

# *DrayTek*

## VigorAP 910C

802.11ac Ceiling-mount Access Point



Quick Start Guide

V2.0

# VigorAP 910C

## 802.11ac Ceiling-mount Access Point

### Quick Start Guide

Version: 2.0

F/W: V1.2.0

For UK updates and support, visit [www.draytek.co.uk](http://www.draytek.co.uk)

Date: June 22, 2017

#### Warranty

We warrant to the original end user (purchaser) that the modem will be free from any defects in workmanship or materials for a period of two (2) years from the date of purchase from a DrayTek authorized dealer in the UK/Ireland. 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 to restore 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 external factors, used with unapproved accessories or subjected to abnormal working conditions. Warranty applies to hardware only, not software or firmware. 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.




#### Declaration of Conformity

Hereby, DrayTek Corporation declares that the radio equipment type VigorAP 910C is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address:  
[http://www.draytek.com.tw/ftp/VigorAP\\_910C/Document/CE/](http://www.draytek.com.tw/ftp/VigorAP_910C/Document/CE/)

Manufacturer: DrayTek Corp.  
Address: No. 26, Fu Shing Road, HuKou Township, HsinChu Industrial Park, Hsin-Chu, Taiwan 303  
Product: VigorAP 910C

#### Frequency Information for Europe area:

2.4G WLAN	2412MHz - 2472 MHz, max. TX power: 19.89dBm
5G WLAN	5180MHz - 5700 MHz, max. TX power: 29.91dBm
	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.

Product is compliant with EN300328. The unit should be kept at least 20 cm away from human body. Designed for use in the UK & Ireland.

#### Join the UK mailing list

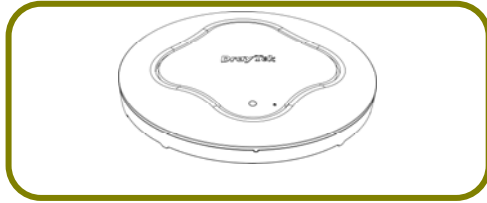
Users in the UK & Ireland can sign up to our mailing list which goes out approximately 4 times per year with products news, updates, hints & tips and offers. For details, please visit [www.draytek.co.uk/list](http://www.draytek.co.uk/list)

#### Firmware & Tools Updates

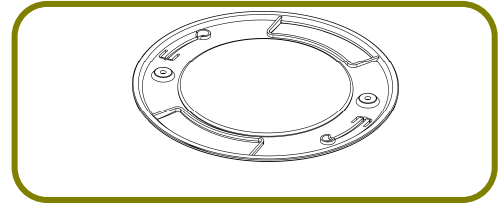
Due to the continuous evolution of DrayTek technology and emerging risks, router firmware updates may be issued. Please consult the DrayTek web site for more information on newest firmware, tools and documents. [www.draytek.co.uk](http://www.draytek.co.uk) (For UK/Ireland)

# 1

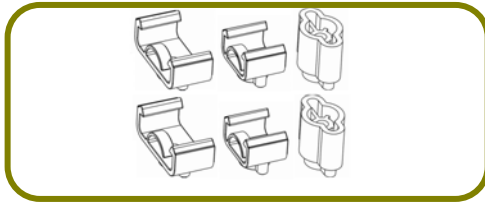
## Package Contents



VigorAP 910C Main Unit



Ceiling mount bracket



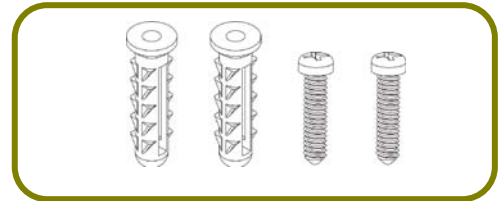
T-Rail Mounting Kits  
(Used for suspended ceiling)



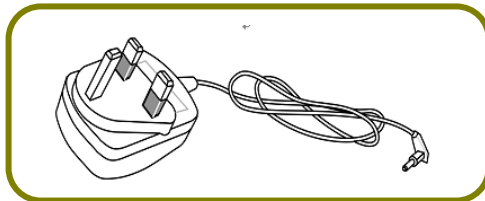
Fixings and Screws  
(for ceiling mounting)



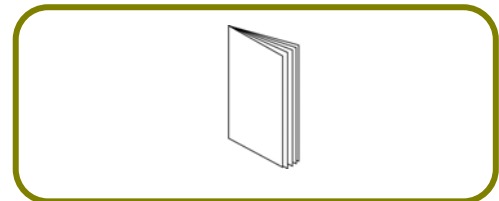
RJ-45 Cable (Ethernet)



Screw set (for wall mounting)



