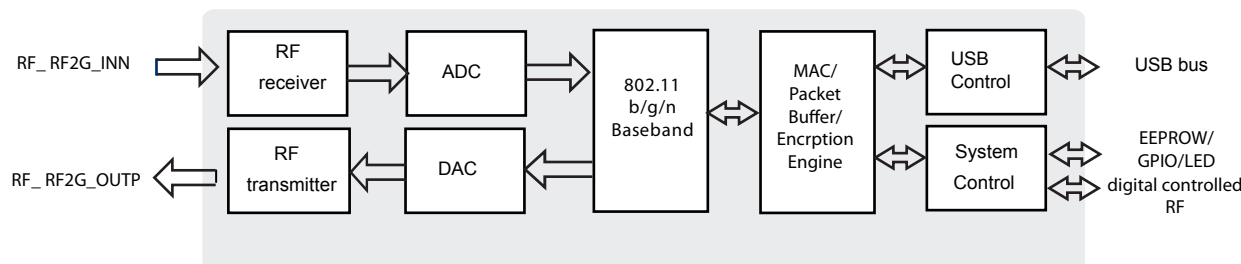
Overview

The RT307X series is a highly integrated MAC/BBP and 2.4G RF single chip supporting 150Mbps to 300Mbps throughput. It fully complies with IEEE 802.11n draft 4.0 and IEEE 802.11 b/g standards, delivers reliable, cost-effective, feature rich wireless connectivity at high throughput from an extended distance. Optimized RF architecture and baseband algorithms provide superb performance with low power consumption. The intelligent MAC design deploys a highly efficient USB engine and hardware data processing accelerators without overloading the host processor. The RT307X is designed to support basic features related to security, quality of service and international regulation, giving the end user the greatest performance any time, and in any circumstance. The RT307X enables the entire 802.11n WLAN solution to fit on a tiny USB module design, creating the ideal choice for next generation Consumer Electronic, Broadband and PC Desktop WLAN solutions.

Features

- Package: 9 x 9 mm 76-ball QFN
- Support PHY rate from 150 to 300Mbps
- 20MHz/40MHz bandwidth support
- Reverse Direction Data Flow and Frame Aggregation
- WEP 64/128, WPA, WPA2, TKIP, AES
- QoS - WMM, WMM-PS
- WPS, PIN, PBC
- Multiple BSSID support
- Host Interface: USB 2.0
- Cisco CCX support
- Bluetooth Co-existence
- Low Power with Advanced Power Management
- Built in e-fuse memory
- Operating systems support: Windows XP 32/ 64, 2000, Vista 32/ 64, Linux and Macintosh

RT307x series Block Diagram

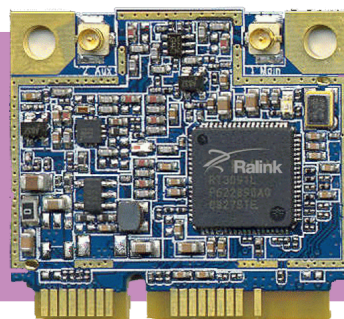


U.S Office
20833 Stevens Creek Blvd., Suite 200
Cupertino, CA 95014
Tel: 408.725.8070 | Fax : 408.725.8069
www.ralinktech.com

Taiwan Headquarters
5F, No. 36, Taiyuan St, Jhubei City,
Hsinchu County, Taiwan
(新竹縣竹北市台元街36號5樓)
Tel: 03-5600868 | Fax : 03-5600818

RT3090

802.11n 1T1R PCI Express Single Chip



- CMOS single chip
- Low power
- PCI Express 1.1 Half-Size Mini Card, Mini Card, Express Card

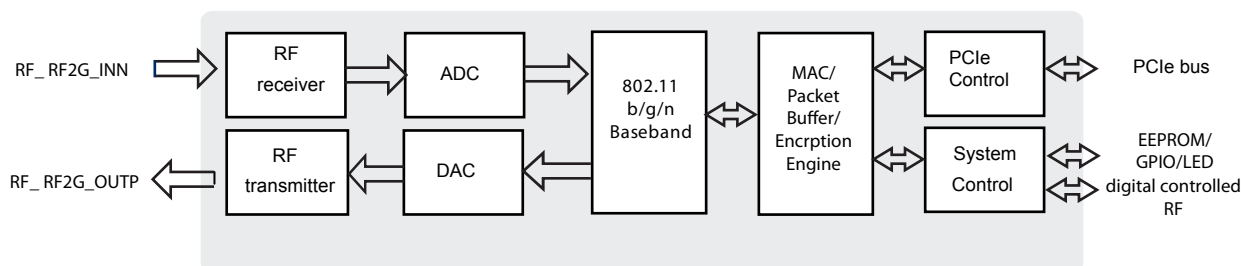
Overview

The RT3090 is a highly integrated MAC/BBP and 2.4GHz RF single chip with support for up to 150 Mbps PHY rate. It fully complies with IEEE 802.11n and IEEE 802.11 b/g features rich wireless connectivity at high standards, and delivers reliable, cost-effective, throughput from an extended distance. Optimized RF architecture and baseband algorithms provide superb performance with low power consumption. An intelligent MAC design deploys a highly efficient PCIe engine and hardware data processing accelerators without overloading the host processor. The RT3090 is designed to support basic features related to security, quality of service and international regulations, giving end users the greatest performance at anytime, and in any circumstance.

