

SMC2802W Circuit Description

General:

SMC2802W Wireless LAN PCI Card is a complete wireless high speed Network Interface Card (NIC), utilizing the Intersil Direct Sequence Spread Spectrum (DSSS) or Orthogonal Frequency Division Multiplexing (OFDM) Wireless Transceiver chip set. It supports the IEEE 802.11b/g network specification for DSSS/OFDM signaling, providing data rate of up to 54Mbps.

Key Components:

ISL3990/ISL3980 (2.4GHz Power Amplifier and Detector):

The ISL3990/ISL3980 is a 2.4GHz monolithic GaAs Power Amplifier designed to operate in the ISM band. It delivers 21dBm (Typ) output power for the typical DSSS/OFDM signal. The ISL3990/ISL3980 is housed in a 24-lead MLFP package.

ISL3690/ISL3686 (Direct Down Conversion Transceiver):

The Intersil ISL3690/ISL3686 is a highly integrated UHF2 process, direct down conversion transceiver and is part of the 2.4GHz, 802.11b/g compliant radio chipset. The ISL3690/ISL3686 directly interfaces with the Intersil's Integrated LAN medium access controller (MAC) with baseband processor (ISL3890/ISL3880). The addition of the ISL3990/ISL3980 Intersil power amplifier completes the LAN radio application.

ISL3090/ISL3084 (RF VCO):

The ISL3090/ISL3084 is a SiGe monolithic VCO circuit designed to simplify and reduce the cost and size of miniature wireless transceivers. A fully integrated VCO requiring no external elements such as inductors and varactors greatly simplifies low cost local oscillator synthesized applications.

ISL3890/ISL3880 (Wireless LAN Integrated Medium Access Controller with Baseband Processor):

The Intersil ISL3890/ISL3880 Wireless LAN Integrated Medium Access Controller with Integrated Baseband Processor is part of the 2.4GHz radio chipset. The ISL3890/ISL3880 directly interfaces with the Intersil's Zero-IF QMODEM (ISL3690/ISL3686). Adding Intersil's Power Amp (ISL3990/ISL3980) offers the designer a complete end-to-end WLAN chipset solution. Protocol and PHY support are implemented in firmware, thus supporting customization of the WLAN solution.