UK-type power adapter

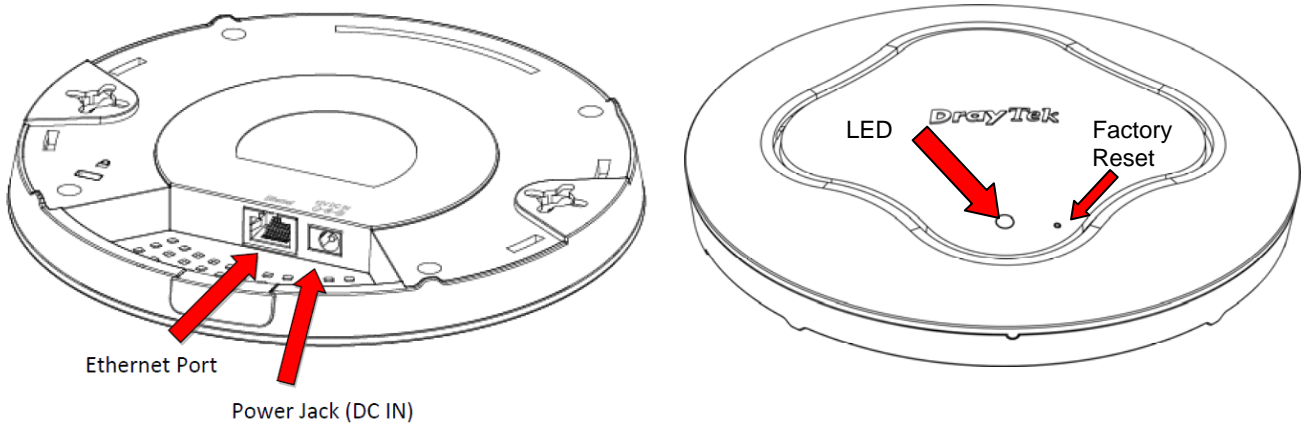


Quick Start Guide

**Warning:** Keep mounting accessories away from children. You should only use the supplied power supply (as shown above). If you have lost or damaged any components or accessories, obtain original DrayTek replacements only as they are safety approved/tested and should ensure that your unit operates correctly. Contents shown may vary.

# 2

## Product Layout



LED Colour	Explanation
Blinking Blue	VigorAP is operating normally.
Purple	VigorAP is initialising
Orange	Firmware upgrade is in progress.
Interface	Explanation
Ethernet Port (RJ-45)	Connects to LAN or router. Supports PoE power & Gigabit (1000BaseT).
Power Socket (DC In)	Connect to power adapter (if not using PoE)
Hole	Explanation
Factory Reset Button	Insert a small item such as an unbent paperclip into the hole and hold the button gently for 10 seconds. The unit will restart with factory default settings.

# 3

## Installation

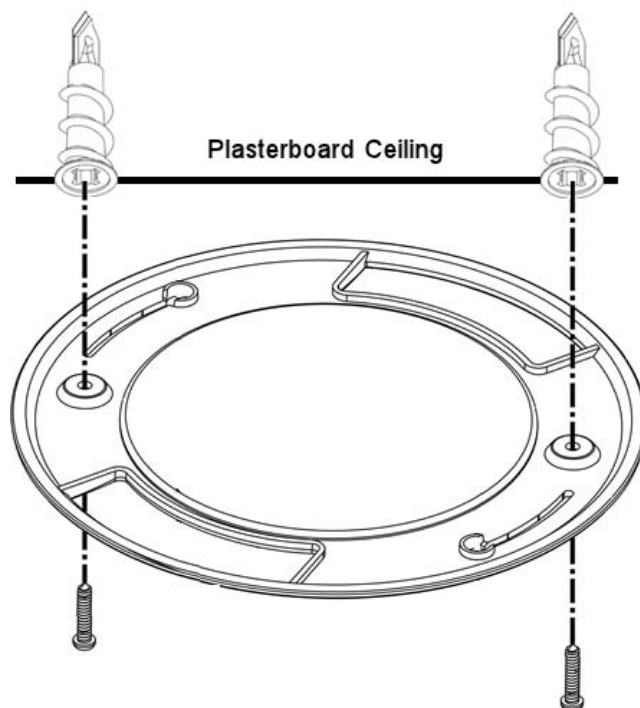
Your VigorAP can be fitted to walls or ceilings and with the cable entry being from behind or from the side. Due to the optimized signal pattern, we do not recommend placing the VigorAP horizontally on a desk or shelf. Run your cables **before** you fit the VigorAP or bracket to the ceiling/wall.

## 3.1 Ceiling-mount Installation

For a **wooden** ceiling, you can use self-tapping screws to fix the mounting bracket without any other fixings. The screws go through the bracket and then directly into the wood; no ‘wall-plug’ fixing needs to be used.

