# DrayTek

# VigorAP 920R Series

Ruggedized Outdoor AP with Extreme 802.11ac Power

## Quick Start Guide

V1.0

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**Version: 1.0**

**F/W: V1.2.0_RC1b**

## Date: December 11, 2017

### Warranty

We warrant to the original end user (purchaser) that the access point will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from the dealer. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labor, to whatever extent we deem necessary tore-store the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. The warranty does not cover the bundled or licensed software of other vendors. Defects which do not significantly affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

### $C \epsilon$ Declaration of Conformity

Hereby, DrayTek Corporation declares that the radio equipment type VigorAP 920R is in compliance with Directive 2014/53/EU.
The full text of the EU Declaration of Conformity is available at the following internet address:
https://www.draytek.com.tw/ftp/VigorAP 920R/Document/CE/

Manufacturer:    DrayTek Corp.
Address:    No. 26, Fu Shing Road, HuKou Township, HsinChu Industrial Park, Hsin-Chu, Taiwan 303
Product:    VigorAP 920R/920RP/920RPD

**Frequency Information for Europe area:**

| 2.4G WLAN | 2412MHz - 2472 MHz, max. TX power: 19.5dBm |
|---|---|
| 5G WLAN | 5470MHz - 5725 MHz, max. TX power: 28.0dBm |
| ⚠ | Requirements in AT/BE/BG/CZ/DZ/DK/EE/FR/DE/IS/IE/IT/EL/ES/ CY/LV/LI/LT/ LU/HU/MT/ NL/NO/PL/PT/RO/SI/SK/TR/FI/SE/CH/ UK/HR. 5150MHz~5350MHz is for indoor use only. |

This product is designed for 2.4GHz/5GHz WLAN network throughout the EC region.

### FC Regulatory Information

**Federal Communication Commission Interference 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 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 device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device may accept any interference received, including interference that may cause undesired operation.

The antenna/transmitter should be kept at least 20 cm away from human body.
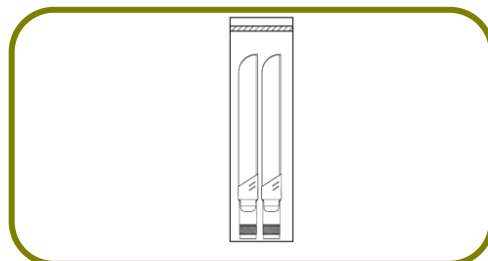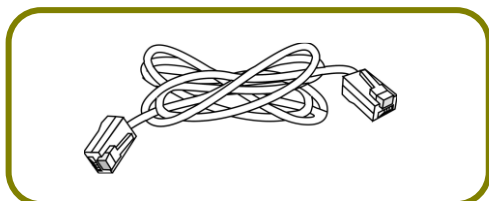
# 1

# Package Content

Please inspect the package contents. If anything is missing or damaged, please contact DrayTek or your dealer immediately.
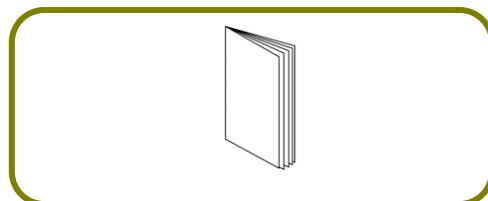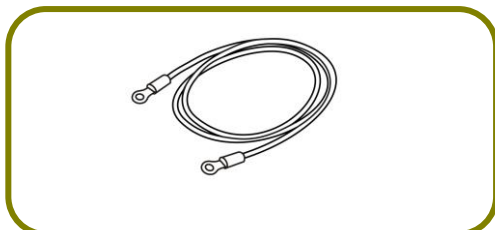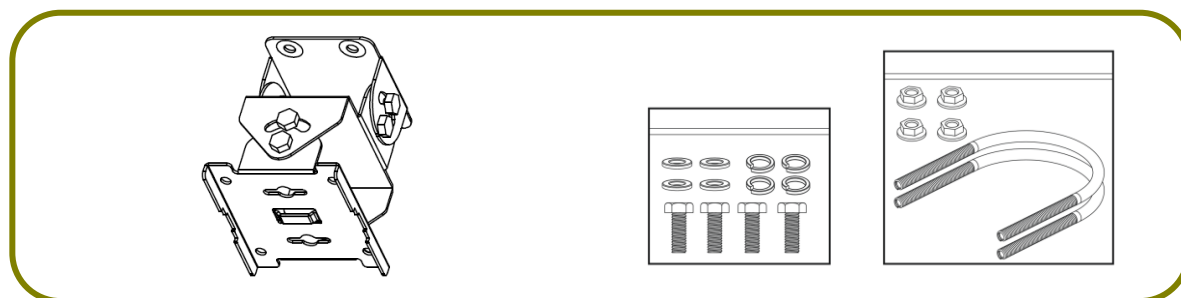


