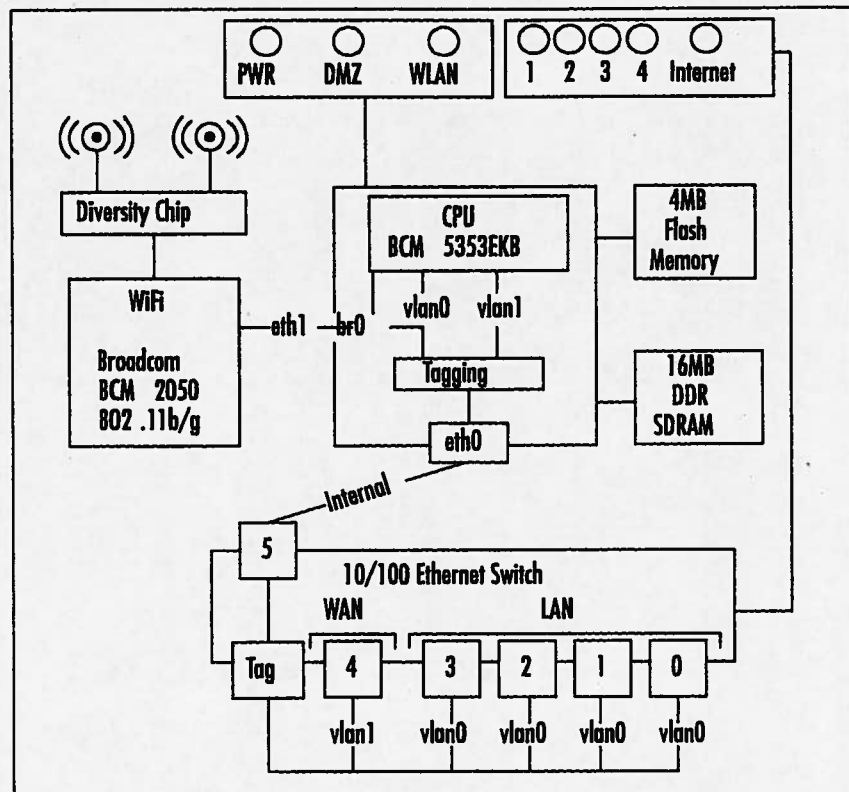**Figure 1.6** WRT54GL Block Diagram

Throughout this book, we will be customizing this configuration to suit our needs, so it is important that we discuss some of the basic concepts in more detail:

- **VLAN tagging** VLANs allow us to, in essence, create multiple Layer 2 segments on the same switch. You can think of this as a switch within a switch. WRT54Gs come with a standard VLAN setting, and for the WRT54GL it sets up two VLANs by default. VLAN0 is referred to as the Ethernet VLAN (LAN), and tags ports 0, 1, 2, and 3 with this VLAN tag, which corresponds to the physical ports labeled 1, 2, 3, and 4, respectively (i.e., tagged port 0 is physical port 1). The tagged port numbers will be of significance when we cover how to manipulate VLANs in various projects throughout the book.

- **Bridging** The WRT54G, by default, creates a networking bridge between the wireless interface and the LAN ports, known as br0. If you have used a Linksys brand router before, even in its default configuration with the Linksys firmware, you know that when you associate to the wireless network you end up on the same subnet as though you were plugged directly into a LAN port. Br0 is also the interface assigned to the actual switch itself, which is the LAN Internet Protocol (IP) address that you connect to in order to manage the router (192.168.1.1 by default).