For ceilings made of **plasterboard**, you can use the self-tapping fixings. Hold the bracket up to the ceiling to mark the locations for the screw holes with a pencil then set the bracket aside.

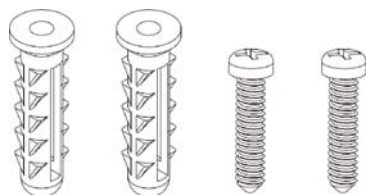
Hammer the fixings lightly to allow the sharp end to penetrate the plaster and start the hole, then gently screw the fixing into the plasterboard with a manual, not electric, screwdriver (seek professional help if you are not experienced with these fixings).



For solid ceilings (e.g. concrete) you will need to assess and provide appropriate fixing hardware; this is not included with the product.



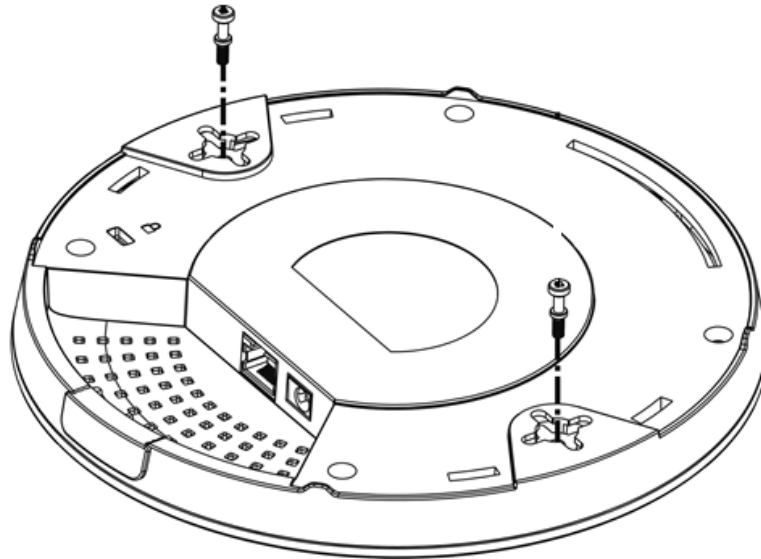
**Warning: The screw set shown below is for wall mounting only. Do not use it for ceilings as it may not provide adequate support.**



**With all types of fixing, during installation, always use appropriate personal safety protection and check for visible or hidden hazards (cables, joists, pipes) before drilling or fixing. Consult a qualified installer if you are not experienced.**

## 3.2 Attaching VigorAP to the ceiling bracket

Install the supplied screws into the back of the AP. These special screws protrude from the back of the AP, leaving a bayonet type fitting to attach to the bracket:

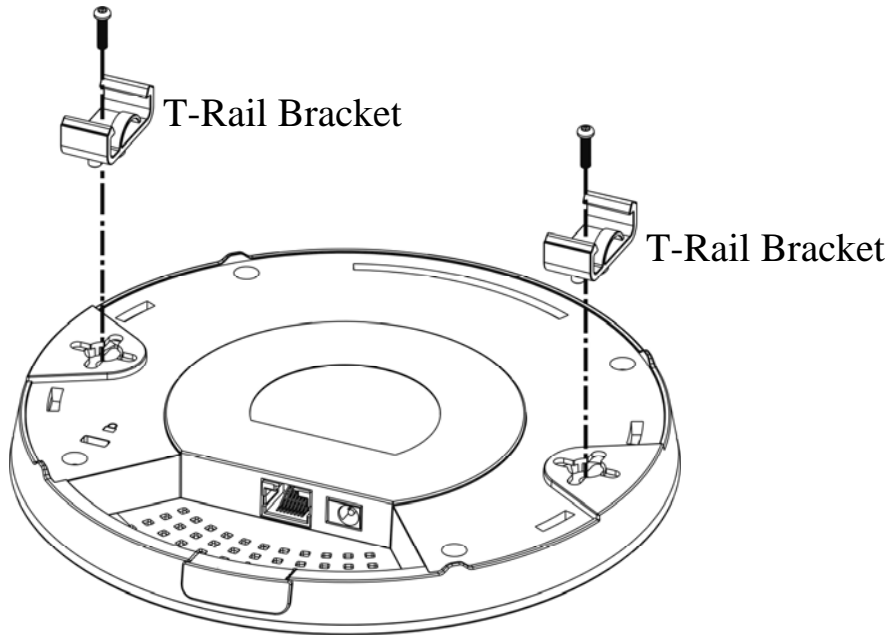


Lift the VigorAP up to the bracket and connect up the power and Ethernet cables. Line up the fixing screws and gently rotate the AP in order that the bayonets connect and ensure a comfortable fit into the slots.

