Simultaneous Dual-band 2.4GHz 802.11n/BT4.0 + 5GHz MIMO 802.11ac Convergence SoC

Redpine Signals announced the release of the industry's first simultaneous dual-band 5GHz MIMO 802.11ac + 2.4GHz BT4.0, 802.11n chipset. The new SoC is based on Redpine's Quali-Fi 802.11ac technology. It offers PHY data throughputs up to 1.3Gbps and an advanced 802.11ac feature set encompassing Multi-User MIMO and LDPC.

Redpine's RS9333 chipset uniquely offers reconfigurable single-chip simultaneous dual-band capability wherein the chipset can be configured on-the-fly through software as either a 3x3 802.11ac solution in 5GHz or simultaneous 2x2 11ac in 5GHz and 1x1 802.11n in 2.4GHz. In addition, the RS9333 chipset supports BT4.0 in 2.4GHz which coexists optimally with the on-chip 802.11n/ac using innovative coexistence mechanisms.

Based on Redpine's in-house four-threaded processor ThreadArch®, the RS9333 achieves high-throughputs and real-time QoS on the concurrently operational 802.11ac, 802.11n and BT4.0 wireless links while still keeping a free hardware thread available for offload of Layer-3 and application-specific functions. The chipset provides PCI-e, USB and SDIO3.0 host-interfaces to enable integration into a multitude of systems ranging from smartphones and tablets to high-end enterprise routers.

"Cloud-based services and multimedia streaming are increasing the demand for wireless bandwidth and QoS. These demands are pushing next-generation Wi-Fi 802.11ac out of the crowded 2.4GHz spectrum and into the 5GHz band. Concurrent dual-band support enables 802.11ac to meet next-generation requirements while providing backward compatibility with legacy 2.4GHz networks," said Linley Gwennap, Principal Analyst of The Linley Group.

"Concurrent dualband is synonymous with large costs and high-power today and is limited to high-end routers. This is mainly due to the usage of two separate baseband chips one each for 2.4 and 5GHz and the associated costs of a high-end network processor. With Quali-Fi RS9333 Redpine is spearheading the integration of concurrent dualband into power, form-factor and cost-sensitive products like Smartphones, tablets and ultra-books," said Venkat Mattela, CEO of Redpine Signals. "Based on 40nm CMOS technology and our innovative multi-threaded processor architecture ThreadArch®, RS9333 provides simultaneous MIMO 802.11ac, 802.11n and BT4.0 wireless links at even lower power and cost than today's 'switchable' dual-band solutions," he added.

Form-factor reference designs for RS9333 will be available to customers in Q3,

2012. These are accompanied by Redpine's field proven OneBox™ software framework which supports Station, AP and Wi-Fi Direct™ links.

Redpine will be presenting Quali-Fi™ RS9333 at the Linley Tech Conference on April 16th, 2012 in San Jose, CA.

For more information on Redpine products, visit http://www.redpinesignals.com/ [1].

Posted by Janine E. Mooney, Editor

April 16, 2012

Links:
[1] http://www.redpinesignals.com/