



## **DAP-400P**

# Wireless AC1300 Wave 2 MU-MIMO Dual Band **PoE Access Point / Router**

# **BEFORE YOU BEGIN**

### **Delivery Package**

- Access point DAP-400P
- Wall mounting bracket with mounting kit
- "Quick Installation Guide" (brochure).

If any of the items are missing, please contact your reseller.

The "*User Manual*" and "*Quick Installation Guide*" documents are available on D-Link website (see <u>www.dlink.ru</u>).

#### **Using a power supply with a different voltage rating than the one included will cause damage and void the warranty for this product.**

## **Default Settings**

IP address	of device	192.168.0.50
Userna	me (login)	admin
	Password	admin
Name of wireless network	2.4GHz	DAP-400P
(SSID)	5GHz	DAP-400P-5G
Network key (PSK p	bassword)	see WPS PIN on the barcode label on the bottom panel of the device

## System Requirements and Equipment

- An Android mobile device (smartphone or tablet) or a computer with any operating system that supports a web browser.
- A PC web browser to access the web-based interface:
  - Apple Safari 8 and later
  - Google Chrome 48 and later
  - Microsoft Internet Explorer 10 and later
  - Microsoft Edge 20.10240 and later
  - Mozilla Firefox 44 and later
  - Opera 35 and later.
- A NIC (Ethernet or Wi-Fi adapter) to connect to the access point.
- An 802.11a, b, g, n, or ac Wi-Fi adapter to create a wireless network.

## CONNECTING TO PC OR MOBILE DEVICE

## Connecting to Mobile Device with D-Link Assistant Application

- 1. Connect the power adapter (12V DC, 1A, not included in the delivery package) to the power connector port on the back panel of the access point, then plug the power adapter into an electrical outlet or power strip.
- 2. Make sure that the Wi-Fi connection on your mobile device is on. To switch it on, go to the mobile device settings.
- 3. In the list of available wireless networks on your mobile device, select the wireless network **DAP-400P** (for operating in the 2.4GHz band) or **DAP-400P-5G** (for operating in the 5GHz band).
- 4. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) as the password and connect to the wireless network of DAP-400P.
- 5. In the settings of the wireless network **DAP-400P** (for operating in the 2.4GHz band) or **DAP-400P-5G** (for operating in the 5GHz band) on your mobile device, in the **IP Settings** field, select the **Static** value.
- 6. Enter the value **192.168.0.51** in the **IP address** field. Confirm the changed settings.

7. Launch D-Link Assistant application on your mobile device. The application is available for Android Google Play.



D-Link Assistant for Android

8. In the application menu, in the **Connection method** section select the **Connection by IP address** value.



- 9. On the application main page click the CHANGE ADDRESS button.
- 10. On the opened page, enter the IP address of the access point (by default, the following IP address is specified: 192.168.0.50) in the device URL address field and click the button to confirm (



- 11. Make sure that the application correctly identified the access point to which you connect.
- 12. In the application interface, select the **Advanced Settings** menu option to go through the Initial Configuration Wizard or finish the Wizard earlier and go the configuration menu.

As you perform initial configuration of the access point via Wi-Fi connection, note that immediately after changing the wireless default

settings of the access point you will need to reconfigure the wireless connection using the newly specified settings.

If you changed the administrator password via the web-based interface, when DAP-400P is accessed with the application the next time, click the **ENTER LOGIN/PASSWORD** button. Enter the username (admin) and the password you specified.

## PC with Ethernet Adapter

- 1. Connect an Ethernet cable between the LAN port of the access point and the Ethernet port of your PC.
- 2. *For a switch supporting PoE*: Connect an Ethernet cable between the PoE-enabled switch and the WAN port of the access point.
- 3. *For a switch not supporting PoE or router*: Connect an Ethernet cable between the switch or router and any Ethernet port of the access point.
- 4. Connect the power adapter (12V DC, 1A, not included in the delivery package) to the power connector port on the back panel of the access point, then plug the power adapter into an electrical outlet or power strip.