Main Unit



Antennas



Ethernet Cable (3M)



Quick Start Guide



Ground Cable



Mount Kit
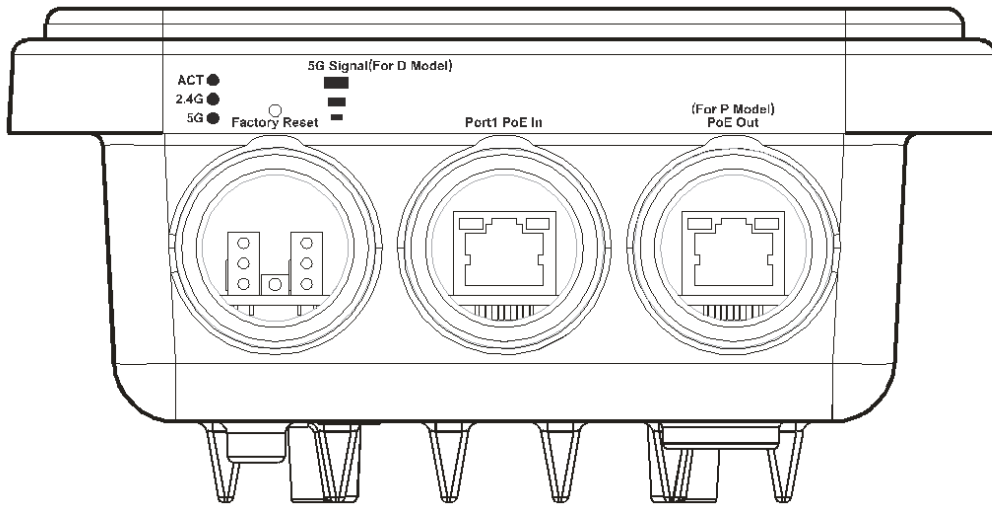
| Note | Do not use Ethernet cables with molded hood boot. |
|---|---|

# Descriptions of Components



| LED | Status | Explanation |
|---|---|---|
| ACT | Off | The system is not ready or has failed. |
| | Blinking | The system is ready. |
| 2.4G / 5G / | On | Wireless function is ready. |
| | Off | Wireless function is not ready. |
| | Blinking | Data is being transmitted (sending/receiving). |
| 5G Signal (For D Model) | | The signal strength (excellent) > -50dBm. |
| 5G Signal (For D Model) | | The signal strength (good) is between -66dBm ~ -51dBm. |
| 5G Signal (For D Model) | | The signal strength (fair) is between -73dBm~ -67dBm. |
| 5G Signal (For D Model) | | No signal or the signal strength is <-73dBm. |

| Interface | Description |
|---|---|
| Factory Reset | Restore the default settings. Usage: Switch on the access point. Press and hold reset button for at least 10 seconds. VigorAP will restart with the factory default configuration.<br>Before pressing the button, the cover should first be removed by rotating it with a torque of 13 kgf-cm. After the access point has been reset, replace the cover and lock it with the same amount of torque. |
| Port1 PoE In | Connector for receiving power from another device. |
| PoE Out (for P Model) | Connector for supplying power to another device. |

