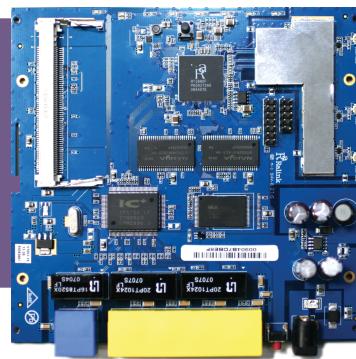


RT2880

MIMO Wireless Access Point/Router/iNIC SoC
802.11n 2T3R Solution featuring MIMObility™ Technology

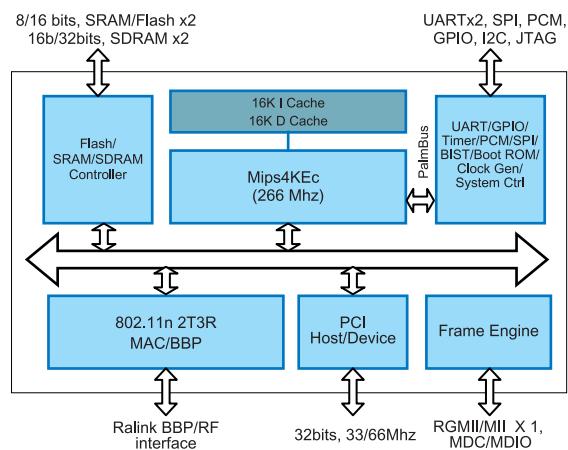


- Ideal solution to add 802.11n to broadband platforms
- Cost effective, High performance, 802.11n AP/Router WLAN SoC
- Simple 802.11n integration to Ethernet equipped device

Overview

The RT2880 SOC combines Ralink's 2T3R MAC/BBP, a 266-MHz Mips4KEc CPU core, a Gigabit Ethernet MAC, and a PCI host/device, to enable a multitude of high performance and cost-effective draft 802.11n applications. The RT2880 has two RF companion chips, the RT2820 for 2.4G-band operation and the RT2850 for dual band 2.4G or 5G operation. In addition to the traditional AP/router application, the chipset can be implemented as an WLAN "intelligent" NIC, drastically reducing the load on the host SOC, such as DSL/Cable or Multimedia Applications processors. WLAN iNIC can be used as a simple Ethernet device for easy porting and guaranteed draft 802.11n compliant WLAN performance without the need to upgrade to an expensive host SOC.

RT2880 Architecture



MAC/BBP Integrated Chip

802.11n MAC/BBP Interfaces

- 300 Mbps PHY Rate Support
- 1T1R/1T2R/1T3R/2T1R/2T2R/2T3R Modes
- Reverse Data Grant (RDG) Support
- Compressed Block ACK
- Hardware Frame Aggregation
- Packaging: 17mm x 17mm BGA – 292

MIPS4KEc Core

- 266 MHz
- 16K I Cache, 16K D Cache

Gigabit Ethernet MAC interface

- RGMII/MII Interfaces Support
- Scatter-Gather DMA
- Interrupt Mitigation
- IEEE 802.3x Flow Control
- Full/Half Duplex
- High/Low Priority Queues

33/66MHz PCI Host Controller

- Embedded PCI Arbiter
- 2 PCI Devices Support
- Scatter-Gather DMA
- Interrupt Mitigation

2.4 and 5 GHz Transceiver Chip

- Single Chip with Direct Conversion Transceivers
- Three receiver paths and two transmit paths
- Low Noise Filter
- High Linearity
- Integrated Channel-Selection Filters
- Integrated Reconstruction Filters
- Integrated Low Dropout Regulators
- Single Supply 3.0 to 3.6 V Operation
- RT2820 for 2.4 GHz Band
- RT2850 for 2.4/5 GHz Bands
- QFN-76 9mm*9mm



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