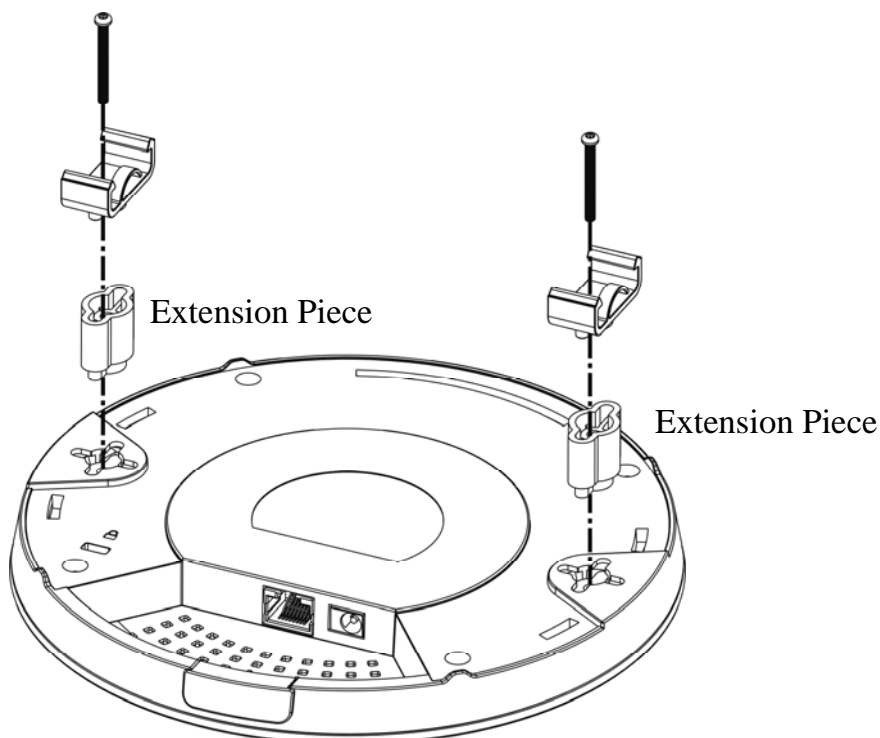
### 3.3 Suspended ceiling (lightweight steel frame)

You cannot screw into ceiling tiles as they are weak and not suitable for bearing loads. Your VigorAP is supplied with mounts (T-Rail brackets) which attach directly to the metal grid ('T-Rail') of your suspended ceiling.

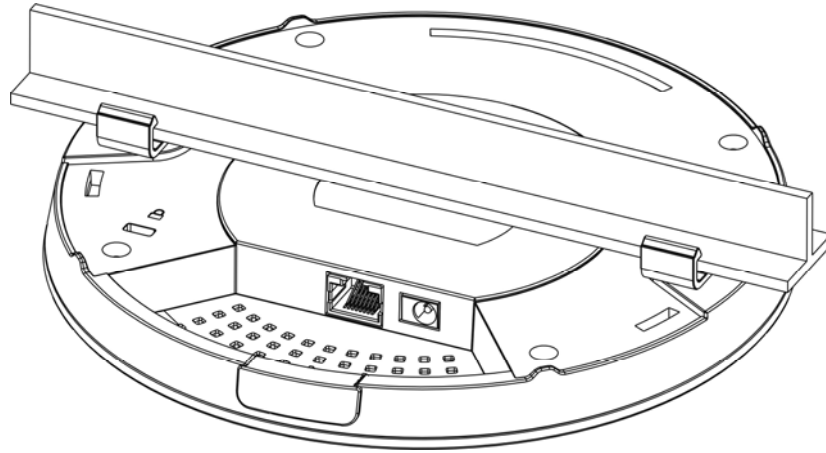
1. Choose one set of T-Rail mounts to suit the size (gauge) of your T-rail.
2. Fix the mounts into the underside of the VigorAP with the supplied screws:



3. If a larger gap is required between the ceiling and the VigorAP, use the extension pieces to extend the height of the brackets.