Now you need to configure an IP address for the Ethernet adapter of your PC.

## **Configuring IP Address in OS Windows 7**

- 1. Click the Start button and proceed to the Control Panel window.
- 2. Select the **Network and Sharing Center** section. (If the Control Panel has the category view (the **Category** value is selected from the **View by** drop-down list in the top right corner of the window), choose the **View network status and tasks** line under the **Network and Internet** section.)
- 3. In the menu located on the left part of the window, select the **Change** adapter settings line.
- 4. In the opened window, right-click the relevant **Local Area Connection** icon and select the **Properties** line in the menu displayed.



 In the Local Area Connection Properties window, on the Networking tab, select the Internet Protocol Version 4 (TCP/IPv4) line. Click the Properties button. Select the Use the following IP address radio button and enter the value 192.168.0.51 in the IP address field. The Subnet mask field will be filled in automatically. Click the OK button.

Internet Protocol Version 4 (TCP/IPv4)	Properties ?
General	
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator
🔘 Obtain an IP address automaticall	y
• Use the following IP address:	
IP address:	192.168.0.51
Subnet mask:	255.255.255.0
Default gateway:	· · ·
Obtain DNS server address autom	natically
• Use the following DNS server add	resses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	· · ·
Vajidate settings upon exit	Ad <u>v</u> anced
	OK Cancel

7. Click the **OK** button in the connection properties window.

Now you can connect to the web-based interface of DAP-400P for configuring all needed parameters. To gain access to an external network (to the Internet), you also need to specify the default gateway and the addresses of DNS servers.

## **Configuring IP Address in OS Windows 10**

- 1. Click the Start button and proceed to the Settings window.
- 2. Select the Network & Internet section.
- 3. In the Change your network settings section, select the Change adapter options line.
- 4. In the opened window, right-click the relevant Local Area Connection icon and select the **Properties** line in the menu displayed.



 In the Local Area Connection Properties window, on the Networking tab, select the Internet Protocol Version 4 (TCP/IPv4) line. Click the Properties button. Select the Use the following IP address radio button and enter the value 192.168.0.51 in the IP address field. The Subnet mask field will be filled in automatically. Click the OK button.

Internet Protocol Version 4 (TCP/IPv4)	) Properties	×
General		
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	matically if your network supports o ask your network administrator	
Obtain an IP address automatical	lly	
• Use the following IP address:		
IP address:	192.168.0.51	
Subnet mask:	255.255.255.0	
Default gateway:		
Obtain DNS server address autor	natically	
• Use the following DNS server add	dresses:	
Preferred DNS server:		
Alternate DNS server:	· · ·	
Ualidate settings upon exit	Advanced	
	OK Cancel	

7. Click the **Close** button in the connection properties window.

Now you can connect to the web-based interface of DAP-400P for configuring all needed parameters. To gain access to an external network (to the Internet), you also need to specify the default gateway and the addresses of DNS servers.

## PC with Wi-Fi Adapter

- 1. *For a switch supporting PoE*: Connect an Ethernet cable between the PoE-enabled switch and the WAN port of the access point.
- 2. *For a switch not supporting PoE or router*: Connect an Ethernet cable between the switch or router and any Ethernet port of the access point.
- 3. Connect the power adapter (12V DC, 1A, not included in the delivery package) to the power connector port on the back panel of the access point, then plug the power adapter into an electrical outlet or power strip.
- 4. Make sure that the Wi-Fi adapter of your PC is on. As a rule, modern notebooks with built-in wireless NICs are equipped with a button or switch that turns on/off the wireless adapter (refer to your PC documents). If your PC is equipped with a pluggable wireless NIC, install the software provided with your Wi-Fi adapter.

Now you should configure your Wi-Fi adapter.

