

# Corinex Wireless to Powerline Access Point



# Declaration of Conformity



Model: **Corinex Wireless to Powerline Access Point**

Manufacturer:

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Directives which Conformity is Declared:

EMC: 89/336/EWG  
LVD: 73/23/EEC  
93/68/EEC

Standards which Conformity is Declared:

EN 55022  
EN 55024  
EN 61000-3-2/A14  
EN 61000-3-3  
EN 60950

The undersigned hereby declares the above specified equipment conforms to the above directives and standards.

Signature: .....

Place/Date: .....2003.....

Printed name: **Peter Sobotka**.....

Position/Title: **CEO**.....

## **User Warning !**

**Any changes or modification to said product not expressly approved by Corinex could void the user's authority to operate the equipment.**

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Wireless to powerline local area network (LAN) solutions, based on Corinex *Wireless to Powerline Access Point* (AP) products, connect a wireless device to the electrical wires in premises. The electrical wires build the "backbone" for other "wired" or "wireless" devices on the network, which are connected to this backbone by Corinex Powerline adapters or another wireless to powerline access point. Any high-performance *Corinex Wireless to Powerline AP* extends the coverage of your network of electrical wires and provides access to the Internet and corporate or personal information for all mobile devices without expensive additional cabling infrastructure.

The *Corinex Wireless to Powerline Access Point* is a Powerline to wireless LAN Bridge for mixed wireless 802.11b and Powerline network environment. With the built-in 802.11b capability, you can connect your legacy wireless device to the home network by plugging the *Corinex Wireless to Powerline Access Point* into your power plug.

The AP's power jack is a connecting medium to the 14 Mbps digital powerline communication network based on the HomePlug 1.0.1 standard. Plug the *Corinex Wireless to Powerline AP* into an existing powerline network and instantly add full 802.11b-compliant wireless connectivity at up to 11 Mbps. This allows the easiest deployment of wireless HotSpot areas where every power outlet can be used as a powerline network interface to the access point. With *Corinex Wireless to Powerline AP* you have already got the network you need to give the wireless access an entirely new dimension.

## Package Content

### **Package Includes:**

By receiving your *Corinex Wireless to Powerline Access Point*, check to be sure that your package contains:

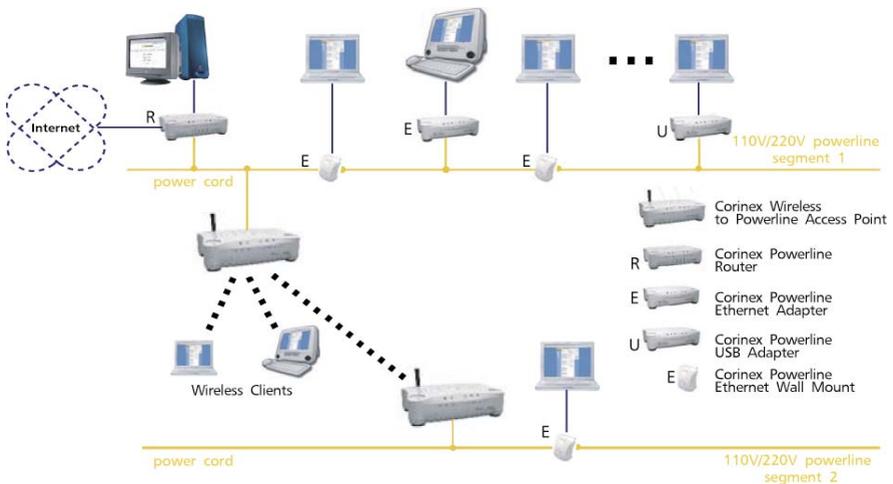
- Corinex Wireless to Powerline Access Point
- Detachable wireless antenna
- AC adapter
- Installation CD-ROM with User Guide
- Quick Installation Guide

## Requirements

- IBM Compatible PC or Macintosh computer (needed for initial configuration of the Access Point)
- AC 220/110 V power outlet
- Powerline and/or Wireless connection for each PC
- Windows 98/ME/200/NT/XP, Mac OS X or Linux operating system
- Web browser supporting JavaScript for the AP management

## Installation Overview

This Guide will assist you with successful installation and configuration of your *Corinex Wireless to Powerline Access Point* for the first time. It will help you with basic settings, which are covering most of the settings you may need to configure for your Internet connection to be shared through the Powerline medium. However, if you require more sophisticated setup, we advise you to read the *Corinex Wireless to Powerline Access Point User Guide*, enclosed in the Installation CD.