4. Attach the T-Rail brackets to the ceiling frame:

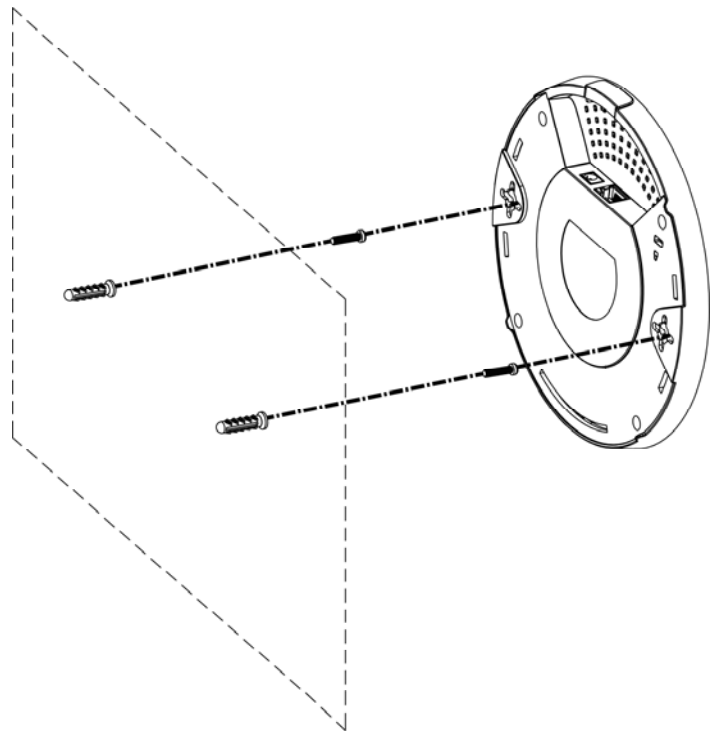


### 3.4 Wall Mounting

For **wall-mounting**, the VigorAP has keyhole type mounting slots on the underside. You can fit the AP at any axis (i.e. 12, 3, 6 or 9 O’Clock) to allow for cable entry from the most convenient location if you are using side entry – note the position of the side entry cable cutout.

A printed template is provided on the VigorAP’s packaging box to enable you to space the screws correctly on the wall.

Fit screws into the wall using the appropriate type of wall plug but do not use the ceiling bracket – the VigorAP hangs onto the screws.



Wall Mounting

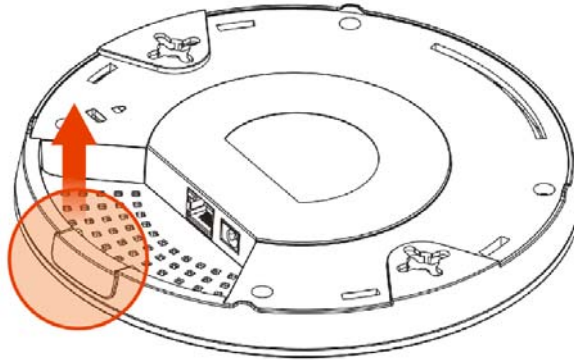


# 4

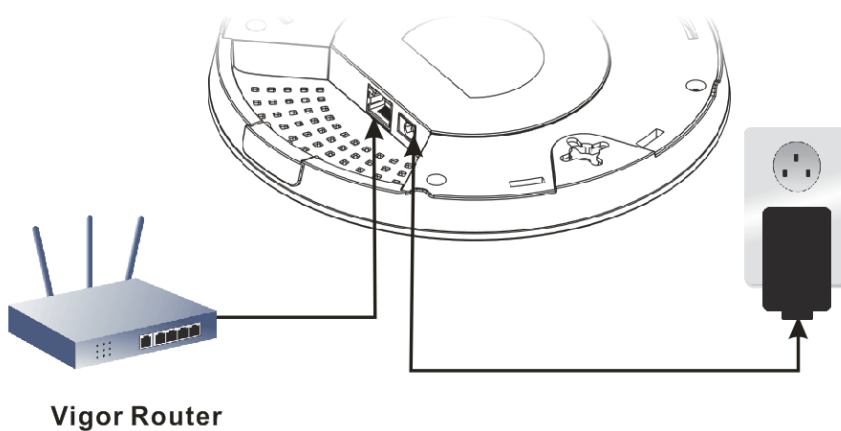
## Connection and Configuration

### 4.1 Hardware Connection

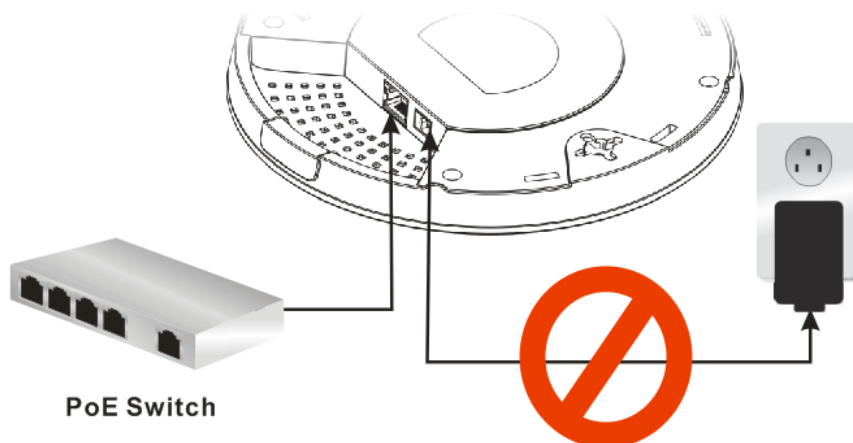
If required, remove the cap on the side of the VigorAP to allow side entry of the Ethernet and power cables:



Connect the VigorAP to your network/LAN with an Ethernet (RJ45) cable. Connect the power supply to the VigorAP and to a suitable power outlet:



If your network switch provides **PoE power**, you do not need to connect the VigorAP's own power supply - the VigorAP will get its power from the switch:



## 4.2 Connect to a Vigor Router using AP Management




Your VigorAP can be used with Vigor routers which support AP management (such as the Vigor 2860 or Vigor 2925 series). AP Management enables you to monitor and manage multiple DrayTek APs from a single interface.

