

## Outdoor 150Mbps Wireless N Access Point - 1T1R 2.4GHz

AP150WN1X1OD / AP150WN1X1OE / AP150WN1X1OG



\*actual product may vary from photos

DE: Bedienungsanleitung - [de.startech.com](http://de.startech.com)

FR: Guide de l'utilisateur - [fr.startech.com](http://fr.startech.com)

ES: Guía del usuario - [es.startech.com](http://es.startech.com)

IT: Guida per l'uso - [it.startech.com](http://it.startech.com)

NL: Gebruiksaanwijzing - [nl.startech.com](http://nl.startech.com)

PT: Guia do usuário - [pt.startech.com](http://pt.startech.com)

For the most up-to-date information, please visit: [www.startech.com](http://www.startech.com)

## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limit set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Déclaration d'exposition à la radiation:

Cet équipement respecte les limites d'exposition aux rayonnements IC définies pour un environnement non contrôlé. Cet équipement doit être installé et mis en marche à une distance minimale de 20 cm qui sépare l'élément rayonnant de votre corps.

L'émetteur ne doit ni être utilisé avec une autre antenne ou un autre émetteur ni se trouver à leur proximité.

FCC ID: VYTLP-9318A

IC: 11232A- AP150WN1X10

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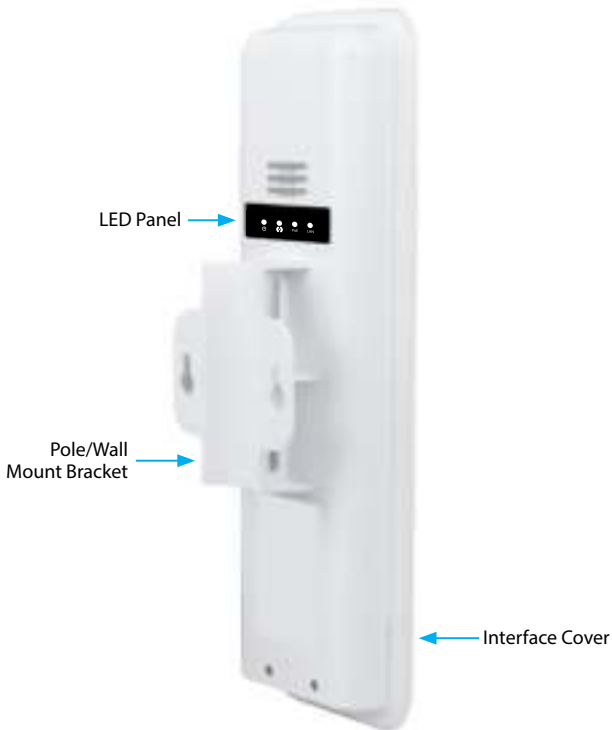
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# Product Diagram

## Rear View



# Introduction

## Packaging Contents

- 1 x Outdoor Access Point
- 1 x PoE Injector
- 1 x Metal Hose Clamp
- 1 x Power Adapter
- 1 x Quick Start Guide (CD)

## System Requirements

- A networked computer system with a Java-enabled web browser (for configuration)
- Cat 5 (or better) network cabling from PoE Injector to Wireless AP and PoE Injector to LAN Switch/router (no more than 100m total)
- Mounting screws / anchors if wall mounting PoE Injector and/or Wireless AP

# Connection Ports



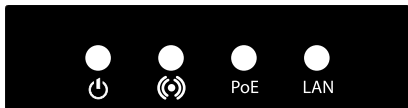
External Antenna  
(optional)

PoE Port

LAN Port  
(Secondary)

Interface	Description
<b>External Antenna</b>	External RP-SMA Antenna connector (optional). Upgradable to high gain antennas for more range. See the External Antenna configuration section for setup procedures.
<b>PoE Port</b>	Power over Ethernet RJ-45 port used to connect the Access Point to the included PoE Injector for power and data connectivity.
<b>LAN Port (secondary)</b>	RJ-45 port used to connect additional network devices to the Access Point.

