

# LINKSYS®

A Division of Cisco Systems, Inc.

Dual-Band  
5GHz +  
802.11a

2.4GHz  
802.11g

Dual-Band  
Wireless A+G  
Access Point



## User Guide

Model No. WAP55AG ver. 2

CISCO SYSTEMS



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## How to Use this Guide

Your guide to the Dual-Band Wireless A + G Access Point has been designed to make understanding networking with the Access Point easier than ever. Look for the following items when reading this guide:



This checkmark means there is a Note of interest and is something you should pay special attention to while using the Access Point.



This exclamation point means there is a Caution or warning and is something that could damage your property or the Access Point.



This question mark provides you with a reminder about something you might need to do while using the Access Point.

In addition to these symbols, there are definitions for technical terms that are presented like this:

***word: definition.***

Also, each figure (diagram, screenshot, or other image) is provided with a figure number and description, like this:

**Figure 0-1: Sample Figure Description**

Figure numbers and descriptions can also be found in the "List of Figures" section in the "Table of Contents".

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# Chapter 1: Introduction

## Welcome

Thank you for choosing the Dual-Band Wireless A + G Access Point. This Access Point will allow you to network wirelessly better than ever.

How does the Access Point do all of this? An access point allows for greater range and mobility within your wireless network while also allowing you to connect the wireless network to a wired environment. Being a dual-band access point, not only does the Access Point bring you these benefits, it also allows three wireless standards, 802.11a, 802.11b and 802.11g, to communicate with each other. This means that PCs with different wireless standards can communicate with each other and with a wired network.

But what does all of this mean?

Networks are useful tools for sharing computer resources. You can access one printer from different computers and access data located on another computer's hard drive. Networks are even used for playing multiplayer video games. So, networks are not only useful in homes and offices, they can also be fun.

PCs on a wired network create a LAN, or Local Area Network. They are connected with Ethernet cables, which is why the network is called "wired".

PCs equipped with wireless cards and adapters can communicate without cumbersome cables. By sharing the same wireless settings, within their transmission radius, they form a wireless network. This is sometimes called a WLAN, or Wired Local Area Network. The Access Point bridges wireless networks of both 802.11g and 802.11b standards and wired networks.

Use the instructions in this Guide to help you connect the Access Point, set it up, and configure it to bridge your different networks. These instructions should be all you need to get the most out of the Access Point.

**network:** a series of computers or devices connected together

**802.11a:** an IEEE wireless networking standard that specifies a maximum data transfer rate of 54Mbps and an operating frequency of 5GHz.

**802.11b:** a wireless networking standard that specifies a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz.

**802.11g:** a wireless networking standard that specifies a maximum data transfer rate of 54Mbps, an operating frequency of 2.4GHz, and backward compatibility with 802.11b devices.

**ethernet:** network protocol that specifies how data is placed on and retrieved from a common transmission medium

**lan (local area network):** the computers and networking products that make up your local network

**adapter:** a device that adds network functionality to your PC

## What's in this Guide?

This user guide covers the steps for setting up and using the Dual-Band Wireless A + G Access Point.

- **Chapter 1: Introduction**  
This chapter describes the Dual-Band Wireless A + G Access Point's applications and this User Guide.
- **Chapter 2: Planning your Wireless Network**  
This chapter describes the basics of wireless networking.
- **Chapter 3: Getting to Know the Dual-Band Wireless A + G Access Point**  
This chapter describes the physical features of the Access Point.
- **Chapter 4: Connecting the Dual-Band Wireless A + G Access Point**  
This chapter instructs you on how to connect the Access Point to your network.
- **Chapter 5: Setting Up the Dual-Band Wireless A + G Access Point**  
This chapter explains how to use the Web-Based Utility to configure the settings on the Access Point and how to install the setup on the Access Point for the Linksys Wireless Guard.
- **Chapter 6: Configuring the Dual-Band Wireless A + G Access Point**  
This chapter explains the use of the Access Point's Web-based Utility.
- **Appendix A: Troubleshooting**  
This appendix describes some frequently asked questions regarding installation and use of the Dual-Band Wireless A + G Access Point.
- **Appendix B: Wireless Security**  
This appendix explains the risks of wireless networking and some solutions to reduce the risks.
- **Appendix C: Upgrading Firmware**  
This appendix instructs you on how to upgrade the Access Point's firmware.
- **Appendix D: Windows Help.**  
This appendix describes some of the ways Windows can help you with wireless networking.
- **Appendix E: Glossary**  
This appendix gives a brief glossary of terms frequently used in networking.
- **Appendix F: Specifications**  
This appendix provides the Access Point's technical specifications.



## Dual-Band Wireless A + G Access Point

- **Appendix G: Warranty Information**  
This appendix supplies the Access Point's warranty information.
- **Appendix H: Regulatory Information**  
This appendix supplies the Access Point's regulatory information.
- **Appendix I: Contact Information**  
This appendix provides contact information for a variety of Linksys resources, including Technical Support.

# Chapter 2: Planning your Wireless Network

## Network Topology

A wireless network is a group of computers, each equipped with one wireless adapter. Computers in a wireless network must be configured to share the same radio channel. Several PCs equipped with wireless cards or adapters can communicate with one another to form an ad-hoc network.

Linksys wireless adapters also provide users access to a wired network when using an access point, such as the Dual-Band Wireless A + G Access Point, or wireless router. An integrated wireless and wired network is called an infrastructure network. Each wireless PC in an infrastructure network can talk to any computer in a wired network infrastructure via the access point or wireless router.

An infrastructure configuration extends the accessibility of a wireless PC to a wired network, and may double the effective wireless transmission range for two wireless adapter PCs. Since an access point is able to forward data within a network, the effective transmission range in an infrastructure network may be doubled.

## Roaming

Infrastructure mode also supports roaming capabilities for mobile users. Roaming means that you can move your wireless PC within your network and the access points will pick up the wireless PC's signal, providing that they both share the same channel and SSID.

Before enabling you consider roaming, choose a feasible radio channel and optimum access point position. Proper access point positioning combined with a clear radio signal will greatly enhance performance.

**ad-hoc:** a group of wireless devices communicating directly with each other (peer-to-peer) without the use of an access point.

**infrastructure:** a wireless network that is bridged to a wired network via an access point.

**roaming:** the ability to take a wireless device from one access point's range to another without losing the connection.

**ssid:** your wireless network's name