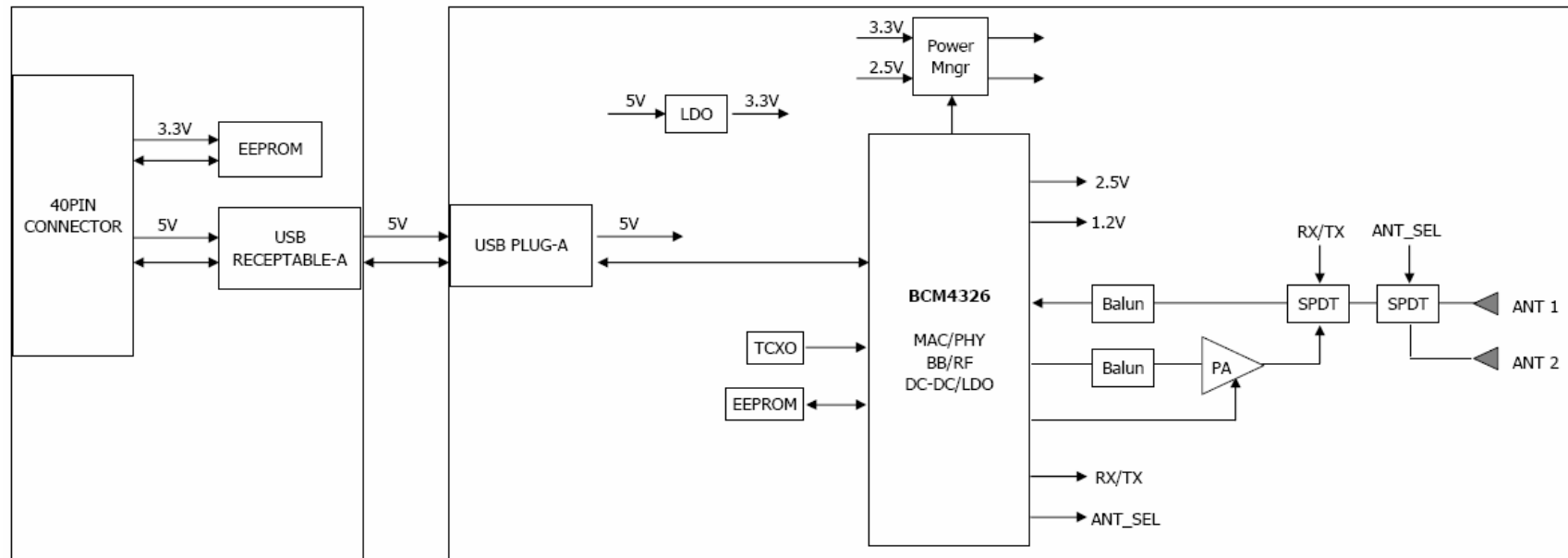


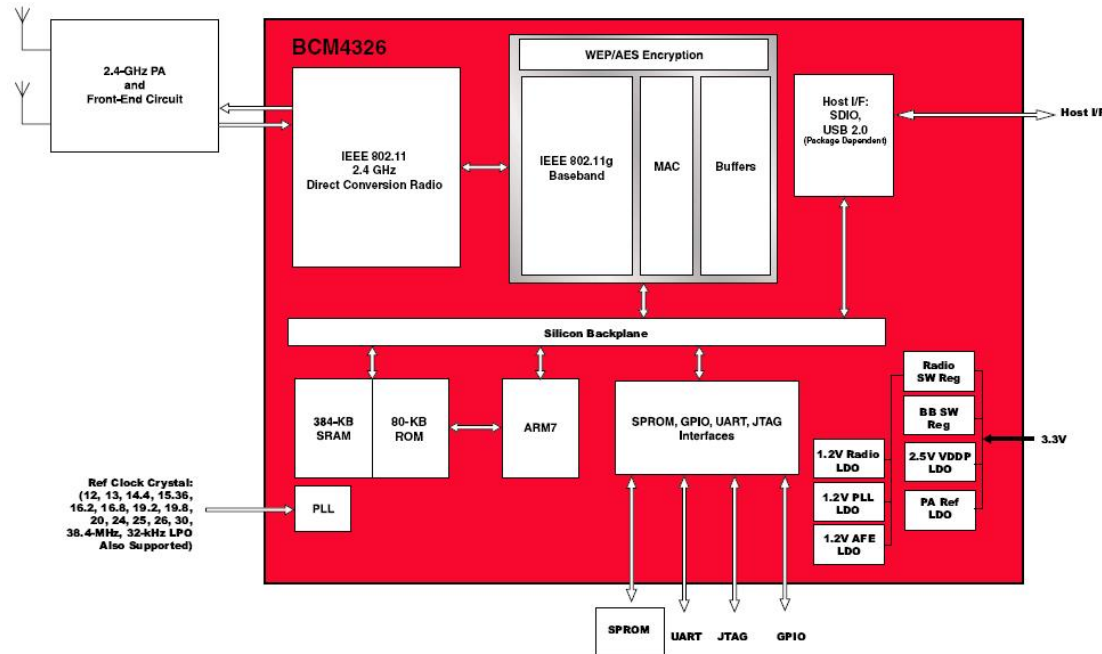
Dell5002 Block Diagram



Dell5002 Functional Description

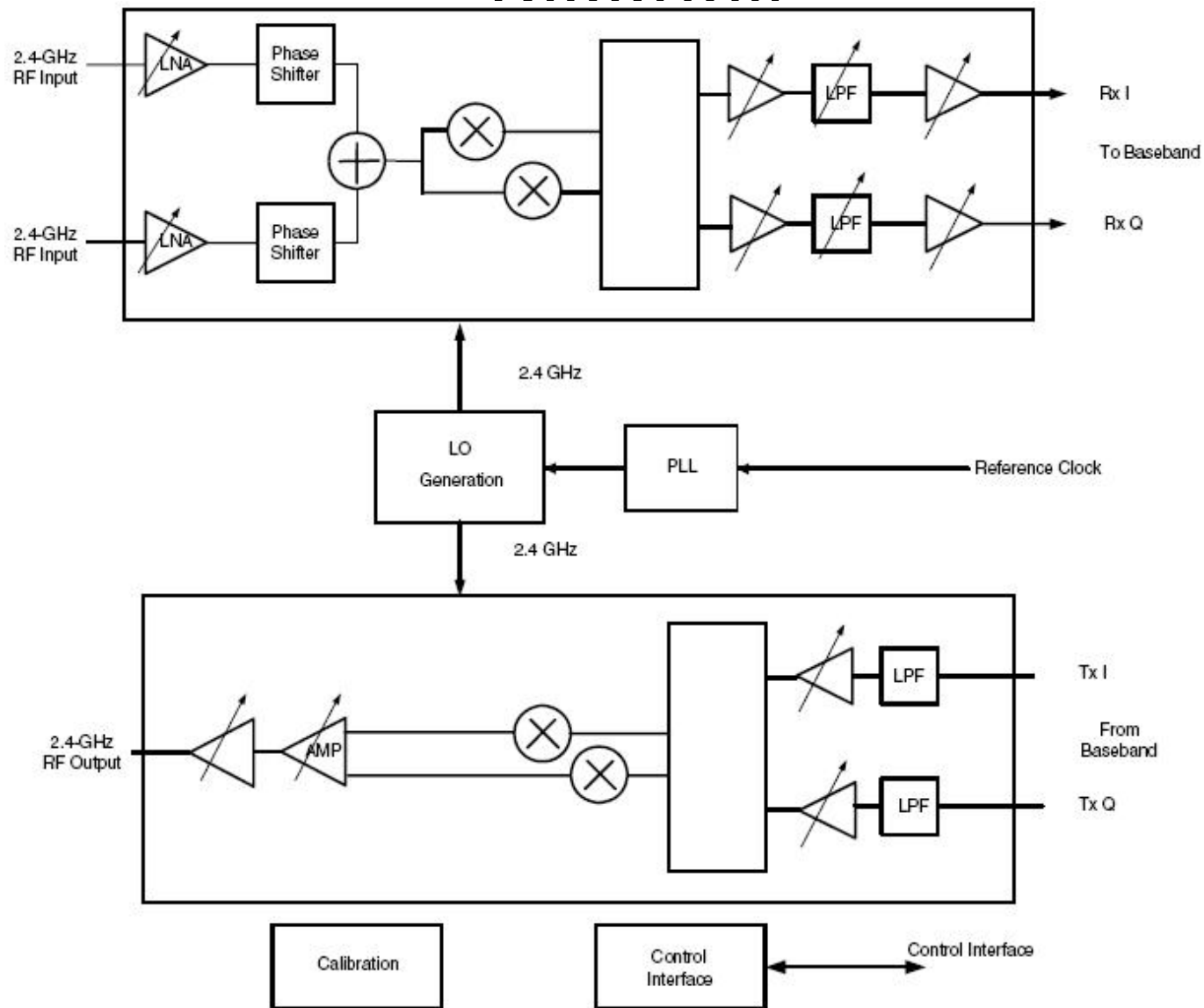
- Dell5002 is the low power USB 2.0 module for 802.11b/g wireless LAN (WLAN) aimed at embedded applications. Dell5002 is the USB 2.0 module that adopts a single-chip wireless local area network (WLAN) medium-access controller (MAC) spread-spectrum baseband processor and 2.4 GHz RF radio.
- Dell5002 supports IEEE 802.11b, and 802.11g standards. Data rates up to 54 Mbps can be provided in 802.11g mode of operation.
- The main IC of Dell5002 includes an 80MHz ARM7 core, 384 KB of on-chip SRAM, and 80 KB of on-chip ROM. Dell5002 is able to host the entire WLAN driver and TCP/IP stack on-chip. This minimizes development time, cost, and burden on the host processor resources making Dell5002 an ideal WLAN solution for nomadic application.
- Dell5002 provides crucial power management functionality and requires only a single 5.0 V supply voltage.

