

INFORMATION

Congratulations on your CREWAVE Wireless LAN Access Point purchase! If you want to install a networking system that is not only fast and powerful, but also easy to set up and simple to maintain, it is natural that you should choose a CREWAVE 11Mbps Wireless LAN Access Point.

The CREWAVE 11Mbps Wireless LAN Access Point(this “AP”) is the wireless Access Point for the 802.11b compliant. This AP extends the range of your cabled Ethernet network(a wired Local Area Network), providing easy network access to mobile users and difficult to wire locations. So the AP can serve mobile wireless stations, roaming between various locations within a network area.

Moreover, this AP provides excellent levels of security, robustness and roaming features required for your business.

What is a Wireless LAN?

A Wireless LAN provides the same functionality of a Wired LAN, but it eliminates the need to install networking cables and other networking equipment. Not only is a Wireless LAN easier to deploy, but it also allows for “roaming.” For example, an employee using a portable computer with a Wireless LAN PC Card, can roam from a conference room to an office without being disconnected from the network.

What is IEEE 802.11?

The IEEE 802.11 specification is a Wireless LAN standard developed by the IEEE(Institute of Electrical and Electronic Engineering) committee in order to specify an over an air interface between a wireless client and a base station or Access Point(AP), as well as among wireless clients. Like other IEEE 802 families, IEEE 802.11 specification addresses both Physical(PHY) layer and

Media Access Control(MAC) layer.

- IEEE 802.11 Physical(PHY) Layer

At the PHY Layer, IEEE 802.11 defines three physical characteristics for WLAN : diffused infrared, direct sequence spread spectrum(DSSS), and frequency hopping spread spectrum(FHSS). While the infrared PHY operates at the baseband, the other two PHYs operate at the 2.4GHz ISM(Industrial, Scientific, and Medical)band, which can be used for operating Wireless LAN devices without the need of end-user licenses. In order for wireless devices to be interoperable, they have to be conforming to the same PHY standard.

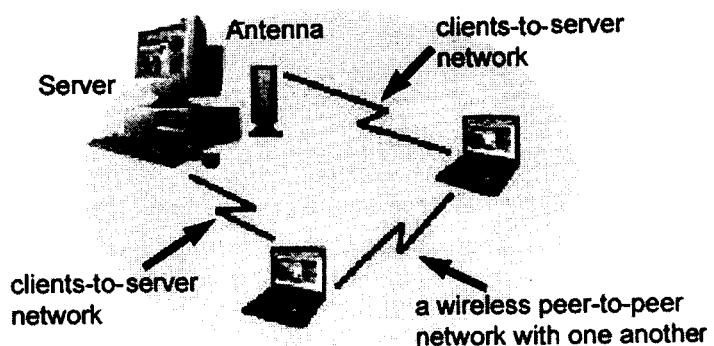
- Media Access Control(MAC) Layer

The IEEE 802.11 MAC Layer is mainly concerned with the rules for accessing the wireless medium. There are two network architectures defined : Ad-hoc Network and Infrastructure Network.

Which one should I use?

- Ad-hoc Networking

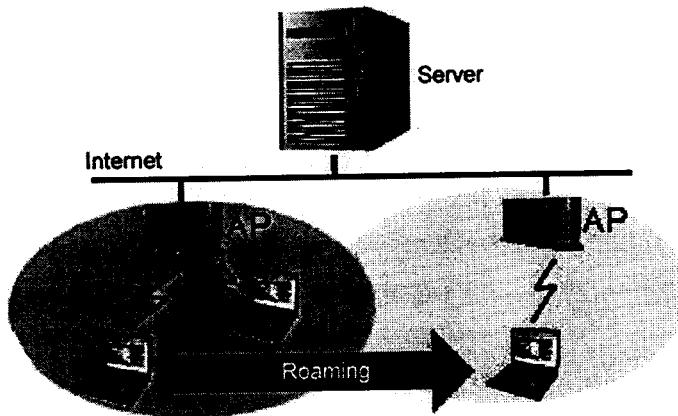
Also called “Peer-to-Peer” networking, this model is the easiest to deploy and is ideal for small offices. As a user on this type of network, you are able to share files with other employees, print to a shared office printer, and access the Internet via a shared modem. However, with Ad-hoc networking your computer is only able to communicate with other wireless computers that are within range and in your wireless workgroup.



