D-Link®

User Manual

Business Cloud Wave 2 Access Point

DBA-1210P

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Package Contents

DBA-1210P Business Cloud Wave 2 Access Point
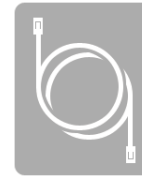
Ceiling Bracket*

Mounting Ring

Ethernet Cable

Power Adapter

*Ceiling Bracket is an optional accessory and not included in the package. If it is required, please contact your reseller to order it.

Note: Using a power supply with a different voltage rating or PoE injector than the one included with the DBA-1210P will cause damage and void the warranty for this product.

System Requirements

Network Requirements	• An Ethernet-based Network • IEEE 802.11a/b/g/n/ac wireless clients (AP Mode) • IEEE 802.11a/b/g/n/ac wireless network (AP Mode)
Web-based Configuration Utility Requirements	**Computer with the following:** • Windows®, Macintosh, or Linux-based operating system • An installed Ethernet adapter **Browser Requirements:** • Internet Explorer® 10 and higher • Mozilla Firefox 36.0 and higher • Google™ Chrome v41.0.2272.104 and higher • Apple Safari v6.2.7 and higher
Serial, Ethernet Connection, or Wireless connection to the Access Point	• The computer used to manually configure the access point must be connected to the access point by a serial cable, Ethernet cable, or wireless connection.

Additional Documentation

The following documentation provides additional information about DBA-1210P installation and management:
- The Quick Installation Guide provides the information about package content and device installation.
- The D-Link Business Cloud User Manual provides the guidance about device management through the D-Link Business Cloud

Introduction

The D-Link DBA-1210P Business Cloud Wave 2 Access Point provides continuous, high-speed access between wireless devices and Ethernet devices. It is an advanced, standards-based solution for wireless networking in businesses of any size. The DBA-1210P enables wireless local area network (WLAN) deployment while providing state-of-the-art wireless networking features.

The DBA-1210P is managed through the D-Link Business Cloud, with an intuitive browser-based interface that enables rapid deployment. Since the DBA-1210P is self-configuring and managed over the web, it can even be deployed at a remote location without on-site IT staff.

This document also describes how to perform the manual networking configuration of DBA-1210P in case of it not being able to connect to D-Link Business Cloud through the internet.

Before you power on a new DBA-1210P, review the following sections to check required hardware and software components, client configurations, and compatibility issues. Make sure you have everything you need for a successful launch and test of your new or extended wireless network.

Features

- **Automatic Self Configuration -** The DBA-1210P will automatically connect to the D-Link Business Cloud to perform its self-configuration and management, meaning it can even be deployed at a remote location without an on-site network administrator. The D-Link Business Cloud also helps to manage the deployment of new features, bug fixes, and enhancements, which are automatically pushed to the DBA-1210P.

- **Faster Wireless Networking -** The DBA-1210P provides an up to 1.75 Gbps[1] wireless connection with other 802.11ac wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio.

- **Compatible with IEEE802.11a/b/g/n/ac Devices -** The DBA-1210P is still fully compatible with the 802.11a/b/g/n/ac standards, so it can connect with any existing 802.11a/b/g/n/ac wireless adapters.

- **Dual Band Wireless Radio -** The DBA-1210P comes equipped both 2.4 Ghz and 5 Ghz high powered internal radios that help to provide better wireless coverage and increased signal strength.

- **PoE Enabled -** The DBA-1210P supports PoE (Power over Ethernet) which enables it to be supplied with Ethernet over a power cable.

- **Convenient Installation -** The DBA-1210P features a wall/ceiling mount for easy deployment in a variety of locations.