# LED Indicators



Indicator	State	Description
PWR	ON	The device is powered on
	Off	The device is powered off
Wifi activity	Flashing	Data is being transmitted / received over wireless
	Off	No link detected
PoE	ON	Link detected
	Off	No link detected
	Flashing	Data is being transmitted / received on the PoE LAN interface
LAN	ON	Link detected
	Off	No link detected
	Flashing	Data is being transmitted / received on the Secondary LAN interface

## Installation

### Preparing Your Site

1. Determine the location for the included PoE injector and mount using the appropriate screws/anchors for the material you are mounting to (not included).
2. Determine the location for the Wireless AP. If you are pole-mounting the AP, use the included clamp to secure the device. If you are wall mounting the AP, use the appropriate screws/anchors for the material you are mounting to (not included).
3. Prepare/purchase the required length of Ethernet cabling to go from the PoE Injector to your LAN Switch or router, and from PoE Injector to the AP.

**Note:** The total length of Ethernet cabling from the Wireless AP to your LAN switch or router should not exceed 100m.



# Hardware Installation

1. Connect the included power adapter to an available wall outlet and the DC jack on the PoE injector.
2. Connect an Ethernet cable from the LAN port of the PoE Injector to your LAN switch or router.
3. Connect a second Ethernet cable from the PoE port of the PoE Injector, the other end of this cable will connect to the AP as instructed in the following steps.
4. Slide the bottom cover of the unit down to remove it and expose the ports.
5. Connect the Ethernet cable from the PoE port of the PoE Injector, to the PoE Port port on the AP (closest to the antenna connector).
6. Slide the cover back on as shown.



**Note:** the AP may take approximately up to 2 mins to complete the power on sequence.

# Operation

Before operation, it is recommended that you ensure the Access Point is using the latest firmware version. Check [www.startech.com/downloads](http://www.startech.com/downloads) for the latest firmware version.

## Default Settings

SSID: AP150WN1X1OD

Security: None

Default IP Address: **192.168.1.200**

ID: admin; PW: admin

DHCP: Auto

1. Scan for available wireless networks on your PC and connect to the AP150WN1X1OD network
2. Open a web browser and enter the IP address 192.168.1.200 into the address bar, then press Enter.
3. When the web menu appears, click the Start button at the bottom of your screen to begin the Setup Wizard. The wizard will guide you through the following basic setup options:
  - a. System Clock
  - b. Network Name (wireless SSID)
  - c. Network Security

## System Clock

The System Clock is used for system logs and setting schedules for Internet access. Click the Sync button to synchronize the System Clock with the time on your computer, or set manually.

Click **Next** to continue

## Network Name

The default SSID of your Wireless Network is: AP150WN1X10D

To change it, enter your desired name in the SSID field. Users connecting wirelessly to the Access Point will use this ID to identify your wireless network.

Click **Next** to continue

Network Name



Click Next to confirm your settings and continue

BACK NEXT

## Network Security

By default, there is no Security Key configured on the Access Point. Enter your desired security key (WPA) in the Security Key field (recommended).

**Note:** The key must be at least 8 characters long

Click **Next** to apply your settings. The Access Point will reboot and may take up to 2 minutes. Please do not refresh the web page; it will automatically reload with the Setup Summary page with the details of what has been configured.

## Network Security

Your wireless network is secured with the following (WPA) security password/key. You must enter this key when connecting wirelessly for the first time to the High Power Wireless-N 600MHz Pro Access Point. You may change the key later.

Note: To specify the use of another type of wireless access, see the Store Settings > Wireless Settings > Security menu. Network security options after your setup is complete.



## Advanced Configuration

The following sections outline the advanced configuration settings available on the Access Point. These options can be accessed by clicking the More Settings link from the left side of the page, or by clicking the Finish button at the bottom of the Setup Summary page.



# Wireless Settings

## Basic

The Wireless Basic Settings page allows you to adjust the settings for your wireless network. These settings are for adjusting the Access Point after you have already gone through the Smart Setup Wizard and wish to further adjust your configurations.

**Basic Settings**

Disable Wireless LAN interface:

Band: 2.4 GHz (B+G+N)

Broadcast SSID:  Enable  Disable

Data Rate: Auto

Wireless Network ID (SSID): AP102WN0100 Multiple AP

Channel Width: 40MHz

Control Sidelband: Upper

Channel Number: Auto

WMM: Enabled

Associated Clients: Show Active Clients

### Disable Wireless LAN Interface:

Turns off all wireless access.