**Note**   For the sake of safety, keep the access point away from children.

# **3** Mounting the Access Point

The VigorAP can be pole mounted depending on the installation environment. This section will guide you through installing the VigorAP.
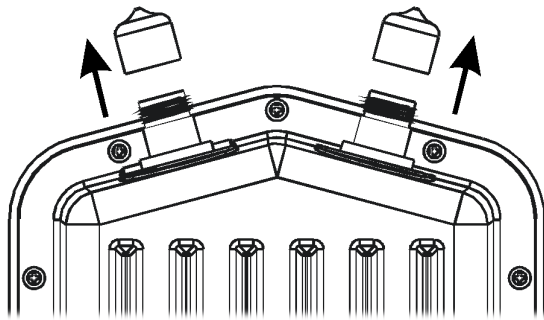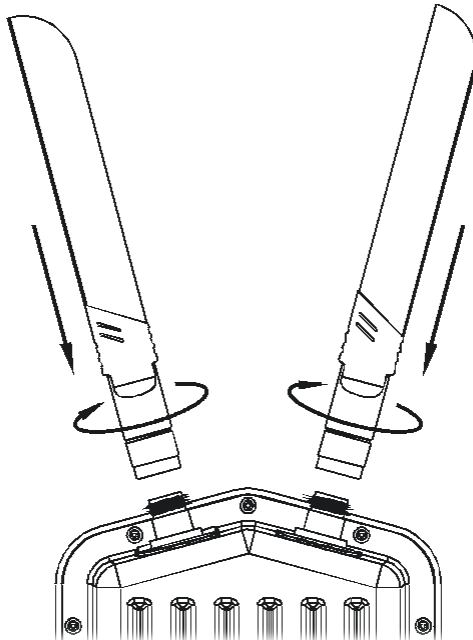
| | |
|---|---|
| **Note** | For the sake of personal safety, only trained and qualified personnel should install this access point. |

## 3.1 Antennas Installation

1. Remove the protective cap.

2. Insert the antennas and fasten them by rotating clockwise.

| | |
|---|---|
| **Warning** | ● Do not open the top cover of the device. |
| | ● Installation during thunderstorms could be dangerous. |

## 3.2 Connecting Ethernet Cable(s)

Refer to the following steps to attach the Ethernet cable and waterproof head. (Take VigorAP 920RP as an example.)
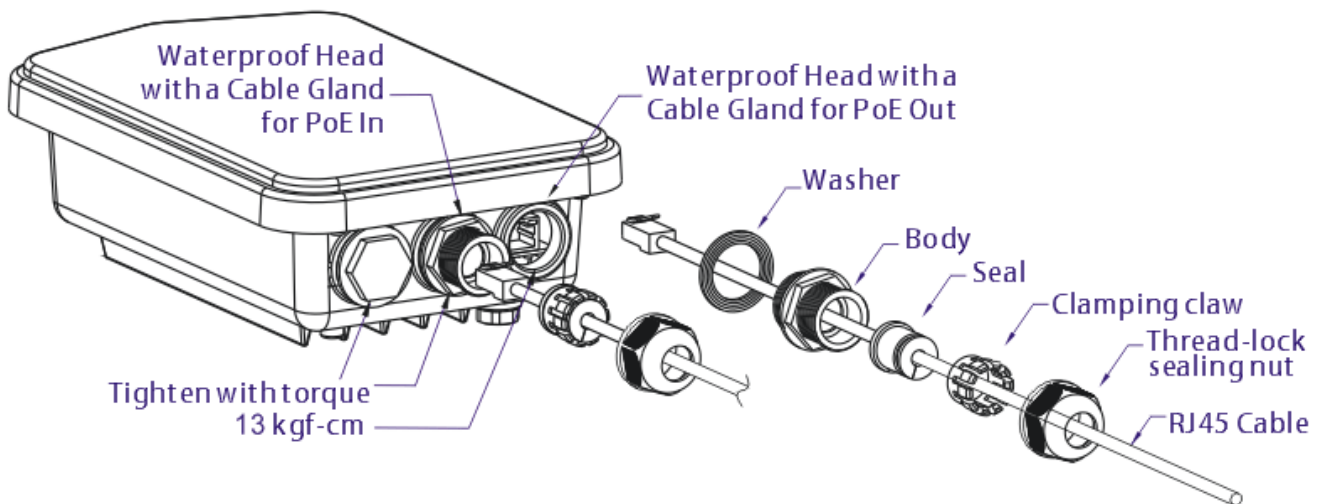
1.  Remove the cable cover for Ethernet Port (e.g., **Port 1 PoE In**).