- **Streamlined Design -** The DBA-1210P is designed with a slim form factor that easily blends into any office environment

[1] Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11b, 802.11g, 802.11n and 802.11ac specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.
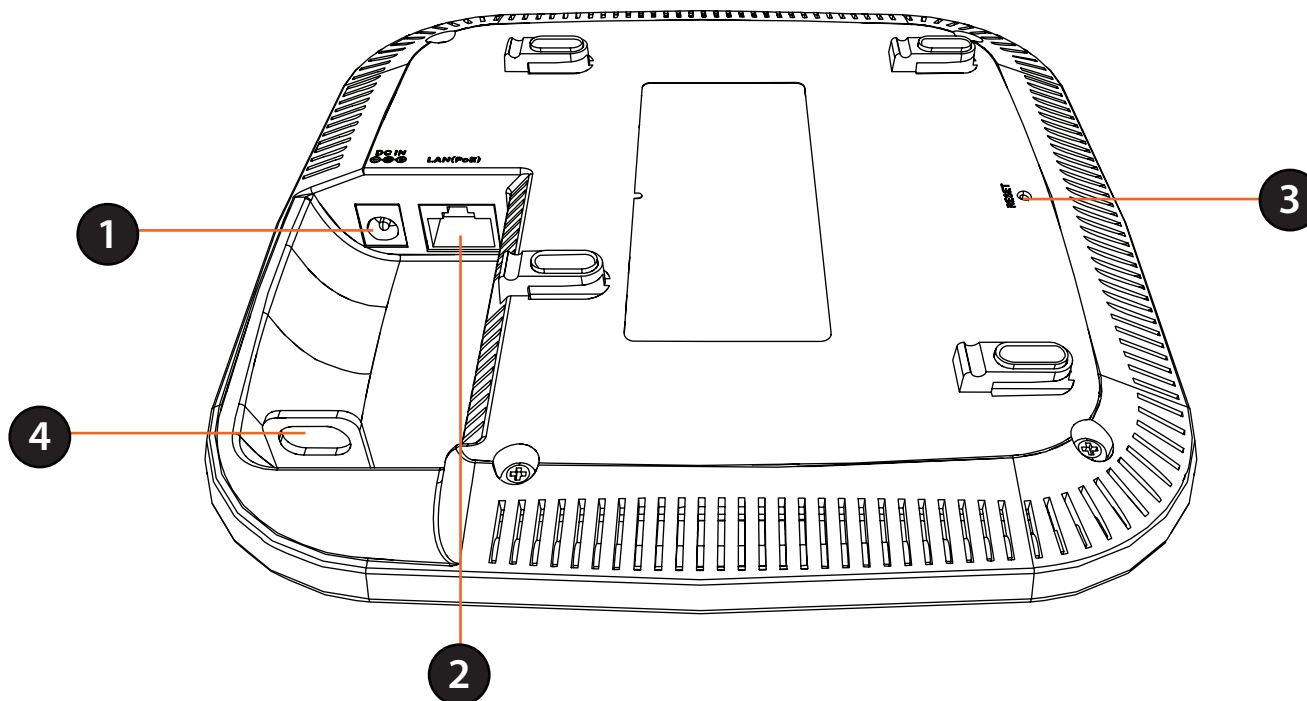
Hardware Overview
LEDs

1
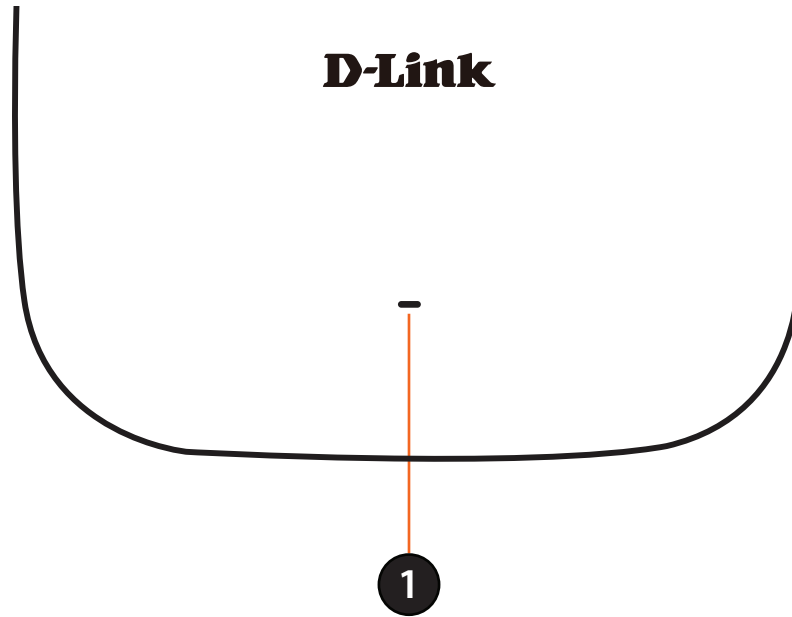
1	Cloud	Solid Orange	The DBA-1210P is connecting to the D-Link Business Cloud
		Solid Green	The DBA-1210P is currently in Cloud mode
		Solid Red	The DBA-1210P is not working properly in Cloud mode