## Configuring Wi-Fi Adapter in OS Windows 7

- 1. Click the Start button and proceed to the Control Panel window.
- 2. Select the **Network and Sharing Center** section. (If the Control Panel has the category view (the **Category** value is selected from the **View by** drop-down list in the top right corner of the window), choose the **View network status and tasks** line under the **Network and Internet** section.)
- 3. In the menu located on the left part of the window, select the **Change** adapter settings line.
- 4. In the opened window, right-click the relevant **Wireless Network Connection** icon. Make sure that your Wi-Fi adapter is on, then select the **Properties** line in the menu displayed.
- 5. In the Wireless Network Connection Properties window, on the Networking tab, select the Internet Protocol Version 4 (TCP/IPv4) line. Click the Properties button.

Select the Use the following IP address radio button and enter the value 192.168.0.51 in the IP address field. The Subnet mask field will be filled in automatically. Click the OK button.

Internet Protocol Version 4 (TCP/IPv4)	Properties ?
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports o ask your network administrator
Obtain an IP address automatical	ly 🔤
Use the following IP address:	
IP address:	192.168.0.51
S <u>u</u> bnet mask:	255.255.255.0
Default gateway:	· · ·
Obtain DNS server address auton	natically
• Us <u>e</u> the following DNS server add	resses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	· · ·
Validate settings upon exit	Ad <u>v</u> anced
	OK Cancel

- 7. Click the **OK** button in the connection properties window.
- 8. To open the list of available wireless networks, select the icon of the wireless network connection and click the **Connect To** button or left-click the network icon in the notification area located on the right side of the taskbar.



 In the opened window, in the list of available wireless networks, select the wireless network DAP-400P (for operating in the 2.4GHz band) or DAP-400P-5G (for operating in the 5GHz band) and click the Connect button.

Not connected	÷7
Connections are available	ble
Wi-Fi	^
wireless router	lite.
Connect automatically	<u>C</u> onnect
Open Network and Shar	ing Center

- 10. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) in the **Security key** field and click the **OK** button.
- 11. Wait for about 20-30 seconds. After the connection is established, the network icon will be displayed as the signal level scale.

Now you can connect to the web-based interface of DAP-400P for configuring all needed parameters. To gain access to an external network (to the Internet), you also need to specify the default gateway and the addresses of DNS servers.

If you perform initial configuration of the access point via Wi-Fi connection, note that immediately after changing the wireless default settings of the access point you will need to reconfigure the wireless connection using the newly specified settings.

## Configuring Wi-Fi Adapter in OS Windows 10

- 1. Click the **Start** button and proceed to the **Settings** window.
- 2. Select the Network & Internet section.
- 3. In the Change your network settings section, select the Change adapter options line.
- 4. In the opened window, right-click the relevant **Wireless Network Connection** icon. Make sure that your Wi-Fi adapter is on, then select the **Properties** line in the menu displayed.
- In the Wireless Network Connection Properties window, on the Networking tab, select the Internet Protocol Version 4 (TCP/IPv4) line. Click the Properties button.
- Select the Use the following IP address radio button and enter the value 192.168.0.51 in the IP address field. The Subnet mask field will be filled in automatically. Click the OK button.

Internet Protocol Version 4 (TCP/IPv4)	Properties	×
General		
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	matically if your network supports ask your network administrator	
Obtain an IP address automatical	ly	
• Use the following IP address:		
IP address:	192.168.0.51	
Subnet mask:	255.255.255.0	
Default gateway:		
Obtain DNS server address auton	natically	
Use the following DNS server add	resses:	
Preferred DNS server:		
Alternate DNS server:		
Ualidate settings upon exit	Advanced	
	OK Cancel	

7. Click the **Close** button in the connection properties window.

8. To open the list of available wireless networks, select the icon of the wireless network connection and click the **Connect To** button or left-click the network icon in the notification area located on the right side of the taskbar.



 In the opened window, in the list of available wireless networks, select the wireless network DAP-400P (for operating in the 2.4GHz band) or DAP-400P-5G (for operating in the 5GHz band) and click the Connect button.