2.  Before connecting, verify that the cable has a rubber seal and that it is not damaged.

| | |
|---|---|
| **Note** | To prevent the enclosure from water leakage, make sure the Ethernet cable gland and the rubber gasket are present and installed properly. |

3.  Inserting RJ-45 connector into the port.



4.  Use an adjustable wrench and tighten the thread-lock sealing nut with torque 10 kgf-cm.
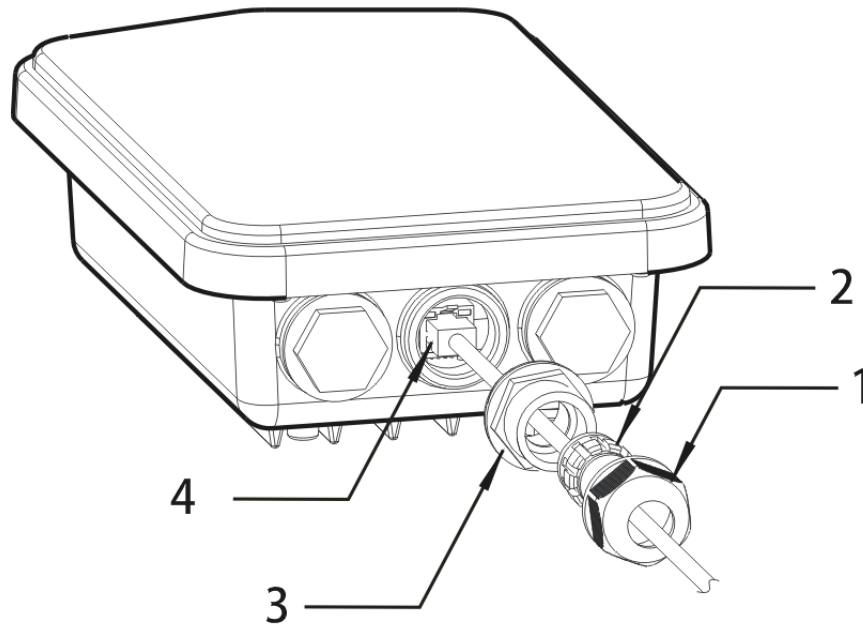
| | |
|---|---|
| **Note** | Do not pull the cable backwards; the force might break the plug. |

## Reconnecting Ethernet Cable

1. Loosen the thread-lock sealing nut.
2. Loosen the clamping claw and seal.
3. Loosen the body and washer.
4. Remove the cable.



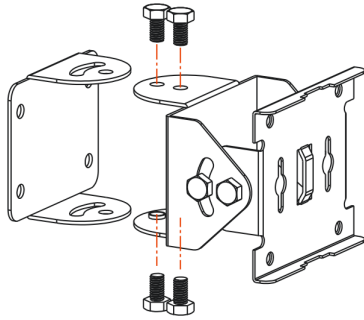5. To reattach the cable, follow the above steps in reverse.

| Note | The diameter for the Ethernet cable shall be limited between 4.3mm to 5.9mm. |
|------|------------------------------------------------------------------------------|

