## 1.2. Operational Description

EUT is a Wireless Broadband Router. This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps for IEEE 802.11b and eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps for IEEE 802.11g. The device of RF carrier is DQPSK, DBPSK and CCK.

The device adapts Digitally Modulation Spread Spectrum modulation. The Connector antenna was provides diversity function to improve the receiving function.

This Wireless Router, compliant with IEEE 802.11b and IEEE 802.11g, is a high-efficiency Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz Direst Sequence Spread Spectrum (DSSS) radio transmission for IEEE 802.11b and Orthogonal Frequency Division Multiplexing (OFDM) for IEEE 802.11g, the Wireless Router Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11b and IEEE 802.11g network.

The EUT is an 802.11g high-performance, wireless router that supports high-speed wireless networking at home, at work or in public places.

Unlike most routers, the EUT provides data transfers at up to 108 Mbps (compared to the standard 54 Mbps) when used with other same EUTs. The 802.11g standard is backwards compatible with 802.11b products. This means that you do not need to change your entire network to maintain connectivity. You may sacrifice some of 802.11g's speed when you mix 802.11b and 802.11g devices, but you will not lose the ability to communicate when you incorporate the 802.11g standard into your 802.11b network. You may choose to slowly change your network by gradually replacing the 802.11b devices with 802.11g devices.

In addition to offering faster data transfer speeds when used with other 802.11g products, the EUT has the newest, strongest, most advanced security features available today. When used with other 802.11g WPA (WiFi Protected Access) and 802.1x compatible products in a network with a RADIUS server, the security features include:

WPA: Wi-Fi Protected Access authorizes and identifies users based on a secret key that changes automatically at a regular interval. WPA uses TKIP (Temporal Key Integrity Protocol) to change the temporal key every 10,000 packets (a packet is a kind of message transmitted over a network.) This insures much greater security than the standard WEP security. (By contrast, the older WEP encryption required the keys to be changed manually.)

802.1x: Authentication is a first line of defense against intrusion. In the Authentication process the server verifies the identity of the client attempting to connect to the network. Unfamiliar clients would be denied access.