BCM4326 MAC/BBP/RF IC



- ✓ The BCM4326 includes an integrated dual-band RF transceiver that has been optimized for use in 2.4-GHz Wireless LAN systems.
- ✓ It has been designed to provide low-power, low-cost, and robust communications for applications operating in the globally available 2.4 GHz unlicensed ISM.
- ✓ With an external transmit power amplifier, it develops full output power per the IEEE 802.11g Specification. The transmit and receive sections include all on-chip filtering, mixing, and gain control functions.

Dell5002 Radio Functional Block Diagram



Dell5002 Radio Functional Description

✓RF Description

The BCM4326 includes an integrated dual-band RF transceiver that has been optimized for use in 2.4-GHz Wireless LAN systems.

It has been designed to provide low-power, low-cost, and robust communications for applications operating in the globally available 2.4 GHz unlicensed ISM.

With an external transmit power amplifier, it develops full output power per the IEEE 802.11g Specification. The transmit and receive sections include all on-chip filtering, mixing, and gain control functions.

✓RECEIVER PATH

The BCM4326 has a wide dynamic range, direct conversion receiver. It employs high order on-chip channel filtering to ensure reliable operation in the noisy 2.4 GHz ISM band. The excellent noise figure of the receiver makes an external LNA unnecessary.

✓TRANSMITTER PATH

Linear transmitters are included which are capable of delivering a nominal output power of 9 dBm while meeting the IEEE 802.11g specification. The TX gain has a 78 dB range with a resolution of 0.25 dB. Baseband data is modulated and up-converted to the 2.4-GHz ISM band.