Hardware Overview
Bottom

1	**Power Receptor**	Connects to the power adapter.
2	**LAN Port (PoE)**	Power is supplied through the LAN cable connected in this port via the Power over Ethernet Injector. Please see "Installation" on page <?> for more details on how to correctly power the DBA-1210P and connect to other networking devices.
3	**Reset Button**	Press the Reset Button between 2 to 5 seconds to restart the device. Press the Reset Button between 6 to 15 seconds to restore the device to its factory default settings. Press the Reset Button more than 15 seconds to restore the device to its factory default settings and also force the loading of alternate firmware.
4	**Kensington Security Slot**	Allows the device to be secured with any Kensington Security Lock.

Dynamic and Static IP Addressing on the AP

When you power on the access point, the built-in DHCP client searches for a DHCP server on the network in order to obtain an IP Address and other network information. If the AP is not able to be assigned a DHCP IP on the network, you can manually reconfigure the static IP address and relevant network setting through device Administration Web UI or CLI interface.

To manually configure network setting through device Administration Web UI, please refer to "Web-based Configuration Utility" on page 13

You can manually configure network setting through device CLI as well by any of the following methods:

- Serial Port Connection to the AP
- Telnet Connection to the AP
- SSH Connection to the AP

Please refer to "Device CLI Configuration" on page 17 for more information on how to configure the DBA-1210P using the CLI.

Caution! If you do not have a DHCP server on your internal network, and do not plan to use one, the first thing you must do after powering on the access point is to change the connection type from DHCP to static IP and assign a new static IP address to the AP.

Caution! The default login information is **admin/admin** for both the Web UI and CLI. Please note that the credentials might have been changed through the D-Link Business Cloud.

Powering the Device

To power on the DBA-1210P, you can use one of the two following methods:

1. Connect the supplied power adapter

2. Plug one end of your Ethernet cable into the LAN port of the DBA-1210P, and the other end into a port on a Power over Ethernet enabled switch.
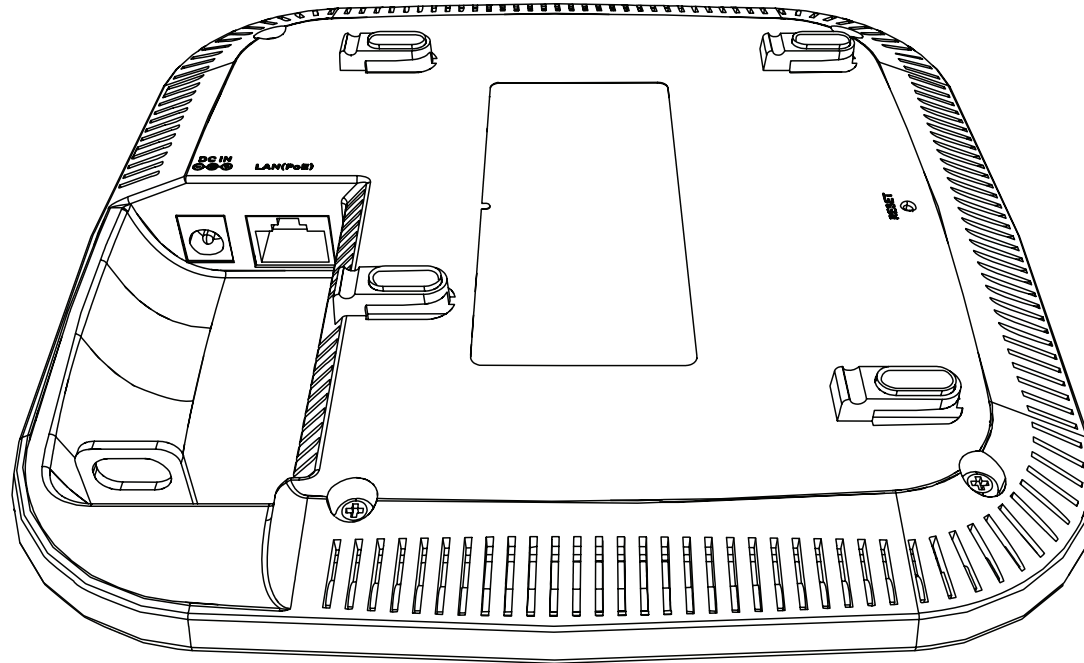
Configure the Device