RD_DLINK Secured	
	Connect

- 10. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) in the **Security key** field and click the **Next** button.
- 11. Allow or forbid your PC to be discoverable by other devices on this network (**Yes / No**).



12. Wait for about 20-30 seconds. After the connection is established, the network icon will be displayed as a dot with curved lines indicating the signal level.

Now you can connect to the web-based interface of DAP-400P for configuring all needed parameters. To gain access to an external network (to the Internet), you also need to specify the default gateway and the addresses of DNS servers.

If you perform initial configuration of the access point via Wi-Fi connection, note that immediately after changing the wireless default settings of the access point you will need to reconfigure the wireless

connection using the newly specified settings.

# **CONFIGURING ACCESS POINT**

#### Connecting to Web-based Interface

Start a web browser. In the address bar of the web browser, enter the IP address of the access point (by default, the following IP address is specified: **192.168.0.50**). Press the **Enter** key.

← → C Ⅲ 🚱 192.168.0.50

If the error "*The page cannot be displayed*" (or "*Unable to display the page*"/"*Could not connect to remote server*") occurs upon connecting to the web-based interface of the access point, make sure that you have properly connected the access point to your computer.

If the device has not been configured previously or the default settings have been restored, after access to the web-based interface the Initial Configuration Wizard opens (see the *Initial Configuration Wizard* section, page 24).

Γ	
	Dear Customer! It's the first time the device is turned on. Please configure the device in order to use the Internet access services. To run the Wizard, click the "Start" button.
	START

If you configured the device previously, after access to the web-based interface the login page opens. Enter the username (**admin**) in the **Username** field and the password you specified in the **Password** field, then click the **LOGIN** button.

Authoriza	ation	
Username*		
Password*		
•		Ø
Stay	signed in	
Forgot passw	ord?	
	Authorization error	
	Attempts remaining: 4	
LOGIN	CLEAR	

In order not to log out, move the **Stay signed in** switch to the right. After closing the web browser or rebooting the device, you need to enter the username and the password again.

If you enter a wrong password several times, the web-based interface will be blocked for a while. Please wait for one minute and reenter the password you specified. The **Summary** page displays general information on the access point and its software.

≡ Summary			۵
Device Informatior		Wi-Fi 5 GHz	
Model:	DAP-400P	Status:	On
Hardware version:	A1	Broadcasting:	On 🌗
Firmware version:	4.0.2	Additional networks:	
Build time:	Thu Dec 21 2023 4:00:37 PM MSK	Network name (SSID):	DAP-400P-5G-5FF
UI version:	1.43.0.ca36ec7-embedded	Security:	WPA2-PSK
Vendor:	D-Link Russia		
Serial number:	1234567890123		
Support:	support@dlink.ru	LAN	
Summary:	Root filesystem image for DAP_400P_MT7621AT	LAN IPv4:	192.168.0.5
Uptime:	6 min.	LAN IPv6:	fd00::1/6
Device mode:	Access Point	MAC address:	00:0c:43:26:5f:fe
Enable LEDs:	•	Wireless connections:	
		Wired connections:	
Wi-Fi 2.4 GHz		LAN Ports	
Status:	on •		
Broadcasting:	On •	LAN:	1000M-Full 🖙 🦷
Additional networks:	0	WAN:	1000M-Full
Network name (SSID):	DAP-400P-5FFE		
Security:	WPA2-PSK 🔒		

The web-based interface of the router is multilingual. You can select the needed language upon the initial configuration of the web-based interface of the access point or in the **System / Configuration** section of the menu.

Other settings of the access point are available in the menu in the left part of the page. Go to the relevant section and select the needed page or run the wizard in the **Initial Configuration** section.

## Initial Configuration Wizard

In order to start the Initial Configuration Wizard manually, go to the **Initial Configuration** section.



Click the **OK** button and wait until the factory default settings are restored.



