RT3662

802.11n 2.4/5GHz 2T3R (300/450Mbps) Single Chip AP/Router SoC

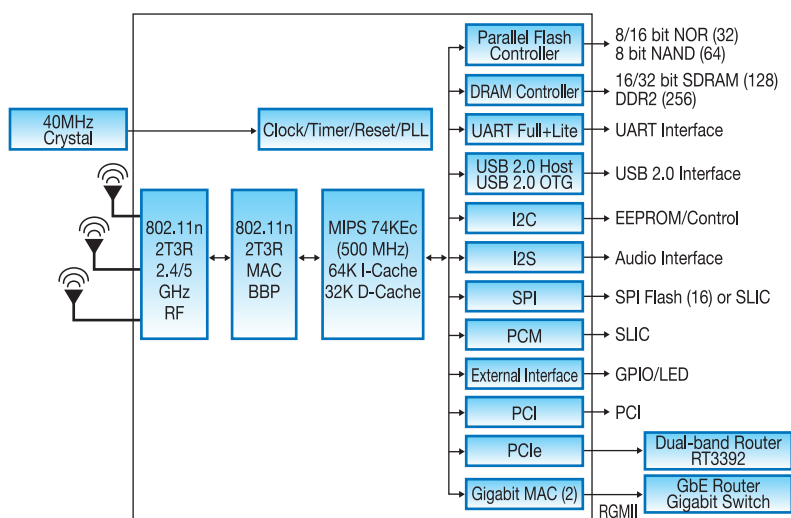A highly Integrated chipset with CPU, MAC, BB, 2.4/5 GHz RF

- Embedded with Ralink Video Turbine (RVT) to enable reliable video transmission

- Support Explicit and Implicit Transmit Beamforming to enhance coverage

Overview

The RT3662 SoC combines Ralink's 802.11n draft compliant 2T3R MAC, BB, 2.4/5GHz RF, a high performance 500MHz MIPS74Kc CPU core, a USB Host and a USB OTG, two Gigabit Ethernet MAC, a PCIe Host/Device and a PCI Host/Device. The RT3662 employs Ralink's 3rd generation, 11n Ralink Video Turbine (RVT) technologies for longer range and better throughput. The embedded high performance CPU can process advanced applications, such as routing, security and VoIP. The USB port can be configured to access external storage devices for Digital Home applications. In addition, the RT3662 includes rich hardware interfaces (SPI/PCM/I2S/I2C/UART/GDMA) to enable many applications.

Block Diagram

Features

- Embedded MIPS74Kc (500 MHz) with 64K I-Cache and 32K D-Cache
- 16/32-bit SDRAM DRAM up to 128 Mbytes
- 16/32-bit DDR2 DRAM up to 256 Mbytes
- NOR/NAND Parallel Flash
- SPI Flash
- 1 USB Host + 1 USB host/device
- 2xRGMII/MII port
- 1 PCIe Host/device embedded with PCIe clock generator; 33/66 MHz PCI host/device
- I2C, I2S, SPI, PCM
- UART Full +UARTLite
- Hardware NAT, QoS, TCP/UDP/IP checksum offloading
- 2T3R 2.4/5 GHz with 300/450Mbps PHY data rate
- 5 GHz : 16 dBm
- 2.4 GHz : 18 dBm
- 20/40 MHz channel bandwidth
- Legacy and High Throughput modes
- Dynamic Frequency Selection (DFS/DFS2)
- L-SIG TXOP
- Reverse Data Grant (RDG)
- Maximal-Likelihood Decoding (MLD)
- Maximal Ratio Combining (MRC)
- Implicit and Explicit Transmit Beamforming
- 16 Multiple BSSID
- Security: WEP-64/WEP-128/TKIP/AES/WPA/WPA2/HWWAPI
- QoS: WMM/WMM-PS
- WPS (Wi-Fi Protected Setup) PBC, PIN
- International Regulation: 802.11d+h
- Voice Enterprise : 802.11k+r
- Mesh Network: 802.11s
- Ralink Video Turbine (RVT)
- AP Firmware: Linux 2.6 SDK, VxWorks 5.5 bsp
- iNIC Driver: Linux 2.4/2.6