The easiest way to configure the DBA-1210P is to connect the DBA-1210P to the Internet through a switch or router. Connect your computer to the Internet and manage the DBA-1210P via D-Link Business Cloud. The DBA-1210P will automatically connect to the D-Link Business Cloud, download its configuration, and join the appropriate network.

If you are unable to connect the DBA-1210P to the D-Link Business Cloud through the Internet due to your networking configuration you will need to manually configure the DBA-1210P using one of the following options.

1. Connect the DBA-1210P and your computer directly via a straight-through Ethernet cable. You can then manage the access point from your computer using the following steps.

   Enter the DBA-1210P hostname in the address field of your browser and then press **Enter**. The default hostname is "DBA-1210P-XXXX" where XXXX is the last 4 digits of the MAC address listed on the device label located on the bottom of the device.

   Log in to the administration web pages. The default login information is:
   Username: admin
   Password: admin

D-Link Business Cloud

DBA-1210P   Switch or Router   Switch or Router   Management

DBA-1210P   Management
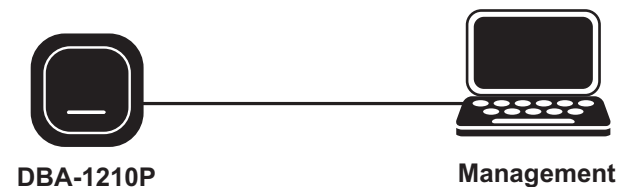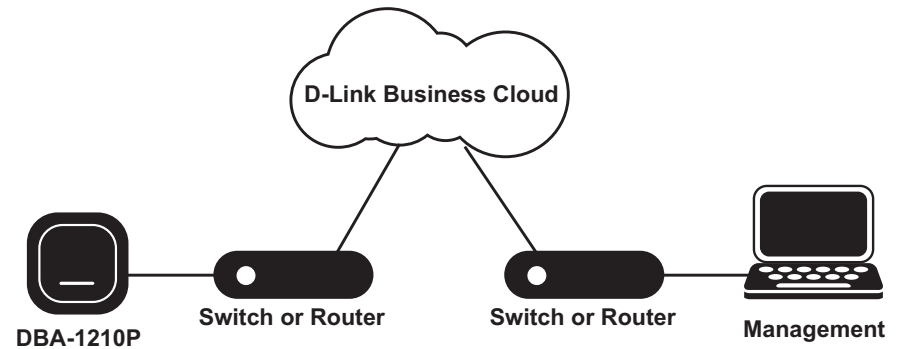
2. Connect the DBA-1210P and your computer to the same
    switch or router. You can then manage the access point
    from your computer using the following steps

    Enter the DBA-1210P hostname in the address field of your
    browser and then press **Enter**. The default hostname is
    "DBA-1210P-XXXX" where XXXX is the last 4 digits of the
    MAC address listed on the device label located on the
    bottom of the device.

