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Function Theorem

WUG2654 is an USB 2.0 interface to Wireless Adapter. The frequency range is from 2400 ~2500 MHz. It combines 802.11 b/g mode—11b mode of CCK modulation technology to producing 11Mbps data rate, and 11g mode of OFDM modulation technology to producing 54 Mbps date.

The transceiver is super heterodyne architecture.

At TX mode: all of digital signals will be modulated on MAC+B.B (U1), delivering I/Q signals to transceiver to up convert its frequency to RF frequency (ISM Band). The RF signals will be sent to Power Amplifier (U4)—to amplify its power—delivering through antenna.

At RX mode :The antenna receive RF signals then send to transceiver that down converted to IF signal to deliver I/Q signals to MAC_B.B to demodulate.

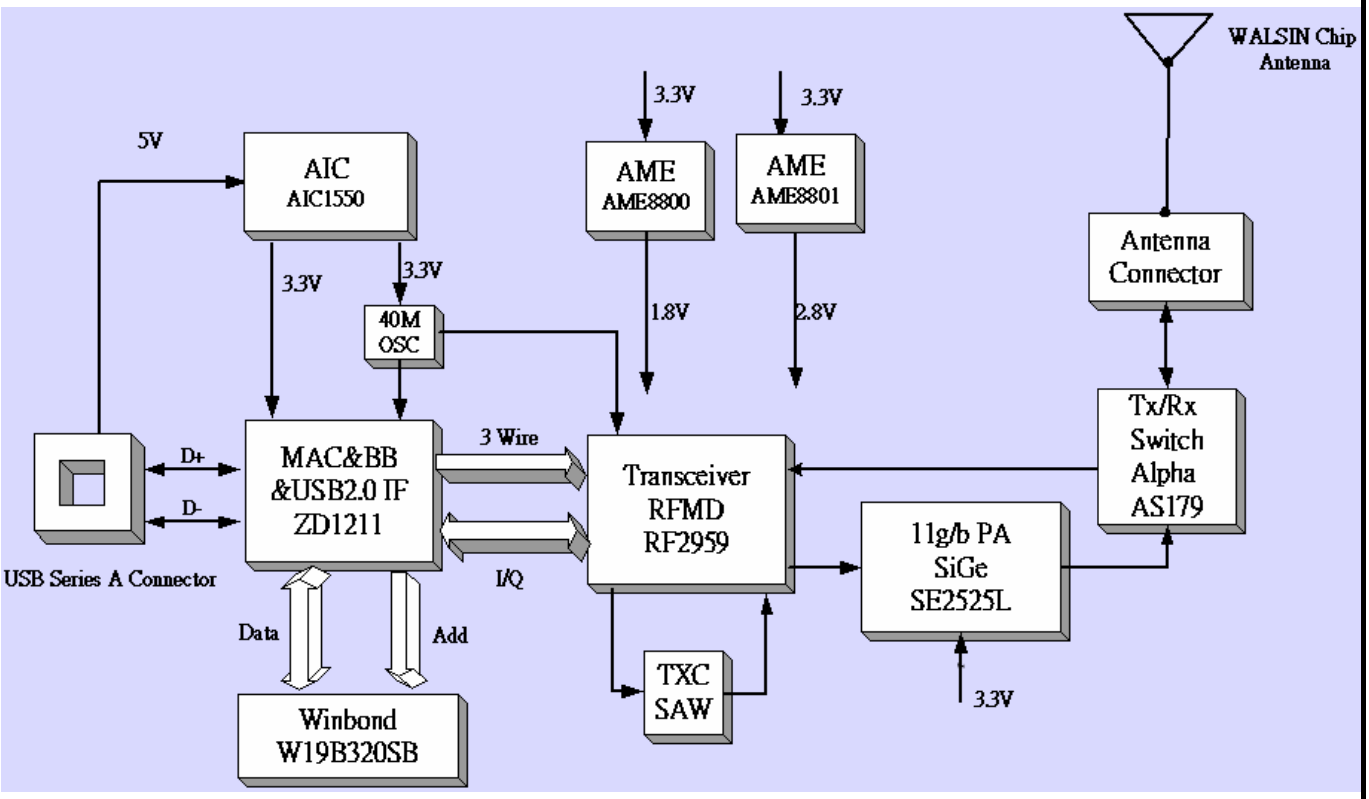

Figure 1 System Diagram

ZD1211: BBP+MAC+USB 2.0 I/F Controller

ZyDAS ZD1211 is a highly integrated, triple mode Wireless LAN (WLAN) MAC and base-band processor that is compatible with IEEE's 802.11g, and 802.11 g standards. The ZD1211 includes two different modems; an Orthogonal Frequency Division Multiplexing (OFDM) modem, and a Direct Sequence Spread Spectrum / Complementary Code Keying (DSSS/CCK) modem. The OFDM modem is compatible with the IEEE 802.11gstandards that supports multiple data rates of up to 54 Mbps. The DSSS/CCK

modem is compatible with the IEEE 802.11b standard that supports multiple data rates of up to 11 Mbps. These two modems share numerous hardware blocks in order to implement a low cost design. This allows the ZD1211to operate as either an OFDM modem, or as a DSSS/CCK modem. Furthermore, theZD1211 includes an processor core that controls the dedicated dual-protocol modem hardware