1. From the web interface of your Vigor router with AP management, open the menu **Central AP Management>>Status**.

Central AP Management >> Status

Index	Device Name	IP Address	SSID	Encryption	Ch.	WL Client	Version	Password	
1	AP810_007620482810	10.28.60.11						Password	X
2	AP910C_00507F22334	10.28.60.12						Password	X

**Note:**

 Green : Online    Red : Offline    Grey : Hidden SSID

Maximum support 20 APs.

When AP Devices connect via another intermediate router or switch, please check/unblock the following ports **UDP:67,68,4944** and **TCP:80** of the router/switch, thus AP status can be retrieved.

2. Locate the new VigorAP. Click the IP address assigned by your Vigor router to access the web user interface of your VigorAP.
3. After typing the default username and password (admin/admin), the main screen will be displayed (remember to change your password – see later).

## 4.3 Connect to Vigor router without AP Management

1. Access into the web user interface of Vigor router. Here we take Vigor2830 as an example. Open **External Devices**.

### External Devices

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External Device Auto Discovery

#### External Devices Connected

Below shows available devices that connected externally:

#### For security reason:

If you have changed the administrator password on External Device, please click the **Account** button to retype new username and password. Otherwise, the router will be unable to monitor the External Device device properly. Click the **Clear** button to Clear the off-line information and account information.

OK

2. Check (tick) **External Device Auto Discovery** and click **OK**. When the IP address assigned by Vigor router appears, click it to access the web interface of your VigorAP.
3. After typing the default username and password (admin/admin), the main screen will be displayed (remember to change your password – see later).

## 4.4 Connecting without a DrayTek Router/LAN

The Vigor AP-910C will attempt to get its IP address automatically from your LAN's DHCP server (normally provided by your router).

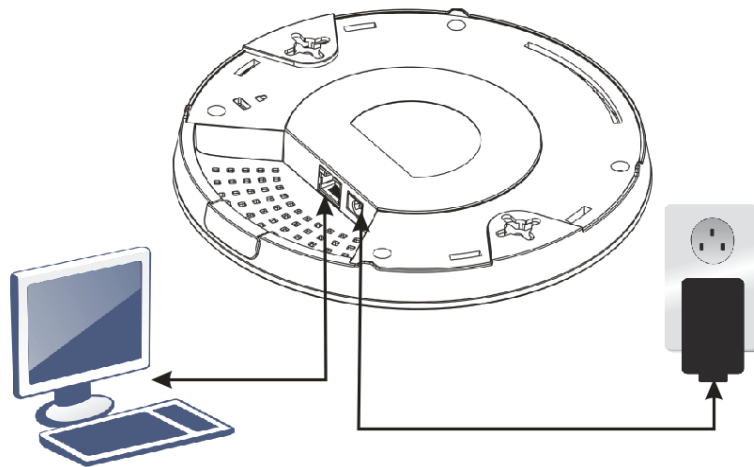
Your router should have a diagnostic or other menu on its web interface which allows you to find the VigorAP in its DHCP table.

Check that **DHCP table** to find an entry with a MAC address matching the VigorAP – the VigorAP's MAC address is printed on a label on the base.

Once you have the VigorAP's IP address, you can access its own web interface, as shown in section 4.6

You can connect the AP-910C directly to a PC with the Ethernet cable – i.e. without any switch or router at all. You may wish to do this temporarily just for configuration purposes, or if you intend using bridge mode.

If your VigorAP fails to get an IP address from a DHCP server on the LAN (which would be the case if you connect directly to a PC), its IP address defaults to **192.168.1.2** (subnet mask 255.255.255.0).



In order to access the VigorAP's web interface from a PC, that PC must have an IP address within the same subnet. For example, 192.168.1.3 is in the same subnet so you could manually set your PC to that temporarily in order to access the VigorAP's web interface and set it up as needed.

Go to <http://192.168.1.2> in your PC's browser and the VigorAP's login prompt should appear. The default username and password is admin/admin – which you should change. Remember that on a network with a DHCP server, the VigorAP will get its IP address from that, so the VigorAP's IP address won't be 192.168.1.2 (except by coincidence).