    Log in to the administration web pages. The default login
    information is:
    Username: admin
    Password: admin

DBA-1210P   **Switch or Router**   **Management**

3. Connect your computer to the DBA-1210P wirelessly via
    the SSID "DBA-1210P-XXXX" where XXXX is the last 4 digits
    of the MAC address listed on the device label located on
    the bottom of the device. You can then manage the access
    point from your computer using the following steps.

    Enter the DBA-1210P hostname in the address field of your
    browser and then press **Enter**. The default hostname is
    "DBA-1210P-XXXX" where XXXX is the last 4 digits of the
    MAC address listed on the device label located on the
    bottom of the device.

    Log in to the administration web pages. The default login
    information is:
    Username: admin
    Password: admin
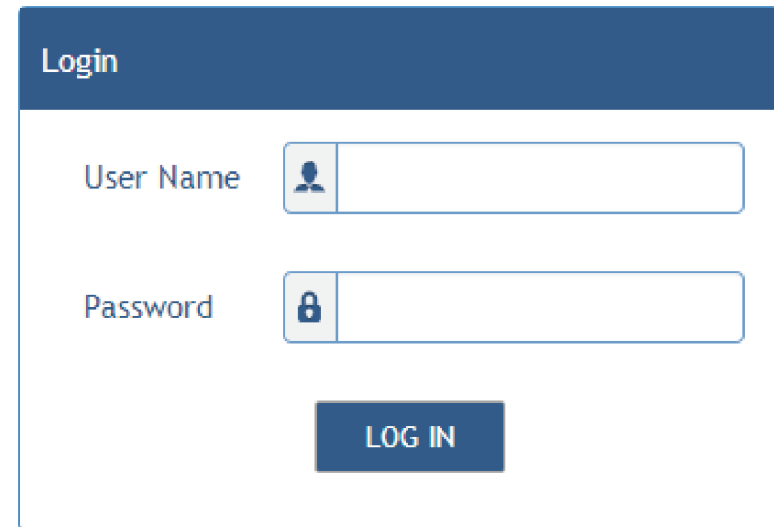
DBA-1210P   **Management**
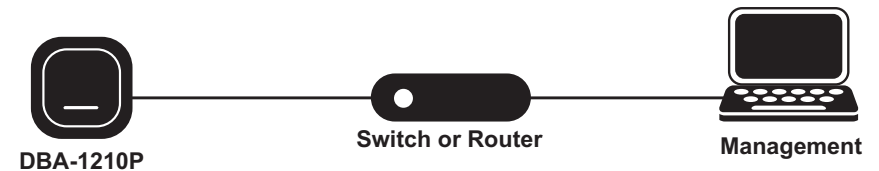
Web-based Configuration Utility

This section will show you how to configure your new D-Link Business Cloud Wave 2 Access Point using the web-based configuration utility.

If you wish to change local settings for the DBA-1210P, you may use the web-based configuration utility.

To access the configuration utility, open a web browser such as Internet Explorer and enter the DBA-1210P hostname in the address field of your browser and then press **Enter**. The default hostname is "DBA-1210P-XXXX" where XXXX is the last 4 digits of the MAC address listed on the device label located on the bottom of the device.

Enter **admin** into the User Name field and then enter **admin** into the Password field.

Access Point Status

From the Status page, you can view various information about the DBA-1210P, including network status, Cloud connection status, and device information. The following table describes the fields and configuration options on the Status page.

Name: Device name.

Mac Address: Ethernet MAC (ex. ethaddr=C0:A0:BB:6E:0A:B3)

Serial Number: Serial Number

Current Firmware: Current running firmware version

Device UID: The ID for D-Link Business Cloud Registration.

IP Address to Cloud: Ethernet IP address

Cloud Registration: The status of cloud registration. Yes/No.

Date of Registration: The Date of registration. Ex. 2013/3/11

Local Network: Local network status.

Internet Connection: Internet connection status.

D-Link Business Cloud: D-Link Business Cloud connection status.

Access Point Local Settings

From the Local Settings page, you can manually configure the network settings to fulfill various network environments.