If you perform initial configuration of the access point via Wi-Fi connection, please make sure that you are connected to the wireless network of DAP-400P (see the WLAN name (SSID) in the *Default Settings* section, page 3) and click the **NEXT** button. Then click the **START** button.

If the device has not been configured previously or the default settings have been restored, the Initial Configuration Wizard starts automatically upon access to the web-based interface or upon opening a web site on the Internet.

Dear Customer! It's the first time the device is turned on. Please configure the device in order to use the Internet access services. To run the Wizard, click the "Start" button.
START

1. Click **YES** in order to leave the current language of the web-based interface or click **NO** to select another language.



2. On the next page, click the **CONTINUE** button.

#### **Selecting Operation Mode**

Select the needed operation mode and click the **NEXT** button.

#### Router

In order to connect your device to a wired ISP, on the **Device mode** page, from the **Connection method** list, select the **Wired connection** value. Then from the **Work mode** list select the **Router** value. In this mode you can configure a WAN connection, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.

Connection method		
Wired connection	•	
Nork mode		
		SSID
Router	•	
	A BACK	NEVT

In order to connect your device to a wireless ISP (WISP), on the **Device mode** page, from the **Connection method** list, select the **Wi-Fi** value. Then from the **Work mode** list select the **WISP Repeater** value. In this mode you can connect your device to another access point, configure a WAN connection, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.

#### Access Point or Repeater

In order to connect your device to a wired router for adding a wireless network to the existing local network, on the **Device mode** page, from the **Connection method** list, select the **Wired connection** value. Then from the **Work mode** list select the **Access point** value. In this mode you can change the LAN IP address, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.

Wired connection	•		
Work mode			SSID
Access point	•		. 50
		•• •••	

In order to connect your device to a wireless router for extending the range of the existing wireless network, on the **Device mode** page, from the **Connection method** list, select the **Wi-Fi** value. Then from the **Work mode** list select the **Repeater** value. In this mode you can change the LAN IP address, connect your device to another access point, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.

In order to let wired PCs connected to your device access the network of a wireless router, on the **Device mode** page, from the **Connection method** list, select the **Wi-Fi** value. Then from the **Work mode** list select the **Client** value. In this mode you can change the LAN IP address, connect your device to another access point, and set your own password for access to the web-based interface of the device.

### **Changing LAN IPv4 Address**

This configuration step is available for the **Access point**, **Repeater**, and **Client** modes.

1. Select the **Automatic obtainment of IPv4 address** to let DAP-400P automatically obtain the LAN IPv4 address.

If you want to manually assign the LAN IPv4 address for DAP-400P, do not select the **Automatic obtainment of IPv4 address** checkbox and fill in the **IP address**, **Subnet mask**, **DNS IP address**, **Hostname** fields and, if needed, the **Gateway IP address** field. Make sure that the assigned address does not coincide with the LAN IPv4 address of the router to which your device connects.



If the LAN IPv4 address of DAP-400P was changed, it may be necessary to change your PC's NIC settings.

LAN	
Automatic obtainment of IPv4 address	
▲ Automatic obtainment of IPv4 address sufficiently prote avoid IPv4 address conflicts, static IPv4 addresses of LAN assigned by an upper-level router (or a local DHCP server).	ects against use of the same addresses in one LAN. In order to devises should not coincide with addresses from the address range
IP address*	
192.168.0.50	
Subnet mask*	
200.200.200.0	
Gateway IP address	
DNS IP address*	
8.8.8.8	
Underset	
Histore277 lead	
Specify a domain name ending with .local. In order to a name with a dot and slash at the end in the address bar of the name with a dot and slash at the end in the address bar of the	ccess the web-based interface using the domain name, enter this the web browser (for example, dlinkap12ab.local./)
< BACK	NEXT >

2. Click the **NEXT** button.

#### Wi-Fi Client

This configuration step is available for the **WISP Repeater**, **Repeater**, and **Client** modes.

1. On the **Wi-Fi Client** page, click the **WIRELESS NETWORKS** button and select the network to which you want to connect in the opened window. When you select a network, the **Network name (SSID)** and **BSSID** fields are filled in automatically.