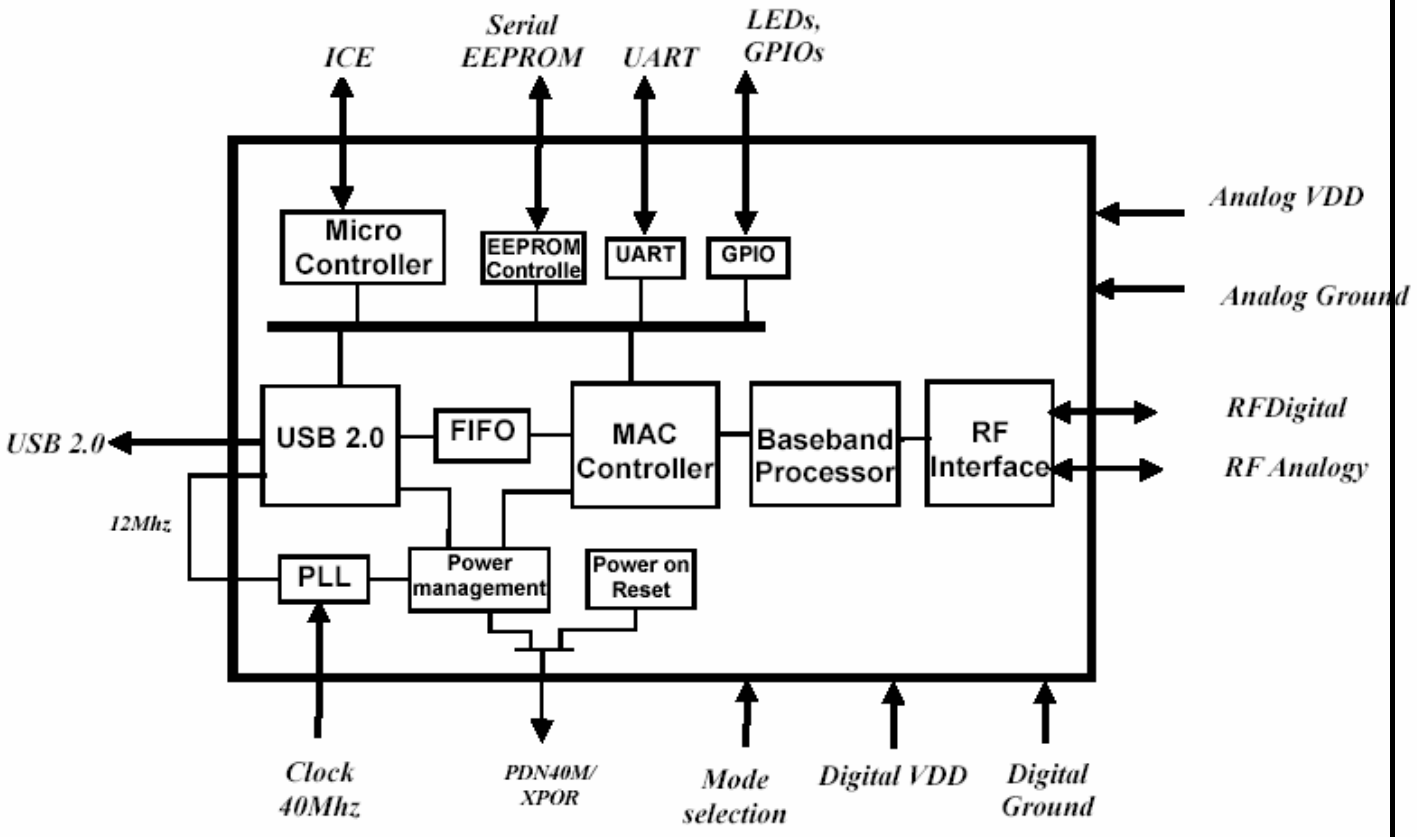

Figure 2 BBP+ MAC+USB 2.0 I/F Block Diagram