Connection Type: If you select DHCP, the UAP acquires its IP address, subnet mask, DNS, and gateway information from a DHCP server.

If you select Static IP, you must enter information in the Static IP Address, Subnet Mask, and Default Gateway fields.

DNS Nameservers: Select the mode for the DNS.
In Dynamic mode, the IP addresses for the DNS servers are assigned automatically via DHCP. This option is only available if you specified DHCP for the Connection Type. In Manual mode, you must assign static IP addresses to resolve domain names.

Management VLAN ID: The management VLAN is the VLAN associated with the IP address you use to access the AP. The default management VLAN ID is 1.
Provide a number between 1 and 4094 for the management VLAN ID.

Enable VLAN: To enable VLAN, select the **Enable VLAN** check box.
To disable VLAN , clear the **Enable VLAN** check box.

VLAN Mode: To enable VLAN tagging, select **Tagged**.
To enable VLAN untagged, select **Untagged**.

Enable IPv6: To enable IPv6 function, select **Enabled**.
To disable IPv6 function, select **Disabled**.

Firmware Upgrade: If you know the path to the new firmware image file, enter it in the **Image Filename** field. Otherwise, click the **Browse** button and locate the firmware image file.

Click **Upgrade** to apply the new firmware image. Upon clicking **Upgrade** for the firmware upgrade, a popup confirmation window is displayed that describes the upgrade process.

Click **OK** to confirm the upgrade and start the process.

Enable Proxy: To enable proxy settings, select **Enabled**.
To disable proxy settings, select **Disabled**.

Host: Proxy IPv4 address or URL.

Port: Proxy port number.

Device CLI Configuration
Access Point Status

You can view various information by using the following CLI commands, including network status, Cloud connection status, and device information. All of the parameters need the command *apply* to take effect.

Use the following steps to log into the CLI:

1. Connect the console cable to the console port of the device and the USB to RS-232 cable.
2. Connect the USB to RS-232 cable to the serial port of a PC, Apple, or UNIX workstation, start a terminal-emulation program, such as HyperTerminal or TeraTerm.
3. Configure the terminal-emulation program to use the following settings:
    • Baud rate: 115200 bps
    • Data bits: 8
    • Parity: none
    • Stop bit: 1
    • Flow control: none
4. The login name is **admin**. The default password is **admin**. After a successful login, the screen shows the "CLOUD_CLI>>".

Action	Commands
View the system information	get system
View the model name	get system model
View the MAC	get management mac
View the serial number.	get system serial-number
View the firmware version.	get system version
View the device UID	get system device-uid
View the Ethernet IP address	get management ip
View cloud registration	get system cloud-registration
View date of registration	get system date-of-registration
View local network status	get system local-network-status
View internet status	get system internet-status
View cloud connection status	get system cloud-connect-status

Access Point Local Settings

You can view various information by using the following CLI commands, including network status, Cloud connection status, and device information. All of the parameters need the command *apply* to take effect.

| Action	Commands
Get Current Settings for the Ethernet (Wired) Internal Interface.	get management
View the connection type.	get management dhcp-status
Use DHCP as the connection type.	set management dhcp
Use a Static IP as the connection type, and then static IP address, subnet mask and default gateway.	set management static static-ip *ip_address* mask *netmask* gateway *ip_address*
View the DNS name server mode.	get host dns-via-dhcp
Set DNS Name servers to use static IP addresses.	set host static-dns-1 *ip_address* or set host static-dns-1 *ip_address* static-dns-2 *ip_address*
Set DNS name servers to use DHCP IP addressing (Manual to Dynamic Mode).	set host dns-via-dhcp {up | down}
View VLAN information.	get management vlan-id get management vlan-enable get management vlan-mode
Enable/Disable the VLAN tagging.	set management vlan-enable {up | down}
Set the VLAN ID.	set management vlan-id *value*
Enable/Disable the VLAN mode.	set management vlan-mode {tagged | untagged}
View IPv6 information.	get management ipv6-enable
Enable/Disable IPv6 function.	set management ipv6-enable {up | down}
Upgrade the device firmware.	firmware-upgrade *url*
View Proxy information.	get management proxy-enable get management proxy-host get management proxy-port
Enable/Disable Proxy server.	set management proxy-enable {up | down}
Set IP address or domain name of proxy server.	set management proxy-host *ip_address* set management proxy-host *domain_name*
Set port number of proxy server.	set management proxy-port *port*
Apply the configuration.	apply
Exit command line.	exit
Reboot the system.	reboot