## 3.3 Access Point Installation – Pole Mount

1. Find a suitable location for installing the access point.

2. Select a mounting point on a pole.

3. Remove the mounting plate from the mount kit by removing the four mounting screws.



4. Attach the VigorAP920 to the mounting plate. Lock the screws with torque of 20 kgf-cm.
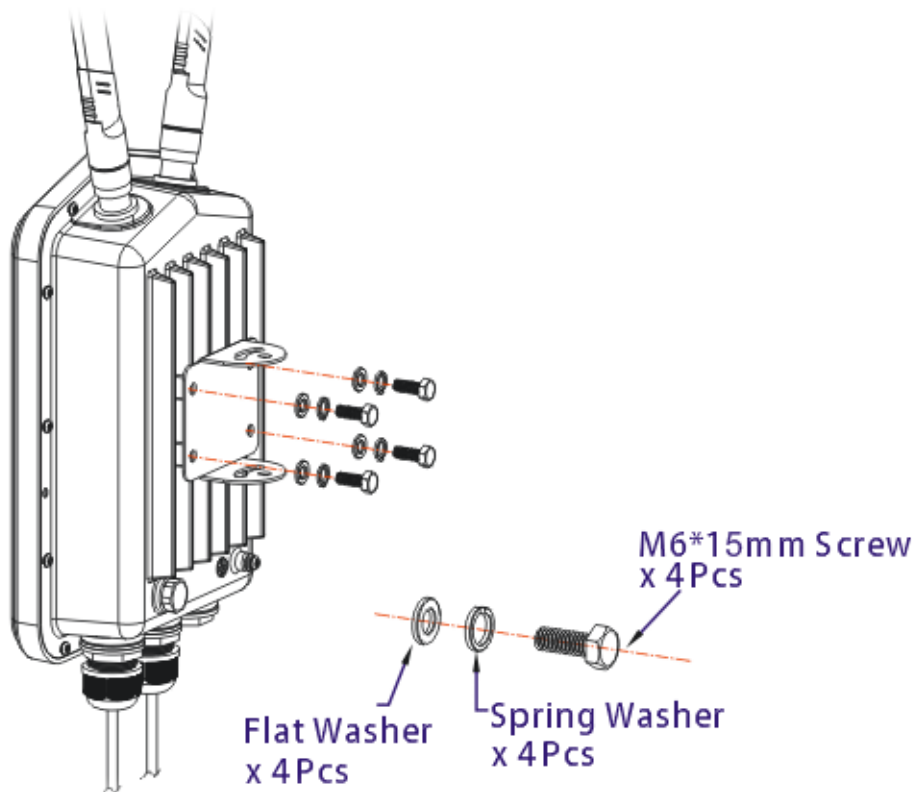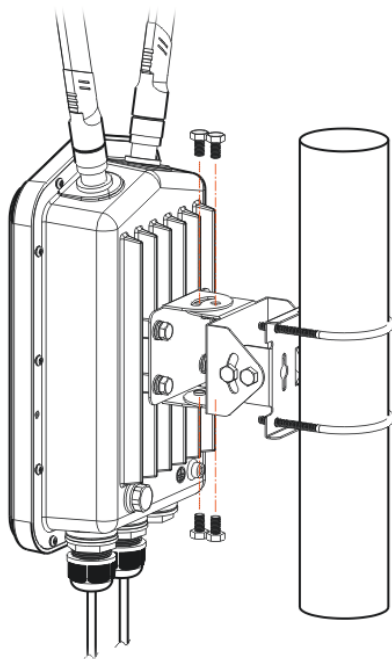
5. Fasten the mount kit on the pole with nut screws and with torque of 20 kgf-cm.
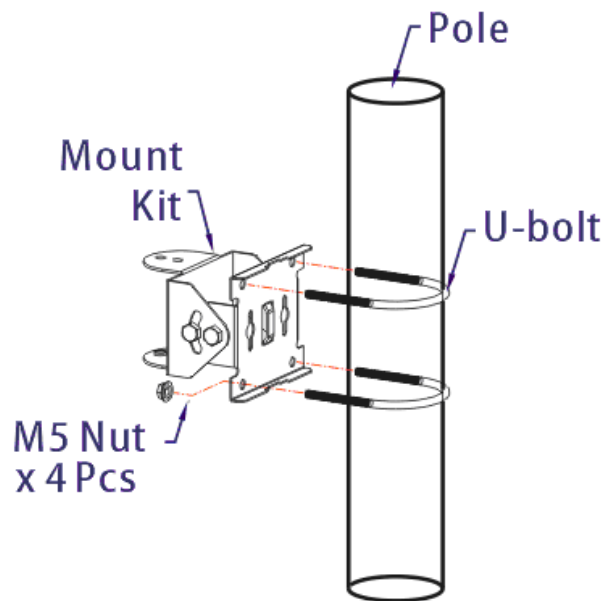


Note | The diameter for a pole shall be limited between 35mm to 53mm.

6. Fasten the access point to the mount kit with screws (torque of 20 kgf-cm) as shown in the following figure.
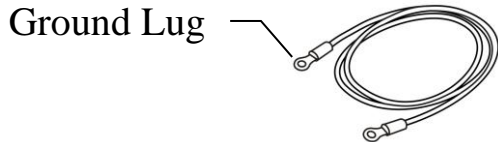


