

Operational Description

Overview

This device is a WLAN 11n USB Client Adapter, which operates in the 2.4GHz ISM band. The system is compliant with IEEE Wireless LAN standards 802.11b/g/n draft 2.0.

It uses OFDM technique that the maximum data rate could up to 300Mbps. If the signal to noise ratio is too poor which could not support 150/300Mbps, the 11Mbps data rate with DSSS technique will be applied.

System Structure

The RT8188/RT8191 integrates a media access control (MAC), a baseband processor, analog-to-digital and digital-to-analog converters, USB2.0 client controller and transceiver in one QFN package.

Together with multiple input/output (MIMO) radio chip RT8188/RT8191 for 2.4GHz to enable 802.11b/g/n solution.

The RT8188/RT8191 implements multiple inputs, multiple output (MIMO), half-duplex OFDM, CCK, and DSSS baseband processing, supporting 130 Mbps and 300 Mbps for 20 MHz and 40 MHz channel operations respectively, and all IEEE 802.11b/g data rates.

The RT8188/RT8191 supports two simultaneous traffic streams using up to two integrated transmit chains and receive chains for high throughput and range performance. Transmit chains combine baseband in-phase (I) and quadrature (Q) signals, convert them to the desired frequency, and drive the RF signal to multiple antennas. Receiver chains use integrated dual conversion architecture and require no off-chip intermediate frequency (IF) filters. The frequency synthesizer supports one-MHz steps to match frequencies defined by IEEE 802.11b/g/n specification.

The 40MHz crystal oscillator feeds to the RT8188/RT8191.

The antennas are dipole antenna with reverse SMA connector.

Power Supply

The EUT is powered by 5Vdc from the host equipment.

For more detailed information, please take a look at the user .