## 4.5 Web Configuration

Before using your VigorAP, you should confirm other settings:

- The VigorAP's LAN IP address
- SSID and Security setting for 2.4G and 5GHz bands
- Administrator's name and password.
- Time and date.

1. Open the main screen of VigorAP 910C.

The screenshot displays the 'System Status' page of the VigorAP 910C. The interface has a red header with the 'DrayTek' logo and 'VigorAP 910C'. On the left is a navigation menu with options like 'Quick Start Wizard', 'LAN', 'Wireless LAN (2.4GHz)', and 'Support Area'. The main content area shows system information:

System Status	
Model	: VigorAP910C
Device Name	: VigorAP910C
Firmware Version	: 1.2.0
Build Date/Time	: r6649 Mon Dec 12 22:14:08 CST 2016
System Uptime	: 0d 00:02:04
Operation Mode	: AP

System	
Memory Total	: 62328 kB
Memory Left	: 13424 kB
Cached	
Memory	: 28064 kB / 62328 kB

Wireless LAN (2.4GHz)	
MAC Address	: 00:1D:AA:7C:CF:A4
SSID	: DrayTek
Channel	: 11
Driver Version	: 2.7.2.0

Wireless LAN (5GHz)	
MAC Address	: 00:1D:AA:7C:CF:A6
SSID	: DrayTek5G
Channel	: 36
Driver Version	: 10.2.85

LAN	
MAC Address	: 00:1D:AA:7C:CF:A4
IP Address	: 192.168.1.11
IP Mask	: 255.255.255.0

**WARNING: Your AP is still set to default password. You should change it via System Maintenance menu.**

At the bottom, it indicates 'Admin mode' and 'AP Mode'.

2. Open **LAN>>General Setup**. Usually, your AP will get its LAN IP address from your LAN DHCP server (your router) so leave 'Enable DHCP Client' enabled, otherwise manually set it here. Click **OK** to save the settings.

### LAN >> General Setup

#### Ethernet TCP / IP and DHCP Setup

LAN IP Network Configuration	DHCP Server Configuration
<input checked="" type="checkbox"/> Enable DHCP Client	<input type="radio"/> Enable Server <input checked="" type="radio"/> Disable Server
IP Address: <input type="text" value="192.168.1.10"/>	<input type="radio"/> Relay Agent
Subnet Mask: <input type="text" value="255.255.255.0"/>	Start IP Address: <input type="text"/>
Default Gateway: <input type="text" value="192.168.1.1"/>	End IP Address: <input type="text"/>
<input type="checkbox"/> Enable Management VLAN	Subnet Mask: <input type="text"/>
VLAN ID: <input type="text" value="0"/>	Default Gateway: <input type="text"/>
	Lease Time: <input type="text" value="86400"/>
	DHCP Server IP: <input type="text"/>
	Address for Relay Agent: <input type="text"/>
	Primary DNS Server: <input type="text"/>
	Secondary DNS Server: <input type="text"/>

**Note:** Disable "DHCP Client" or "Auto Provision" for VigorAP Management only work with Vigor2860 v3.7.3.1 and newer APM Server.



## Note

If the IP address has been modified, use the new LAN IP address for accessing into the web user interface of VigorAP.

3. Open **Wireless Setting (2.4GHz)>>General Setup** to configure the 2.4Ghz wireless network. We recommend changing the default SSID (the wireless network name which is visible to users). Enter a new SSID in the SSID1 field and click **OK** to save the settings.

### Wireless LAN (2.4GHz) >> General Setup

#### General Setting ( IEEE 802.11 )

Enable Wireless LAN

Enable Limit Client (3-64)  (default: 64)

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Mode :

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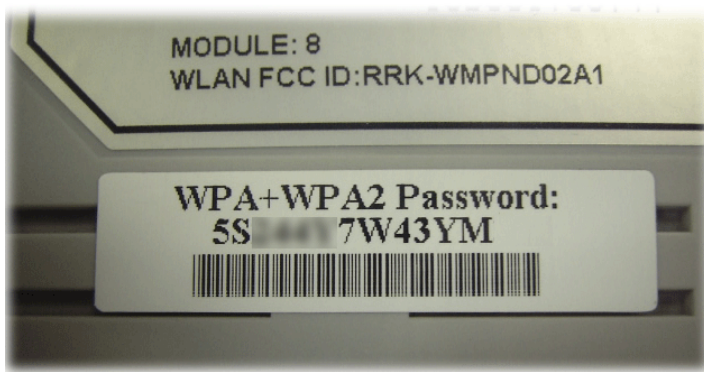
	Hide SSID	SSID	Isolate Member (0:Untagged)	VLAN ID	Mac Clone
1	<input type="checkbox"/>	<input type="text" value="DrayTek"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>	
3	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>	
4	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text" value="0"/>	

**Hide SSID:** Prevent SSID from being scanned.  
**Isolate Member:** Wireless clients (stations) with the same SSID cannot access for each other.  
**MAC Clone:** Set the MAC address of SSID 1. The MAC addresses of other SSIDs and the Wireless client will also change based on this MAC address. Please notice that the last byte of this MAC address must be a multiple of 2.