The next chapters will explain you how to connect your *Corinex Wireless to Powerline Access Point* in three easy steps.

## Step 1: Connecting the Access Point

Locate an optimum location for the Access Point. The best place for the Access Point is usually at the center of your wireless network, with line of sight to all of your mobile stations.

Fix the direction of the antenna. Try to place it in a position which can best cover your wireless network. Plug the supplied AC power adapter to the *Corinex Wireless to Powerline Access Point* and consequently into an AC outlet. **Use only the power adapter supplied with the Access Point. Usage of a different adapter may result in product damage!**

After the *Corinex Wireless to Powerline Access Point* is powered ON, verify LED functionality below:

- The LED on the Powerline side labelled **LINK** should be ON
- The LED on the Wireless side labelled **POWER** should be ON

**Note:** All other wireless devices must be operating in the infrastructure mode, so that they can communicate with Access Point. If any wireless device is configured in the ad-hoc mode, it WILL NOT be recognized by the Access Point.

## Step 2: Configuring Computers

The instructions in this chapter will help you to configure each of your computers to be able to communicate with the *Corinex Wireless to Powerline AP*.

This process differs between powerline connected computers and wireless connected computers and it also depends on operating systems.

### A. Using Powerline Connection

We advise you to read and use the Manual of your Powerline Adapter to establish a Powerline connection between *Corinex Wireless to Powerline AP* and Powerline Adapter. Use the Default Powerline (NEK) password "HomePlug", as this is the factory default password setting for the *Corinex Wireless to Powerline AP*. When you are using the *Corinex Setup Tool* to configure your powerline adapter, you can check, whether your Adapter has a powerline connection to the *Corinex Wireless to Powerline AP* by searching in the last window of the *Corinex Setup Tool* for the MAC addresses of the AP. You will find the MAC address of your *Corinex Wireless to Powerline AP* on the label on the bottom of the AP's plastic cover (MAC PLC / SN).



### B. Using the Wireless Connection

You may need to reconfigure some wireless settings to ensure all settings match between wireless devices.

**Note:** Different wireless settings will make successful wireless network connections between wireless adapters impossible.

Default Wireless Interface Settings are as follows:

SSID: **Corinex**  
Channel: **11**  
WEP: **Disabled**

**Note:** WEP is disabled by default for an easier installation. For enhanced security, it is recommended that you later (after successful configuration) enable WEP on all wireless devices.

### C. TCP/IP Settings

Next you will need to configure your TCP/IP Settings. Computers use IP addresses to communicate with each other across a network or the Internet.

Find out which operating system is running your computer, like Windows 95, 98, Millennium, 2000, XP, Linux or Macintosh OS. We do give you detailed configuration guide to the Windows XP Operating System. Other operating systems have slight differences and we recommend to read the *Corinex Wireless to Powerline AP User Guide* for detailed description how to change TCP/IP settings on your Operating System.

#### Windows XP TCP/IP Settings

- A. Click the **Start** button, then open the **Control Panel**. From there, click the **Network and Internet Connections** icon and then the **Network Connections** window appears.

- B. Select the Local Area Connection icon for the applicable adapter (wireless adapter, if you are wireless connected or Powerline Adapter if you are powerline connected. It is usually the first adapter listed). Double-click the **Local Area Connection**.
- C. The Local Area Connection Status screen will appear. Click the **Properties** button.



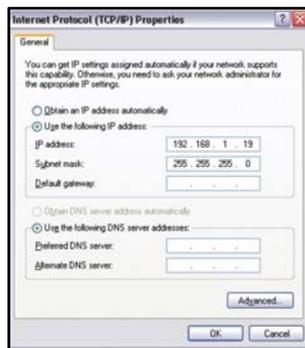
- D. Select **Internet Protocol (TCP/IP)** and click the **Properties** button.



- E. Select **Obtain an IP address automatically** and click the **OK** button. Click the **OK** button again (or the **Close** button if any settings were changed) to complete the computer configuration.



- F. If you do not have DHCP server on the network, then select **Use the following IP address**. Set the **IP address** manually in the shape 192.168.1.X and mask 255.255.255.0 of local TCP/IP settings and click the **OK** button. On the next appearing screen click the **OK** button again.