Note | Before connecting the access point to the mount kit, make sure it is oriented with the LED indicators pointing downwards.
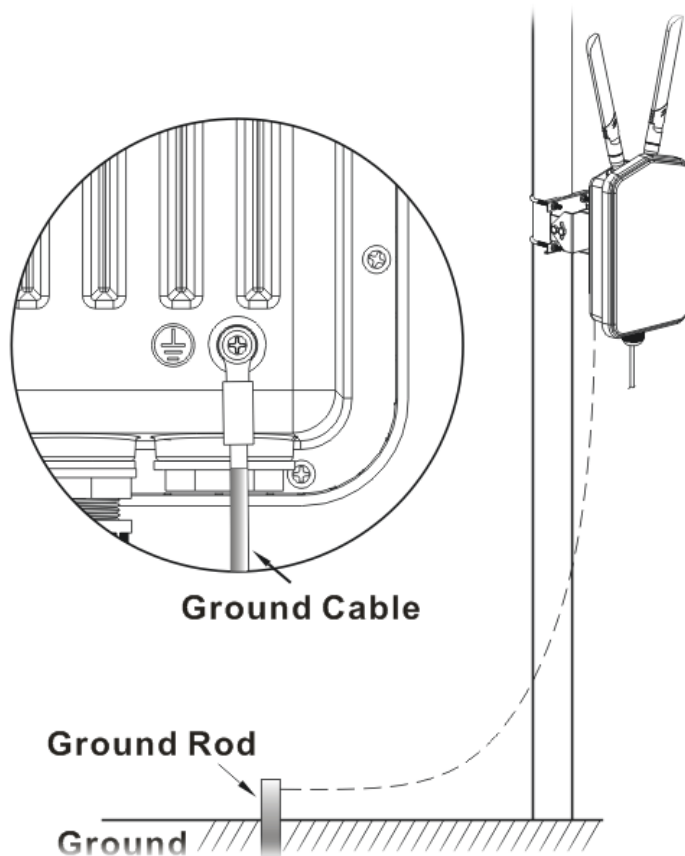
## 3.4 Grounding Access Point

In outdoor installations and before powering the access point with AC power, VigorAP must be grounded prior to wire installation.

1. Take out the ground cable from the mount kit.

Ground Lug

2. Insert a ground rod on the ground.
3. Strip the insulation for the ground lug.
4. Use the appropriate crimping tool to crimp the ground cable to the grounding lug.
5. Connect the ground rod and the VigorAP using the ground cable.

Ground Cable

Ground Rod

Ground

| | |
|---|---|
| **Note** | Please consult an electrician if you are uncertain about the type of grounding that is required. |

## 3.5 Powering Access Point

VigorAP 920R/RP can be powered via the PoE input from an in-line power injector or a suitably powered switch port.

Before powering VigorAP, you should:

- Pay attention to local and national electrical codes.

- Not place the power injector / VigorSwitch in outdoor environment without any protection. Moisture might get into the power injector and cause a short circuit or possible fire.

- Not work on the system during periods of lighting activity to avoid the risk of electric shock, and do not connect or disconnect the Ethernet cables under bad weather.

Below shows two examples of connecting power for VigorAP 920R and VigorAP 920RP.