### Band:

Allows you to setup access under a specific combination of Wi-Fi speed standards.

### Broadcast SSID:

Disabling the broadcasting of your SSID will make it so outside users cannot see your network when they scan for wireless networks - users must manually enter the SSID to connect.

### Data Rate:

Adjust the speed of your wireless network. It is recommended that you use Auto for this selection.

### SSID of Wireless network:

This is the name of your Wireless network and the name that users will scan for to connect wirelessly.

## Multiple AP:

You may add one additional (SSID) to your Wireless network. The additional SSID can have its own security, band and data rate settings. You may restrict users for specific SSIDs or provide access only to some users with lower bandwidth by changing the band (i.e. only allow 802.11b access to specific users).

## Channel Width:

Wi-Fi operates in two separate channel widths, 20Hz and 40Hz. 20Hz allows operation on channels 1-11, while 40Hz is 5-11. 40Hz allows for faster speeds. Select the channel width you wish to use for your network.

## Control Sideband:

This relates to the channel number used for your wireless network. An upper band represents higher channels and vice versa.

## Channel Number:

The channel number used for your wireless network. If there are other wireless networks using the same channel, this may cause slower performance. You may adjust the channel here to attempt to improve performance through less interference.

## WMM:

Prioritizes audio and video content going over your wireless network.

## Associated Clients:

Displays all wireless connections to the Pro Access Point.

## Security

Wireless security allows you to change the security type, password/key and format for your wireless network. The security key you select must be used by all computers and devices connecting to the Access Point wirelessly.

Select Wireless Network:

SSID: AP15/WIRE100

APPLY RESET

Encryption: WPA

Authentication Mode:  Enterprise (RADIUS)  Personal (Pre-Shared Key)

WPA Cipher Suite:  TKIP  AES

Pre-Shared Key Format: Passphrase

Pre-Shared Key: \_\_\_\_\_

Using the drop down menu, you can select which network you wish to configure and adjust the security settings for (standard wireless network or the multiple SSID network).

**Note:** It is recommended to use WPA or WPA2 as your encryption type. WEP 64bit and 128bit security is a more primitive WiFi security encryption type which may limit wireless performance and speed from the Access Point. (Pre Service Pack 3 Windows XP computers may not support WPA2).

## Wi-Fi Protected Setup (WPS)

WPS is a Wi-Fi feature created to make Wi-Fi setup simpler and easier. Some wireless devices and adapters support this feature with varying names (i.e. one touch setup or WPS). You may enable WPS setup here by selecting the type of WPS setup you wish to use. Push button

You may push the WPS button on the web menu. The Access Point does not have a physical WPS button.



[Disable Wi-Fi Protected Setup (WPS)]

**Enable Wi-Fi Protected Setup**

Option A: If your wireless user has a Wi-Fi Protected Setup button, click or press the WPS PBC (Push Button Configuration) button here:

Option B: If your wireless user asks for the High Power Wireless-II (802.11r) Access Point's PIN number, use this number on the user's device:  
**10036091**

Option C: If your wireless user has a Wi-Fi Protected Setup PIN number, enter that number here:

and then click

## WDS Settings

Wireless Distribution System (WDS) allows you to use the Access Point to wirelessly connect to other Access Points. In WDS mode, the Access Point can function as a Main Access Point which is connected to a network using a cable, or it can be a Relay Access Point which is wirelessly connected to the Main Access Point.

Enable Wireless Distribution System Setup (WDS)

MAC Address:

Comment:

Band:

Wireless Network (SSID):

Channel Number:

DHCP:

IP Address:

Subnet Mask:

Default Gateway:

Current WDS AP List

MAC Address	To Note (Signal)	Comment	Signal
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To configure WDS mode you will need to adjust the settings for the following fields:

- Enable WDS: First you must enable the WDS function to use it.
- MAC Address: Enter the MAC address of the Access Point that you wish to connect to. If you are configuring the Main Access Point then you would need to enter the Relay Access Point's MAC Address here.
- Comment: Provide a comment, such as "Main Access Point" to easily remember which Access Point belongs to which MAC Address entry.
- Band: Select the wireless band you wish to operate on.
- Wireless Network (SSID): Enter the wireless SSID of your Access Point. Do not use the same SSID for two separate Access Points.