If you cannot find the needed network in the list, click the UPDATE LIST



2. If a password is needed to connect to the selected network, fill in the relevant field. Click the **Show** icon ( **N**) to display the entered password.

requency band	
.4 GHz	<ul> <li>Attention! Upon connection to networks with WEP or TKIP encryption, basic settings of Wi-Fi networks will be changed:</li> </ul>
etwork name (SSID)*	the standards 802.11b and g will be used in the 2.4 GHz band and the standard 802.11a will be used in the 5 GHz band.
RD DLINK	Network authentication
-	WPA2-PSK -
SSID	
4:da:da:0a:8f:c9	
	Password PSK*
	Encryption type*
	AES
WIRELESS NETWORKS	

If you connect to a hidden network, select the band where the hidden network operates from the **Frequency band** list and enter the network name in the **Network name (SSID)** field. Then select a needed value from the **Network authentication** list and then, if needed, enter the password in the relevant field.

3. Click the **NEXT** button.

#### **Configuring WAN Connection**

This configuration step is available for the **Router** and **WISP Repeater** modes.

You should configure your WAN connection in accordance with data provided by your Internet service provider (ISP). Make sure that you have obtained all necessary information prior to configuring your connection. Otherwise contact your ISP.

1. On the **Internet connection type** page, click the **SCAN** button (available for the **Router** mode only) to automatically specify the connection type used by your ISP or manually select the needed value from the **Connection type** list.

*Static IPv4:* Fill in the following fields: IP address, Subnet mask, Gateway IP address, and DNS IP address.

*Static IPv6:* Fill in the following fields: IP address, Prefix, Gateway IP address, and DNS IP address.

**PPPOE**, **IPv6 PPPOE**, **PPPOE Dual Stack**, **PPPOE** + **Dynamic IP** (**PPPOE Dual Access**): Enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon ( $\bigotimes$ ) to display the entered password. If authorization is not required, select the **Without authorization** checkbox.

Without authorization	
Jsername*	
Password*	Ø

**PPPoE** + Static IP (PPPoE Dual Access): Enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon (()) to display the entered password. If authorization is not required, select the **Without authorization** checkbox. Also fill in the following fields: **IP address**, **Subnet mask**, **Gateway IP address**, and **DNS IP address**.

Without authorization		
Username*		
Password*	Ø	
IP address <sup>◆</sup>		
Subnet mask*		
Gateway IP address*		
DNS IP address*		

**PPTP** + **Dynamic IP** or **L2TP** + **Dynamic IP**: Enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon ( $\bigotimes$ ) to display the entered password. If authorization is not required, select the **Without authorization** checkbox. In the **VPN server address** field, enter the IP address or full domain name of the PPTP or L2TP authentication server.

Without authorization	
Username*	
Password*	Ø
VPN server address*	

**PPTP** + Static IP or L2TP + Static IP: Enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon ( $\bigotimes$ ) to display the entered password. If authorization is not required, select the **Without authorization** checkbox. In the **VPN server address** field, enter the IP address or full domain name of the PPTP or L2TP authentication server. Also fill in the following fields: **IP address**, **Subnet mask**, **Gateway IP address**, and **DNS IP address**.

- 2. If a particular MAC address was registered by your ISP upon concluding the agreement, from the MAC address assignment method drop-down list (available for the Router mode only), select the Manual value and enter this address in the MAC address field. Choose the Clone MAC address of your device value to place the MAC address of your network interface card in the field, or leave the Default MAC address value to place the access point's WAN interface MAC address in the field.
- 3. If the Internet access is provided via a VLAN channel, select the **Use VLAN** checkbox and fill in the **VLAN ID** field (available for the **Router** mode only).