- Infrastructure Networking

The key difference between a structured wireless network and an Ad-hoc wireless network is the addition of one extra element – an Access Point. Unlike “Peer-to-Peer” networking, where networked computers send data directly to each other, structured networked computers communicate with each other through a dedicated Access Point.

All data transmitted between two computers, (clients) on the wireless network passes through the Access Point. Additionally, the Access Point on the wireless infrastructure network can provide access to an existing wired network. This link allows computers on the wireless network to access the wired network's resources and tools, including Internet access, email delivery, file transfer, and printer sharing.



*** Roaming**

In an infrastructure network, this is when a wireless PC moves out of range of the previously connected Access Point and connects to a different Access Point. By physically spreading Access Points throughout the network environment, clients can always be connected regardless of where they are located or roam.

INTRODUCTION

CREWAVE Wireless LAN

1. Development & Manufacturer : CREWAVE Co., Ltd.

2. Product: 11Mbps Wireless LAN Products(PCMCIA Card): **CW-1100**

Access Point : **CW-1100AP** Wireless Bridge : **CW-1100WLB**

2.1 PCMCIA Features:

- IEEE 802.11b Fully compliant
- High-Speed Data Rate up to 11Mbps
- Low Power Consumption
- Seamless & real time connection

2.2 Access Point(AP)/Wireless Bridge(WLB) Features

- Wired Network : Ethernet 10BaseT and 100BaseT
- Configuration : SNMP / USB
- Filtering : Ethernet Frame type filtering
- Antenna Type : Reverse F-Type Antenna
- Radio(Wireless) : Onboard IEEE802.11b Compliant Wireless LAN
- LED Indicator : . **Power (Red Color)**
 - . **Wired Link Tx, Rx (Green Color)**
 - . **Wireless Tx, Rx (Green Color)**

Specifications

General Description	
Model Name	CREWAVE 11Mbps Wireless Wireless Bridge (CW-1100WLB)
Standards	IEEE802.11b
Interface Type	USB 1.1 12Mbps, 10Mbps Ethernet
Frequency Band	2.400~2.4835GHz(Korea,USA,Canada,ETSI:13Channel) 2.400~2.497GHz(Japan)
Wireless Network Architecture	Direct Sequence Spread Spectrum (DSSS)
IEEE 802.11 Features	
Data Rates	11, 5.5, 2 and 1 Mbps
Antenna	Reverse F-Type Antenna
Operating Voltage	5VDC +/-0.5V
Modulation Method	CCK(11Mbps), DBPSK, DQPSK
Power Consumption	Max. 700mA
Output Power	Typical 15dBm(Max. 20dBm)
Receiver Sensitivity	-85dBm(Min:11Mbps), -92dBm(Min:2Mbps)
Long/Short Preamble	Support the long/short preamble
Management Features	
Security	64bits WEP Encryption (Support up to 4 WEP Keys)
Remote Configuration	SNMP supported, AP Manager for Windows ME/2000/98/95
IP Auto Configuration	Supports DHCP Client features
Firmware Upgrade	Upgrade via USB / Ethernet Interface support
Local Configuration	USB
Environment	
Storage Temperature	-25 °C to 70 °C (-13 °F to 158 °F)
Humidity	95% (Max : Non-condensing)
Coverage Area	Open Space : 300m(1000feet) / Office : 40m(130feet) * The operating environment may affect coverage.
Physical Features	
Power Adapter	100~230 VAC 50/60Hz to 5VDC 1A

Wired Network Connection Type	10BaseT(RJ-45)
Local Interface Type	USB
Dimension	165 x 110 x 35 mm
Weight	500g
LED Indicator	Power (Red), Ethernet Lamp (Green), Wireless Lamp (Green)