This is a highly integrated Wireless LAN (WLAN) USB 2.0 network interface controller compatible with the IEEE 802.11n Draft specification 2.0. The Adapter baseband implements Orthogonal Frequency Division Multiplexing (OFDM) with two transmit and two receive paths (2T2R). Features include one spatial stream transmissions, short Guard Interval (GI) of 400ns, spatial spreading, and support for both 20MHz and 40MHz channel bandwidth.

For legacy compatibility, Direct Sequence Spread Spectrum (DSSS), Complementary Code Keying (CCK) and OFDM baseband processing are included to support all IEEE 802.11b, and 802.11g data rates.Differential phase shift keying modulation schemes, DBPSK and DQPSK with data scrambling capability are available, and CCK provides support for legacy data rates, with long or short preamble. The high speed FFT/IFFT paths, combined with BPSK, QPSK, 16QAM, and 64QAM modulation of the individual subcarriers, and rate compatible punctured convolutional coding with coding rate of 1/2, 2/3, 3/4, and 5/6,provide the higher data rates of 54Mbps and 300Mbps for IEEE 802.11g and 802.11n OFDM respectively

The Adapter supports 802.11e for multimedia applications, 802.11i for security, and 802.11n for enhanced MAC protocol efficiency. Using packet aggregation techniques such as A-MPDU with BA and A-MSDU, protocol efficiency is significantly improved. Power saving mechanisms such as U-APSD, and APSD, and power saving reduces power wasted during idle time, and compensates for the extra power required to transmit OFDM. The Adapter provides simple legacy and 20MHz/40MHz co-existence mechanisms to ensure backward and network compatibility.