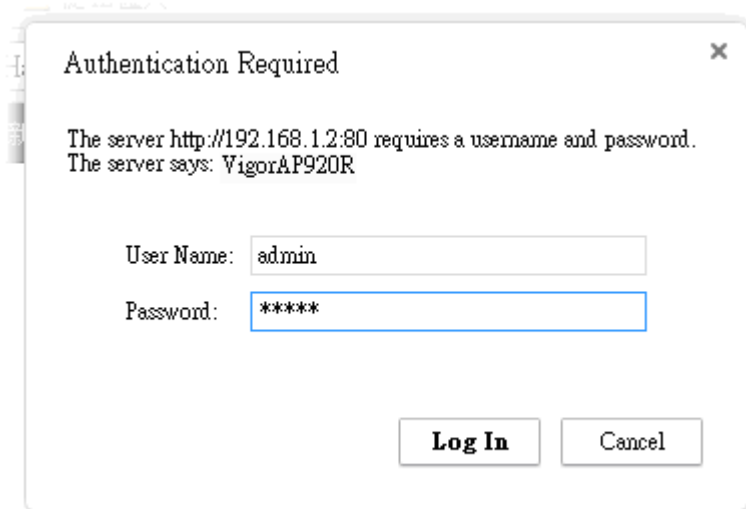Example 1: AP920R
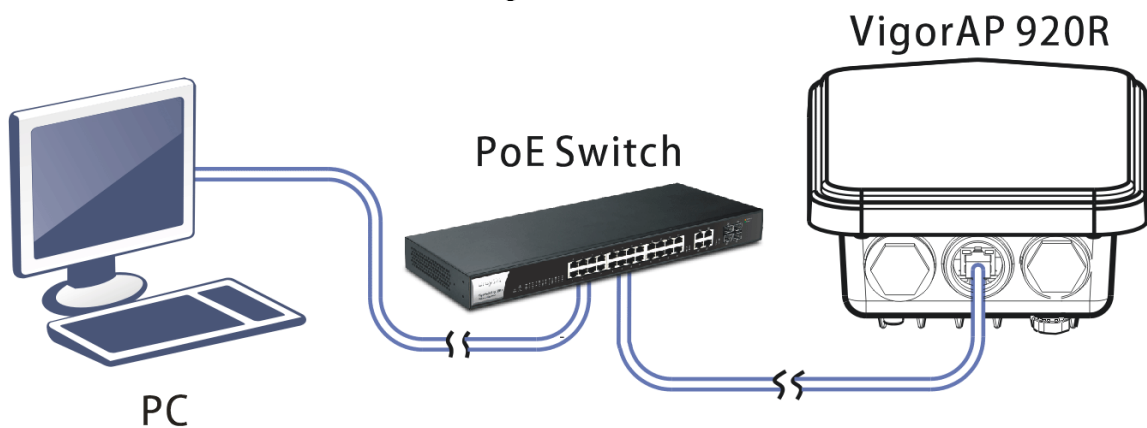
Example 2: AP920RP
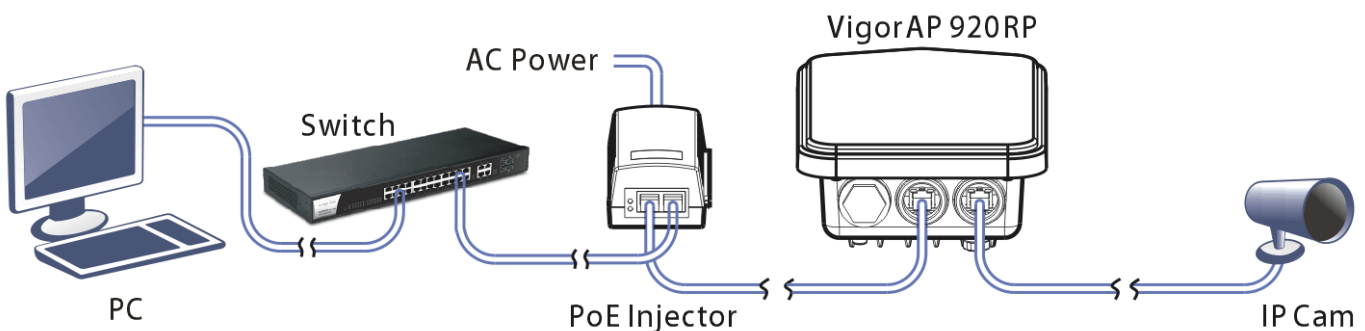
# 4  Configuring Web Pages

This section will guide you through the configuration of the settings using a web browser.

