

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

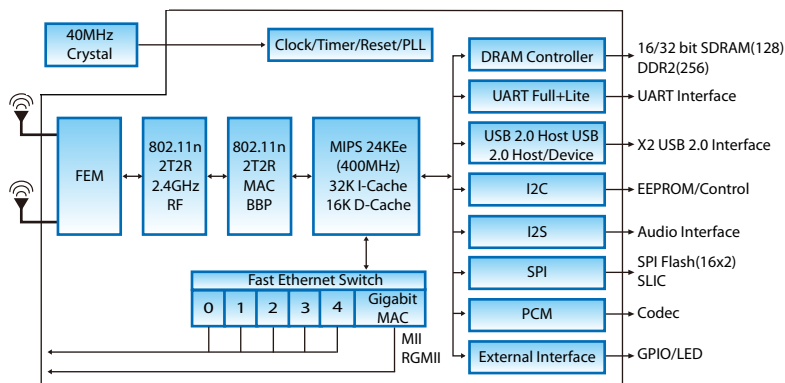
- 2x2/2.4G 802.11n all-in-one AP router-on-a-chip, with an integrated RF front-end module
- Intelligent NIC (iNIC) design available, providing existing wireless LAN platforms with an easy upgrade path to 802.11n

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)
 - DDR2: 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

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