Mounting the Device

This section will show you how to configure your new D-Link Business Cloud Wave 2 Access Point using the web-based configuration utility.

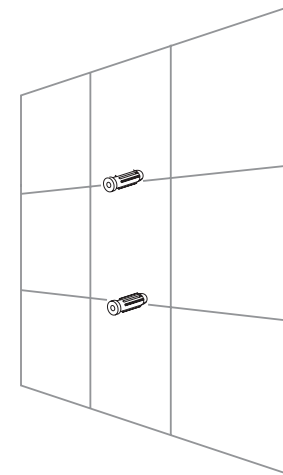To mount the DBA-1210P, use one of the following methods:

Solid wall or ceiling Installation

1. Place the mounting bracket on a wall or ceiling.
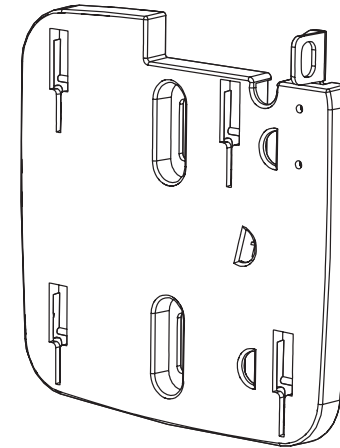
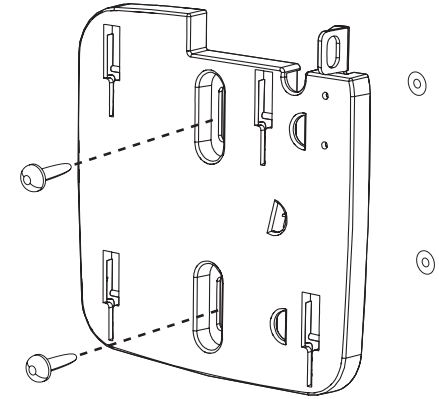2. Mark the points where you will insert the screws. Take out the mounting ring.

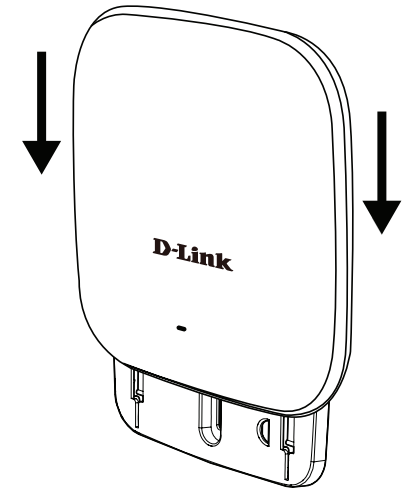3. Drill holes in the marked points and insert the plastic wall anchors.

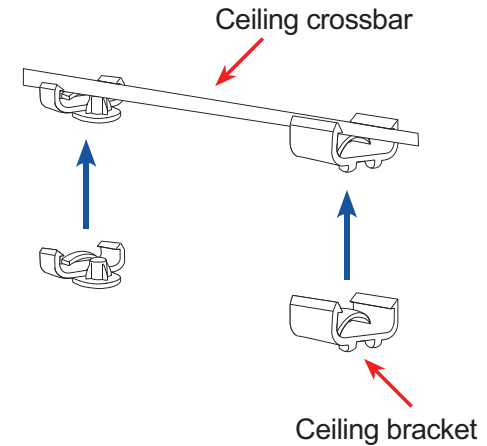4. Use the supplied screws to attach the mounting ring to the wall.