## Step 3: Configuring the Access Point

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In this Step, you will configure the *Corinex Wireless to Powerline Access Point*.

- A. Open your web browser. (You can get an error message at this point. Ignore it.) Enter **http://192.168.1.1** in the web browser's **Address** field. Press the **Enter** key and the *Corinex Wireless to Powerline Access Point* web-based configuration utility will start.



A screenshot of a web browser's address bar. The text 'http://192.168.1.1' is entered into the address field. The word 'Address' is visible on the left side of the bar, and a small downward arrow is on the right side.

- B. Window requiring entering your password will appear. The default password for the configuration utility is **password**. The password is case sensitive. The configuration utility is used to configure both the wireless and powerline aspects of your AP. The wizard contains eight different dialog screen options accessible through the following tabs:

- **Home**

- *Status*
- *Help*

- **IP Address**

- *IP Address Settings*

- **Wireless**

- *Wireless Settings*
- *Wireless Mode*
- *Security Settings*

- **Powerline**

- *SNMP Agent*
- *NEK Password Setting*
- *Powerline Statistics*
- *Priority Settings*

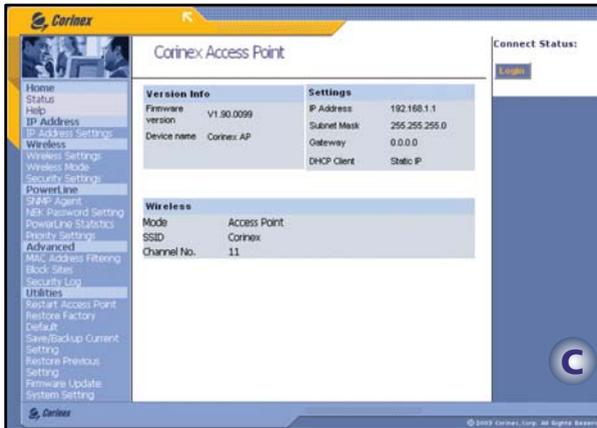
- **Advanced**

- *MAC Address Filtering*
- *Block Sites*
- *Security Log*

- **Utilities**

- *Restart Access Point*
- *Restore Factory Default*
- *Save/Backup Current Settings*
- *Restore Previous Settings*
- *Firmware Update*
- *System Settings*

- C. The **Status** screen will allow you to review your settings (Firmware Version, Device Name, IP Settings and Wireless Settings).



The screenshot shows the 'Corinex Access Point' status page. On the left is a navigation menu with options like Home, Status, Help, IP Address, Wireless Settings, PowerLine, and Utilities. The main content area is divided into three sections: 'Version Info', 'Settings', and 'Wireless'. The 'Version Info' section lists Firmware version (V1.90.0099) and Device name (Corinex AP). The 'Settings' section lists IP Address (192.168.1.1), Subnet Mask (255.255.255.0), Gateway (0.0.0.0), and DHCP Client (Static IP). The 'Wireless' section lists Mode (Access Point), SSID (Corinex), and Channel No. (11). A 'Connect Status:' section on the right has a 'Login' button. A blue circle with the letter 'C' is overlaid on the bottom right of the screen.

Version Info		Settings	
Firmware version	V1.90.0099	IP Address	192.168.1.1
Device name	Corinex AP	Subnet Mask	255.255.255.0
		Gateway	0.0.0.0
		DHCP Client	Static IP

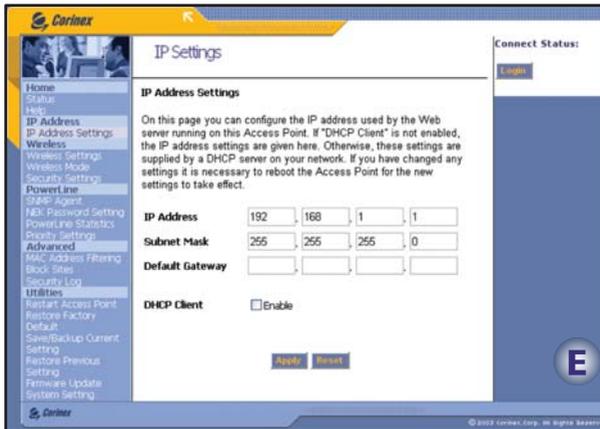
Wireless	
Mode	Access Point
SSID	Corinex
Channel No.	11

- D. On the **Login** screen, enter the default password, **password**, in the **Password** field. Then click the **Submit** button. For enhanced security, remember to change this password later through the web-based utility (Utilities / System Settings).