- f) Channel: Ensure that all Access Points, Main or Relay, operate on the same wireless channel.
- g) DHCP: WDS mode requires that you have a static IP address for your Access Point. Enter a static IP address for your Access Point by selecting “Disable” under the DHCP field.
- h) IP Address: The IP address of the Access Point should be on the same subnet as the Main or Relay Access Points. For example, if the network you are connected to has an IP address range of 192.168.1.100 – 192.168.1.200, then the IP address of the Access Point should be 192.168.1.xx.
- i) Subnet Mask: The subnet mask for the Access Point should be the same as the network you are connecting to. (e.g. 255.255.255.0)
- j) Default Gateway: This entry is typically the IP address of your network router. (e.g. 192.168.1.1)

## Antenna Settings

The Access Point includes an internal High Gain Antenna, however if you wish to use an external antenna instead, you may activate the External Antenna port here. The External Antenna Port is a RP-SMA port and accepts RP-SMA antenna connections. It is compatible with most high gain antennas.

**Note:** It is important that you attach the external antenna to the External Antenna Port **BEFORE** activating the External Antenna Port to avoid damage to the Access Point.



After you have attached the external high gain antenna, select the External Antenna selection under Active Antenna and click **Apply**. After the Access Point reboots, your external antenna will be active and ready for use.

## Advanced Settings

These settings allow you to control the advanced details of your wireless network configuration. Please use caution in changing these settings.



## Smart Features

The Access Point provides Smart Features that offer convenience and protection for your wireless network. The Smart Features allow you to control access to your wireless network through on/off schedules, specific user authorizations, as well as through the range of your wireless coverage for you.

**Note:** These settings only apply to users connecting through the Access Point to your network.

### Access Schedule

Set a schedule for when your Wi-Fi is enabled or disabled through the Access Schedule feature.

**Note:** Ensure your Time Zone Settings have been configured in order for your schedule to work correctly. Time Zone Settings can be adjusted from the web menu under Management > Time Zone Settings.



To do so:

- Click Enable Access Schedule
- Select which days you wish for your Wi-Fi to be available
- Select the time frame during that day that you wish for Wi-Fi to be available
- Apply Changes

## User Access Control

User Access lets you deny / allow access to specific users connecting wirelessly to your network by MAC address. By inputting the MAC address(es) into this area, you can define whether that device is allowed into your network or not allowed. When entering the MAC addresses, only enter alpha-numerical characters (e.g. A1B233C45566).



The screenshot shows a configuration page titled "User Access Control". It includes a red square icon to the left of the title. Below the title is a paragraph of text explaining that users can be denied or allowed access by entering their MAC address (a 12-digit hex number). Below this text are three input fields: "Wireless Access Control Mode" with a dropdown menu set to "Disable", "MAC Address" with a text input field, and "Comment" with another text input field.

## Wireless Coverage Controls

Adjust the output power of the Access Point to control the coverage distance of your wireless network. For a smaller coverage area you can select a lower output power percentage. For the maximum wireless coverage, select 100%.

**Note:** If you select a lower output power, your connection to your Home Network will also decrease in range. So be sure to test your signal strength after each adjustment.

### Wireless Coverage Controls

Adjust the output power and range of your Long Range Wireless-N Pro Access Point. For a smaller coverage area, choose a lower output power percentage. For a larger coverage area, select a higher output power percentage.

Wireless Output Power:  100%  75%  50%  35%  15%

# IP Settings



IP Address	192.168.1.201
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DHCP	Auto
DHCP Client Range	192.168.1.101 - 192.168.1.200
Static DHCP	Disabled DHCP
Domain Name	jagocam
IEEE 14 Spanning Type	Disabled
Clone MAC Address	000000000000

## IP Address:

The IP address of the Access Point.

## Subnet Mask:

The subnet of the Access Point.

## Default Gateway:

The Access Point to another network, normally the IP address of your router.

## DHCP:

The Access Point includes a 'Smart' **AUTO DHCP** feature to help manage the IP addresses within your wireless network and with your router. When the Access Point is connected to your home network/router through the 'Network' port, the AUTO DHCP will determine whether it can receive an IP address from your router. If it can, it will automatically switch to a client and allow your router to assign it an IP address.