5. Plug the Ethernet cable into the LAN port on the access point.

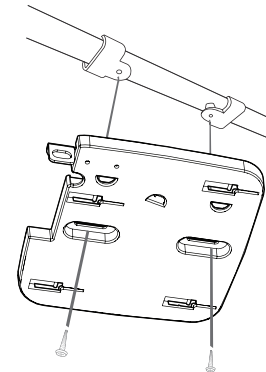6. To attach the access point to the mounting bracket.

Mounting with a ceiling bracket Installation

1. Clip two ceiling brackets onto the ceiling panels. Make sure both brackets are in line with each other.
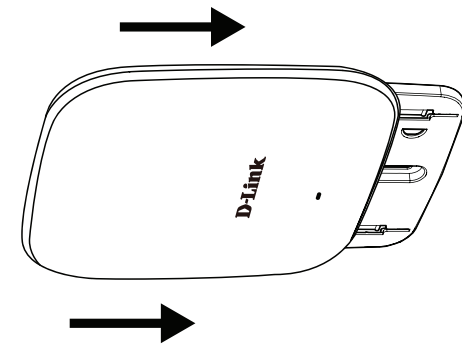
Ceiling crossbar

Ceiling bracket

2. Use the provided screws to attach the mounting ring to the ceiling bracket.

3. Plug the Ethernet cable into the LAN port on the access point.

4. Place the DBA-1210P's male bracket in the mounting bracket's female bracket. Click DBA-1210P and the mounting racket to lock in position.

Placement on a Desktop

1. Plug the Ethernet cable into the LAN port on the access point.
2. If you are not using a PoE switch or router with the DBA-1510P, plug the power cable into the Power Receptor on the access point.

Technical Specifications

General		
Device Interfaces	• 802.11a/b/g/n/ac wireless • Reset button • One 10/100/1000 Ethernet port (supports PoE)	• DC Power Connector
LED	• Cloud	
Antenna	• Internal Omni-Directional Antenna	• 2x2 MIMO with two spatial streams
Wireless Frequency	• 2.4 GHz	• 5 Ghz
Functionality		
Security	• WPA2-Personal/Enterprise • WPA-Personal/Enterprise • 802.1X • MAC Address Filtering • Rogue AP Detection	• Station Isolation • SSID Isolation • Guest Access • Captive Portal • IP Filter
SSID	• Support for up to 16 SSIDs	
Physical		
Dimensions	• 170x170x33.5mm (6.69x6.69x1.32 inches)	
Weight	• Without Mount: 314.2 grams (0.69 lbs)	• With Mount: 370.6 grams (0.82 lbs)
Power	• Power over Ethernet (PoE): 802.3af Power over Ethernet	•• AC Input: 100 to 240 V, 50/60 Hz; Output: DC 12 V / 1A
Power Consumption	• 12W (PoE)	• 12W (Adapter)
Temperature	• Operating: 0 to 40 ℃ (32 to 104 °F)	• Storage: -20 to 65⊠ (-4 to 149⊠)
Humidity	• Operating: 10% to 90% non-condensing	• Storage: 5% to 95% non-condensing
Regulatory	• CE • RoHS	• REACH • WEEE
Security	• Kensington lock slot	• Security screw
Mounting Options	• Ceiling mount • Wall mount	• Desktop (Horizontal)

[1] Range will vary depending on country's maximum transmit power output regulation. Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11b, 802.11g, 802.11n and 802.11ac specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

Configuring MAC Authentication on the RADIUS Server

If you use RADIUS MAC authentication for MAC-based access control, you must configure a station list on the RADIUS server. The station list contains client MAC address entries, and the format for the list is described in the following table.

RADIUS Server Attribute	Description	Value
User-Name	MAC address of the client station.	Valid Ethernet MAC Address.
User-Password	A fixed global password used to lookup a client MAC entry.	DBA-1210P

Federal Communication Commission Interference Statement

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 must accept any interference received, including interference that may cause undesired operation.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 22cm between the radiator & your body.