The screenshot shows the 'Login' page. It features a navigation menu on the left and a central form area. The form area contains a message: 'Before you can change any settings, you need to log in with a password. If you have not yet set a custom password, then leave this field blank and click "Submit."' Below this is a 'Password' label and an empty text input field. Underneath the input field, it says 'Default = leave blank'. There are two buttons: 'Submit' and 'Clear'. A 'Connect Status:' section on the right has a 'Login' button. A blue circle with the letter 'D' is overlaid on the bottom right of the screen.

- E. In the **IP Address Settings** page you can configure the IP address used by the web-based utility running on this Access Point. If **DHCP Client** is not enabled, the IP address settings are given here. Otherwise, these settings are supplied by a DHCP server on your network. If you have changed any settings it is necessary to reboot the Access Point for the new settings to take effect.



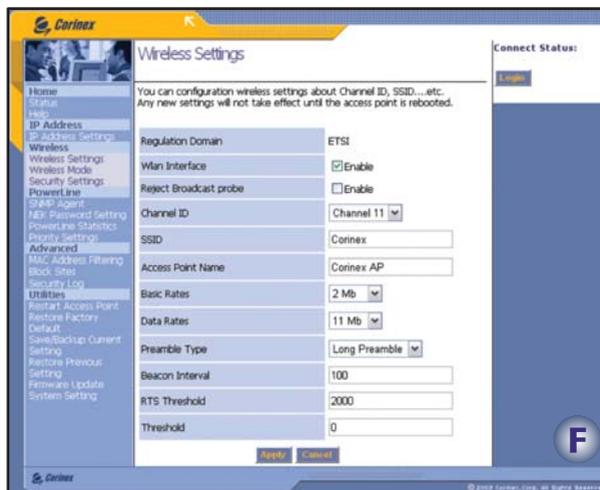
The screenshot shows the 'IP Settings' page in the Corinex web interface. The page title is 'IP Settings'. Below the title, there is a 'Connect Status' section with a 'Login' button. The main content area is titled 'IP Address Settings' and contains the following text: 'On this page you can configure the IP address used by the Web server running on this Access Point. If "DHCP Client" is not enabled, the IP address settings are given here. Otherwise, these settings are supplied by a DHCP server on your network. If you have changed any settings it is necessary to reboot the Access Point for the new settings to take effect.'

The settings are as follows:

- IP Address:** 192, 168, 1, 1
- Subnet Mask:** 255, 255, 255, 0
- Default Gateway:** (empty fields)
- DHCP Client:**  Enable

At the bottom of the settings area, there are 'Apply' and 'Cancel' buttons. A large blue circle with the letter 'E' is overlaid on the bottom right corner of the screenshot.

- F. The **Wireless Settings** page allows you to configure the wireless settings. Enter your wireless network's **SSID**, select the **Channel** at which the network broadcasts its wireless signal, name of the AP and fill all the other fields according to your settings requirements. Any new settings will not take effect until the AP is rebooted.



The screenshot shows the 'Wireless Settings' page in the Corinex web interface. The page title is 'Wireless Settings'. Below the title, there is a 'Connect Status' section with a 'Login' button. The main content area contains the following text: 'You can configuration wireless settings about Channel ID, SSID, etc. Any new settings will not take effect until the access point is rebooted.'

The settings are as follows:

- Regulation Domain:** ETSI
- Wlan Interface:**  Enable
- Reject Broadcast probe:**  Enable
- Channel ID:** Channel 11
- SSID:** Corinex
- Access Point Name:** Corinex AP
- Basic Rates:** 2 Mb
- Data Rates:** 11 Mb
- Preamble Type:** Long Preamble
- Beacon Interval:** 100
- RTS Threshold:** 2000
- Threshold:** 0

At the bottom of the settings area, there are 'Apply' and 'Cancel' buttons. A large blue circle with the letter 'F' is overlaid on the bottom right corner of the screenshot.

- G. In the **Wireless Mode** page you can configure the Access Point to perform in any one of two modes, as a wireless **Access Point** or as a **Wireless Client**.