4. Open **Wireless Setting (2.4GHz)>>Security**. The default security mode is **Mixed (WPA+WPA2)/PSK**. The VigorAP has a default security key printed on a label on its base but you should change it here – choose a ‘strong’ password (complex with a mix of letters, symbols and numbers). You should also switch to ‘WPA2 only’ as it’s more secure than WEP and WPA (most modern wireless clients – tablets, laptops and phones - support WPA2).

SSID 1	SSID 2	SSID 3	SSID 4
SSID: DrayTek			
Mode: Mixed(WPA+WPA2)/PSK			
Set up <b>RADIUS Server</b> if 802.1x is enabled.			
<b>WPA</b>			
WPA Algorithms: <input type="radio"/> TKIP <input type="radio"/> AES <input checked="" type="radio"/> TKIP/AES			
Pass Phrase: <input type="text"/>			
Key Renewal Interval: 3600 seconds			
<b>WEP</b>			
<input type="radio"/> Key 1 : <input type="text"/> Hex			
<input checked="" type="radio"/> Key 2 : <input type="text"/> Hex			
<input type="radio"/> Key 3 : <input type="text"/> Hex			
<input type="radio"/> Key 4 : <input type="text"/> Hex			
802.1x WEP: <input type="radio"/> Disable <input type="radio"/> Enable			

OK Cancel



5. Open **Wireless Setting (5GHz)>>Security**. As with the 2.4Ghz band, above, you should change the SSID name, security method and default wireless password. Click **OK** to save the settings.



**Note**

Under **System Maintenance**, you can change the access point's default admin password. You should do this immediately in order to prevent users from accessing the VigorAP's management interface and changing settings.

**SSID Naming:** When giving your SSIDs names, you may want to give them names which indicate their band, in order that it's easy to determine if you're using 2.4 or 5Ghz. For example, you could call your SSIDs Henry and Henry\_5, respectively. The defaults are DrayTek and DrayTek\_5G.

# Keep up to date with our mailing list

Now that you have your DrayTek product, you should keep up to date with product updates (firmware), security advisories and other product news, advice or special offers. Users in the UK/Ireland can subscribe to our mailing list. For details and to subscribe, please visit [www.draytek.co.uk/list](http://www.draytek.co.uk/list). In other countries or regions, please contact your local distributor/supplier for local options.

Wireless Access Points provide convenience and flexibility, but you should always take security seriously. You can learn more about improving your wireless and network security in our special guide, available from [www.draytek.co.uk/best](http://www.draytek.co.uk/best)

## Firmware Updates

Firmware updates for your product ensure that you have the latest set of features, security updates and improvements for your product. Users in the UK/Ireland can download these from [www.draytek.co.uk/support](http://www.draytek.co.uk/support)

## Getting Help & Support

If you need help with using your DrayTek product, please contact your dealer for further assistance. For support in the UK/Ireland, you can also visit the support section on [www.draytek.co.uk](http://www.draytek.co.uk). From there you can view the knowledgebase or contact our support department for assistance with any eligible product.

If you are **outside** of the UK/Ireland and need assistance, please contact your own local supplier, email to [support@draytek.com](mailto:support@draytek.com) or visit [www.draytek.com/support](http://www.draytek.com/support)

For warranty service, in the first instance, please contact the support services, as listed above, for help in diagnosing or eliminating the problem or issue. The support department can arrange repair or service if then deemed necessary.

The standard Vigor AP-910C warranty is 'Return to base' (RTB) unless you have VigorCare which provides enhanced services (see [www.draytek.co.uk/vigorcure](http://www.draytek.co.uk/vigorcure)).

You should keep your proof of purchase (original invoice) safely in case warranty or other service is ever required.



**Safety  
Instructions**

- Read the installation guide thoroughly before you set up the device.
- The product is a complicated electronic unit that may be repaired only by authorized and qualified personnel. Do not try to open or repair the modem yourself; it is not user-serviceable.
- Use only approved original parts and power supplies.
- Do not place the product in a damp or humid place, e.g. a bathroom, outhouse or outdoors.
- The modem should be used in a sheltered area, within a temperature range of +5 to +40 Celsius.
- Do not expose the modem to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.
- Do not deploy the power or LAN cables outdoors to prevent electronic shock hazards.
- Keep the packaging out of reach of children.
- When you want to dispose of the modem, follow local environmental regulations.