1.  Make sure your PC is connected to access point correctly.

2.  Open a web browser on your PC and type **http://192.168.1.2.** A pop-up window will open asking you for a username and password. Please type "admin/admin" for Username/Password and click **Login.**
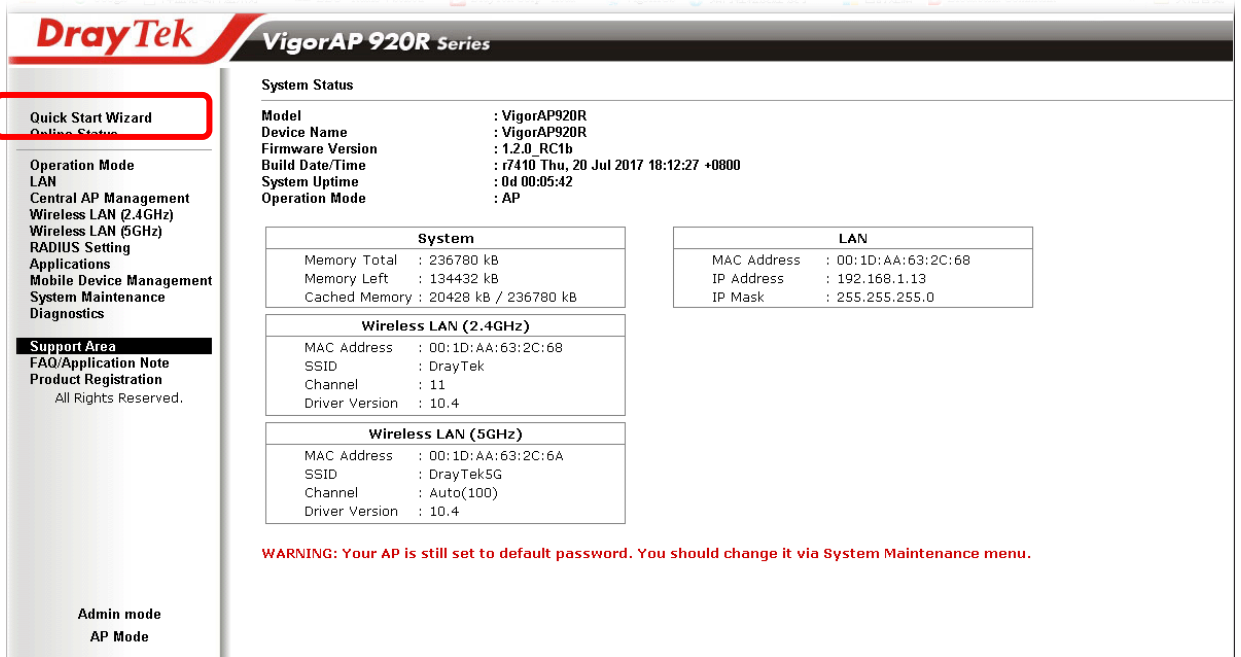


| Note | You may either set up your computer to receive an IP address dynamically from the access point or manually enter an IP address that is within the same subnet as **the IP address of VigorAP 920R.** |

- If there is no DHCP server on the network, the VigorAP 920R will have an IP address of 192.168.1.2.

- If there is DHCP available on the network, the VigorAP 920R will receive its IP address via the DHCP server.

3. The **Main Screen** will be displayed. Click **Quick Start Wizard.**



4. This page shows operation modes of the wireless LANs (2.4GHz/5GHz), and whether or not they are enabled. You may alter the settings if you wish.

5. The subsequent page is for configuring the 2.4G wireless connection. Select one of the five operation modes. The following figure shows the configuration page for the AP (Access Point) operation mode. Configuration pages for other operation modes will differ. In this example, choose **AP** and click **Next** to configure the following page.



6. After completing the configuration for wireless LAN (2.4GHz), click **Next**. The configuration page for wireless LAN (5GHz) will be shown. The following figure shows the AP configuration page.

7. When you have completed making changes to settings for wireless LAN (5GHz), click **Next.** The following final page will be shown. If you are satisfied with the changes you have made, click **Finish**. You may verify your settings by navigating to **Online Status** on the Main Screen.

**Quick Start Wizard**

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**Vigor Wizard Setup is now finished!**

Basic settings for "AP920R" is completed.

Press Finish button to save and finish the wizard setup.
Note that the configuration process takes a few seconds to complete.

[ < Back ]  [ Finish ]  [ Cancel ]

| | |
|---|---|
| **Note** | Under **System Maintenance,** you can change the access point's default admin password. You should do this as soon as possible to prevent unauthorized access to the VigorAP's management interface. |

## Contacting DrayTek

If the access point still cannot work correctly after trying many efforts, please contact your dealer for further help right away. For any questions, please feel free to send e-mail to support@draytek.com.

| | |
|---|---|
| **Safety Instructions** | ● Read the installation guide thoroughly before you set up the access point. |
| | ● The access point is a complicated electronic unit that may be repaired only be authorized and qualified personnel. Do not try to open or repair the modem yourself. |
| | ● Keep the package out of reach of children. |
| | ● When you want to dispose of the access point, please follow local regulations on conservation of the environment. |
| **FCC RF Radiation Exposure Statement** | ● This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. |
| | ● This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. |
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| | Version 2, June 1991 |
| | For any question, please feel free to contact DrayTek technical support at support@draytek.com for further information. |