The screenshot shows the 'Wireless Mode' configuration page in the Corinex web interface. The page is titled 'Wireless Mode' and features a navigation menu on the left with categories: Home, Wireless, Advanced, and Utilities. The main content area is titled 'AP MODE' and contains two radio button options: 'Access Point' (which is selected) and 'Wireless Client'. Below the 'Wireless Client' option, there are four input fields for 'Remote AP SSID', 'Remote AP MAC', 'Remote', and 'AP Channel'. A 'Save Settings' button is located below the input fields. At the bottom of the main content area, there are 'Apply' and 'Cancel' buttons. On the right side of the page, there is a 'Connect Status:' section with a 'Login' button. The Corinex logo is visible in the top left and bottom left corners, and a copyright notice '© 2008 Corinex Corp. All Rights Reserved' is at the bottom right.

- H. In the **Security Settings** screen select the **Encryption type**, **Authentication type**, **Radius IP**, **WPA**, **WEP**, etc. Set the **Wired Equivalent Privacy (WEP)** for your wireless network. Select a WEP or other encryption method and a passphrase. Click on **Apply** to make changes.

**Carinex**

Security setting

Wireless Security Settings  
You can setting Encryption type and Authentication type ...etc.

**Type**

Authentication Type: Open System

Encryption Type: None

**WEP**

WEP Type: Enable 120

Active Key: Key 1

Key 1(Hex): .....

Key 2(Hex): .....

Key 3(Hex): .....

Key 4(Hex): .....

**802.1x**

ReAuthEnabled: False

ReAuthPeriod: 3600

**Radius IP**

IP: 10.1.1.248

**Secret**

Secret: 123456

**WPA**

Support Station: WPA

Unicast Cipher: TKIP

Key Interval: 3600

PSK (H-EX): .....

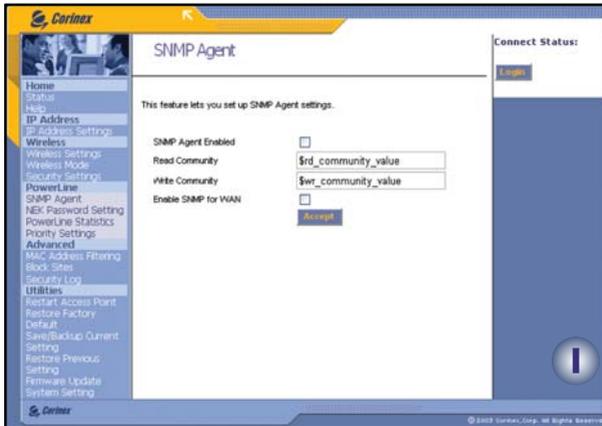
Use passphrase:  Enable

**Apply** **Cancel**

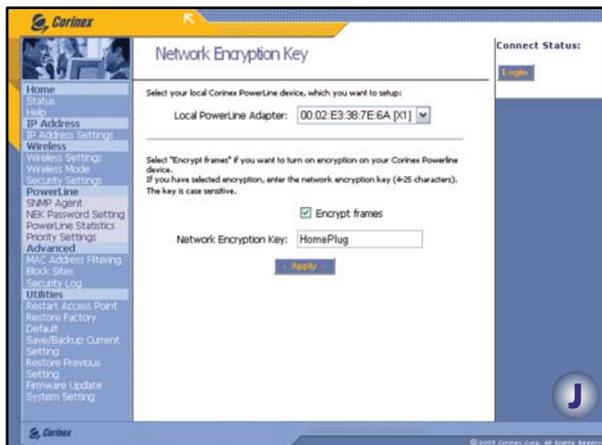
Connect Status: **Login**

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- I. **SNMP Agent** - this feature lets you set up SNMP Agent settings.



- J. The **Network Encryption Key** page allows you to configure the Powerline settings. All Corinex Powerline and CableLAN devices are shipped using "HomePlug" as the network encryption key (NEK). The Security dialog screen allows you to change this encryption key, to set your own private NEK and apply it to the *Corinex Wireless to Powerline Access Point*. Click **Apply** button to make changes.



**Note:** NEK must be between 4 to 24 alphanumeric characters and is case sensitive.

For detailed configuration procedures and functionality of the AP or for installation with other operating system versions, please see the *Corinex Wireless to Powerline User Guide* on the included CD-Rom.