Features

- Package: 9 x 9 mm 76-ball QFN
- Support PHY rate up to 150Mbps
- 20MHz/40MHz Bandwidth support
- Reverse Direction Data Flow and Frame Aggregation
- WEP 64/128, WPA, WPA2, TKIP, AES
- QoS - WMM, WMM-PS
- WPS - PIN, PBC
- Multiple BSSID support
- PCI Express 1.1
- Cisco CCX support
- Bluetooth Co-existence
- Low Power with Advanced Power Management
- Built in e-fuse memory
- Operating systems support: Windows XP 32/ 64, 2000, Vista 32/ 64, Linux, and Macintosh

RT3090 Block Diagram



U.S Office
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 Cupertino, CA 95014
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Taiwan Headquarters
 5F, No. 36, Taiyuan St, Jhubei City,
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 (新竹縣竹北市台元街36號5樓)
 Tel: 03-5600868 | Fax : 03-5600818

RT3352

802.11n Wireless Router-on-a-Chip

This Single-Chip AP Router Solution offers five times greater throughput than Legacy 802.11b/g, at a lower cost and with a smaller footprint

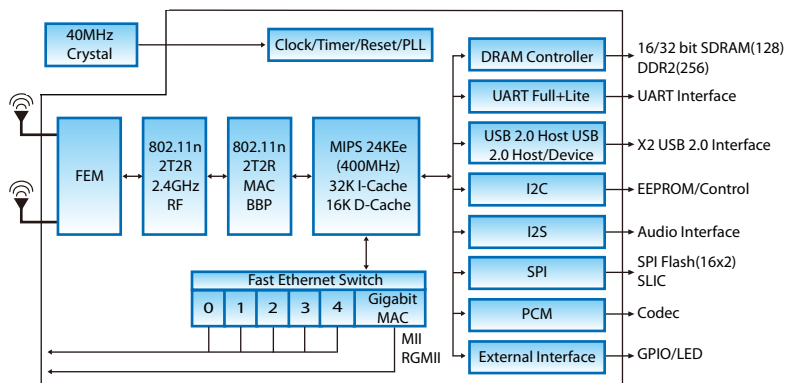
- 2x2/2.4G 802.11n all-in-one AP router-on-a-chip, with an integrated RF front-end module
- Intelligent NIC (iNIC) design available, providing existing wireless LAN platforms with an easy upgrade path to 802.11n

Overview

The RT3352 router-on-a-chip includes an 802.11n media access controller (MAC) and baseband, a 2.4GHz radio and FEM, a 400 MHz MIPS® 24K™ CPU core, a 5-port 10/100 switch and one RGMII. The RT3352 requires less and includes everything needed to build an AP router from a single chip. The embedded high performance CPU can process advanced applications effortlessly, such as routing, security and VoIP. The USB port can be configured to access external storage for Digital Home applications; the RT3352 also includes a wide selection of interfaces to enable many possible applications.



RT3352 Block Diagram



Features

- Embedded MIPS24KEc (400 MHz) with 32K I-Cache and 16K D-Cache
- 16/32-bit SDRAM up to 128 Mbytes
- 16/32-bit DDR2 up to 256Mbytes
- SPI Flash x2
- USB 2.0 host x2 or host/device
- 5 Ports 10/100 SW and RGMII
- I2C, I2S, SPI, PCM, UART, JTAG, MDC/MDIO/ GPIO
- An optimized PMU: 3.3→1.8V SW, 1.8→1.2 LDO
- Green AP
 - Intelligent Clock Scaling (exclusive)
 - DDRII: ODT off, Self-refresh Mode
 - SDRAM: Pre-charge Power down
- Hardware NAT & WAPI, SSCG, QoS, TCP/UDP/IP checksum offloading
- 2T2R 2.4 GHz with 300Mbps PHY data rate
- Tx Power: 16dBm Rx Sensitivity: -76 dBm@54Mbps
- 20/40 MHz channel bandwidth
- Legacy 802.11b/g and High Throughput 802.11n modes
- Reverse Data Grant (RDG)
- Maximal Ratio Combining (MRC)
- 16 Multiple BSSID
- Security: WEP-64/WEP-128/TKIP/AES/WPA/WPA2/WAPI
- QoS: WMM/WMM-PS
- WPS (Wi-Fi Protected Setup) PBC, PIN
- Voice Enterprise : 802.11k+r
- Mesh Network: 802.11s
- AP Firmware: Linux 2.6.21 SDK, eCOS
- iNIC Driver: Linux 2.4/2.6

Contact Us

Taiwan Headquarters

5F, No. 36, Taiyuan St, Jhubei City,
Hsinchu County, Taiwan
(新竹縣竹北市台元街36號5樓)
Tel: (886)3-560-0868 | Fax: (886)3-560-0818
www.ralinktech.com.tw

U.S Office

20833 Stevens Creek Blvd., Suite 200
Cupertino, CA 95014
Tel: (408)725-8070 | Fax: (408)725-8069
www.ralinktech.com

China Office

Galaxycentury Building A Room. 2116,
No.3069 CaiTain Rd, FuTian District
ShenZhen, GuanDong Province, China
(广东省深圳福田区彩田路3069号
星河世纪大厦A座2116室)
Tel: (86)755-3300-0580

Japan Office

2F Nitto BLDG, 6-15-11, Sotokanda,
Chiyoda-Ku, Tokyo 101-0021, Japan
(101-0021東京都千代田区外神田6-15-11日
東ビル202号室)
Tel: (81)3-6803-2758 | Fax: (81)3-6803-2761