

WG111 v3 Operation Principle

1. CPU, RTL8187L is a low-profile highly integrated cost-effective Wireless LAN USB 2.0 network interface controller that integrates a USB 2.0 PHY, SIE (Serial Interface Engine), 8051 MCU, a Wireless LAN MAC, and a Direct Sequence Spread Spectrum/OFDM baseband onto one chip. It provides USB high speed (480Mbps), and full speed (12Mbps), and supports 4 endpoints for transfer pipes. To reduce protocol overhead, the RTL8187L supports short InterFrame Space (SIFS) burst mode to send packets back-to-back. A protection mechanism prevents collisions among 802.11b nodes. The RTL8187L fully complies with IEEE 802.11a/b/g specification.
2. Transceiver RTL8225, 802.11g/b Zero-IF RF transceiver. Building synthesizer LC auto calibration. Building RX low pass filter RC auto calibration. Fast 80MHz Series interface controls transmit and receive PGA. Transceiver multi-mode control 3-wire interface or shut down transceiver by external power down pin. Whole chip ESD protection circuits. Self power on reset. On-chip Oscillator. Synthesizer clock source selectable.
3. EEPROM, The AT93C46 provides 1024bits of serial electrically erasable programmable read only memory (EEPROM) organized as 64 words of 16 bits.
4. 2.4GHz – 2.5GHz Power Amplifier, The SE2525L-EK1 Evaluation Kit is a tool that is intended to demonstrate the performance of the RangeCharger™ SE2525L 802.11g Power Amplifier in 802.11g application. 11dBm O/P Power, 802.11b, 11Mbps. 12dBm O/P Power, 802.11g, 54Mbps.