When there is no connection available, the Access Point will act as a DHCP Server. You may also manually control the IP settings of the Access Point by choosing Client, Server or Disabled from the DHCP drop down menu.

## DHCP Client Range:

The range of IP addresses the Access Point's DHCP server will assign to devices connecting to the Access Point.

## Disabled / Static DHCP:

If your network requires the use of manual IP address assignments, select this option. You may manually enter the IP address settings of the Access Point so it reflects the correct addresses to work with your specific network.

# Management Settings

The Management features on the Access Point allow you to view the status of your Access Point and your wireless network.

## System Status

The Access Point System Status page provides full information regarding the system, wireless network and configurations as well as the current IP settings of the Access Point. This page is often used to check the health of your wireless network and the link to your home router/network.

## Network Statistics

The Network Statistics page provides detailed traffic data for each connection type. View this page to see the amount of traffic going through the Access Point's wired or wireless connections.

## System Clock

Maintain the internal clock for the Pro Access Point by syncing with your computer's time. Your system clock settings need to be accurate in order for system logs and wireless access schedules to work correctly.

## Upgrade Firmware

In the event that a new firmware file is available you may update it here. During the upgrade process **DO NOT** power off the device to avoid damage to the Access Point. Check [www.startech.com/downloads](http://www.startech.com/downloads) for the latest firmware version.



To manually upgrade your firmware:

- Download the file from the [www.startech.com/downloads](http://www.startech.com/downloads) and remember the location where you saved it.
- Click Browse and locate the file.
- Click Upload to begin.

## Save and Reload Settings

Allows you to back-up your current settings which may be reloaded at a later time. This feature may be useful for testing new features and settings without having to worry about returning to a stable platform.

You may also reset the Access Point's settings to factory settings by pressing Reset. By resetting the Access Point you will lose all previous configurations and will need to run the Smart Setup Wizard again to reconnect to a Home Network.

In addition to the web interface, the PoE Injector has a small reset button located on the rear side. Press and hold the reset button for 10 seconds to restore all settings to factory default.

### Save/Reload Settings

Save your current Long Range Wireless-N Pro Access Point configurations to a file or reload previously saved configurations. If needed, you may also reset your Pro Access Point to factory default settings.

Save Settings to File:

Load Settings from File:

Reset Settings to Default:

## Password Settings (recommended)

By default, the Access Point does not require a password to log in to the web menu. If you wish to enable a password to protect unauthorized access to the web menu and Smart Setup Wizard, you may enter one here.

### Password

Prevent unauthorized access to your Long Range Wireless-N Pro Access Point's configuration menu by providing a user name and password. If no protection is necessary, leave these fields blank and you will not be prompted for a login and password when accessing this web menu.

User Name:

New Password:

Confirmed Password:

# Specifications

<b>Supported Wireless Standards</b>	IEEE802.11 b/g/n
<b>Chipset</b>	Realtek - 8196C
<b>Connectors</b>	2 x RJ45 Ethernet Female 1 x RP-SMA (Coax; Reverse Polarity SubMiniature A) Female
<b>Antenna Configuration</b>	1x1:1 (TxR:s)
<b>Antenna Type</b>	12dBi Directional Antenna
<b>Wireless Frequency Range</b>	2.400 ~ 2.484GHz
<b>Wireless Bandwidth</b>	20/40MHz
<b>Wireless Encryption Supported</b>	64/128 bit WEP WPA(TKIP with IEEE 802.1x) WPA2(AES with IEEE 802.1x) WPA Mixed
<b>Maximum Data Transfer Rate</b>	802.11n : (40MHz) : up to 150Mbps 802.11n : (20MHz) : up to 72Mbps RJ45 Ethernet: 10/100 Mbps
<b>Enclosure Material</b>	Plastic
<b>Operating Temperature</b>	0°C to 70°C (32°F to 122°F)
<b>Storage Temperature</b>	-20°C to 70°C (-4°F to 158°F)
<b>Humidity</b>	10~90% RH
<b>Dimensions</b>	282 x 80 x 55 mm

# Technical Support

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