

# RT2800

## MIMO Wireless Chipset Family

802.11n Solution featuring MIMOility™ Technology



- Blazing speed at 300Mbps PHY
- Robust Connection at Extended Range
- Mitigating Dead Spots

### Overview

The Ralink 802.11n Chipset family provides solutions for PCI, PCIe and USB interfaces with both 2.4 and 2.4/5GHz support. Each chipset consists of two highly integrated ICs (RFIC and BB/MAC IC) that fully comply with current draft IEEE 802.11n and IEEE 802.11a/b/g standards.

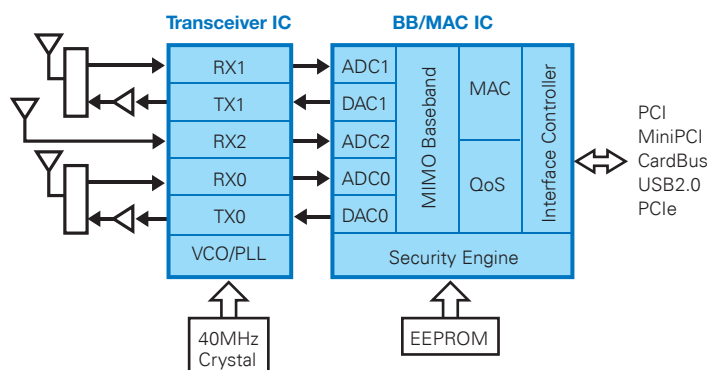
Ralink feature-rich chipsets embody 2 transmitter 3 receiver (2T3R) architecture to ensure reliable, cost-effective wireless connectivity at high throughput over an extended range. Optimized RF architecture and baseband algorithms provide superb performance with low-power consumption. Intelligent MAC design deploys a highly efficient DMA engine and hardware data processing accelerators without overloading the host processor.

All chipsets support standards-based security, quality of service and international regulatory, giving end users the greatest performance anytime, anywhere.

### MAC/BBP Integrated Chip

- 300 Mbps PHY Rate Support
- 2T2R/2T3R Modes
- Legacy, Mixed and Green Field Modes
- 20MHz/40MHz Bandwidth Support
- Reverse Direction Data Flow and Frame Aggregation
- 802.11i - WEP 64/128, WPA, WPA2
- 802.11e - WMM, WMM-PS,
- Wake on Wireless LAN
- Multiple BSSID Support
- International Regulatory Compliant - 802.11d
- Cisco CCX Compliant
- Bluetooth Co-existence
- Low Power with advanced Power Management
- Operating Systems Support: Windows Vista, Windows 2000, Windows XP, Linux and MAC OS X
- RT2860, RT2870: 16mm x 16mm TQFP - 144
- RT2890: 14mm x 14mm TQFP - 128

### RT2800 Architecture



### 2.4 and 5 GHz Transceiver Chip

- Single Chip with Direct Conversion Transceivers
- Three receiver paths and two transmit paths
- Low Noise Figure
- 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

Chipset Family

Chipset	BB/MAC	RFIC	Interface	Freq Band
RT2800P	RT2860	RT2820	PCI/mPCI/CB	2.4 GHz
RT2800PD	RT2860	RT2850	PCI/mPCI/CB	2.4/5 GHz
RT2800U	RT2870	RT2820	USB 2.0	2.4 GHz
RT2800UD	RT2870	RT2850	USB 2.0	2.4/5 GHz
RT2800E	RT2890	RT2820	PCIe	2.4 GHz
RT2800ED	RT2890	RT2850	PCIe	2.4/5 GHz

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Features	Specification
<b>Standard</b>	802.11n current draft 802.11a/b/g 802.11i 802.11e 802.11d 802.11h 802.11j
<b>Certification</b>	WHQL Cisco CCX Wi-Fi Certification: 802.11a/b/g, 802.11n, WPA, WPA2, WMM, WMM-PS
<b>WLAN Features</b>	11b: 1, 2, 5.5, 11Mbps 11g: 6, 9, 12, 24, 36, 48, 54Mbps 11n (20MHz): MCS0-15, 32 with Short Guard Interval Support (up to 144Mbps) 11n (40MHz): MCS0-15, 32 with Short Guard Interval Support (up to 300Mbps) RTS / CTS MSDU / PSDU aggregation Block Ack Reverse Direction Data Flow Link Adaptation Hardware WEP, TKIP, AES Engines EAP - TLS, TTLS, LEAP, PEAP WPA1/2 - PSK (WPA Home) WPA1/2 - 802.1x (WPA Enterprise) Roaming
<b>Software</b>	Windows Vista, Windows 2000, Windows XP/XP-64, Windows CE Mac OS X Linux Kernels 2.4, 2.6 Simple Configuration WPS



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

**雷凌科技股份有限公司**  
新竹縣竹北市台元街36號5樓  
5F, No.36, Tai-Yuen Street, ChuPei City  
HsinChu Hsien 302, Taiwan  
Tel: 886.3.560.0868 | Fax: 886.3.560.0818