\C address	
0:62:eb:2c:c8:3a	
) In some ISP's networks, it is req	ired to register a certain MAC address in order to get access to the Internet.
<ol> <li>In some ISP's networks, it is req</li> <li>✓ Use VLAN</li> </ol>	ired to register a certain MAC address in order to get access to the Internet.
<ol> <li>In some ISP's networks, it is req</li> <li>Use VLAN</li> <li>Select the checkbox if the Intern</li> </ol>	ired to register a certain MAC address in order to get access to the Internet. t access is provided via a VLAN channel.

4. Click the **NEXT** button.

#### **Configuring Wireless Network**

This configuration step is available for the **Router**, **Access point**, **WISP Repeater**, and **Repeater** modes.

- 1. On the **Wireless Network 2.4 GHz** page, in the **Network name** field, specify your own name for the wireless network in the 2.4GHz band or leave the value suggested by the access point.
- 2. In the **Password** field, specify your own password for access to the wireless network or leave the value suggested by the access point (WPS PIN of the device, see the barcode label).
- 3. If the access point is used as a Wi-Fi client, you can specify the same parameters of the wireless network as specified for the network to which you are connecting. To do this, click the **USE** button (available for the **WISP Repeater** and **Repeater** modes only).
- 4. You can restore the parameters of the wireless network specified before resetting to factory defaults. To do this, click the **RESTORE** button.

Wireless Network 2.4 GH	2
Senable	
Broadcast wireless network 2.4 Gi	iz
<ol> <li>Disabling broadcast does not in</li> </ol>	luence the ability to connect to another Wi-Fi network as a client.
Network name* <b>my wi-fi</b>	
Open network	
Password*	
	Q
<ol> <li>Password should be between 8</li> <li>Use the same param</li> </ol>	and 63 ASCII characters
RESTORE	rork name and security that was set before applying factory settings.

5. If you want to create an additional wireless network isolated from your LAN in the 2.4GHz band, select the **Enable guest network** checkbox (available for the **Router** and **WISP Repeater** modes only).

C Enable guest network
① Guest Wi-Fi network allows connection to your device and getting access to the Internet. Upon that computers connected to this wireless network will be isolated from the resources of your main local area network. This helps to secure your LAN while you provide access to the Internet for temporary users.
Network name*
my wi-fi_Guest
Open network
Max associated clients*
0
Enable shaping

- 6. In the **Network name** field, specify your own name for the guest wireless network or leave the value suggested by the access point.
- 7. If you want to create a password for access to the guest wireless network, deselect the **Open network** checkbox and fill in the **Password** field.
- 8. If you want to limit the bandwidth of the guest wireless network, select the **Enable shaping** checkbox and fill in the **Shaping** field.
- 9. Click the **NEXT** button.
- 10. On the **Wireless Network 5 GHz** page, specify needed settings for the wireless network in the 5GHz band and click the **NEXT** button.

#### **Changing Web-based Interface Password**

On this page you should change the default administrator password. To do this, enter a new password in the **User's interface password** and **Password confirmation** fields. You may set any password except **admin**. Use digits, Latin letters (uppercase and/or lowercase), and other characters available in the US keyboard layout.<sup>1</sup>

Changing web-based interface password			
For security reasons, please chang	e the password used	o access the device's settings	i.
User's interface password*	Ø		
Password should be between 1 and	l 31 ASCII characters		
Password confirmation*	Ø		
	🕻 ВАСК	NEXT	

Remember or write down the new password for the administrator account. In case of losing the new password, you can access the settings of the access point only after restoring the factory default settings via the hardware **RESET** button. This procedure wipes out all settings that you have configured for your access point.

Click the **NEXT** button.

On the next page, check all the settings you have just specified.

Also you can save a text file with parameters set by the Wizard to your PC. To do this, click the **SAVE CONFIGURATION FILE** button and follow the dialog box appeared.

To finish the Wizard, click the **APPLY** button.

<sup>1 0-9,</sup> A-Z, a-z, space, !"#\$%&'()\*+,-./:;<=>?@[\]^\_`{|}~.

## **Configuring Local Area Network**

- 1. Go to the Connections Setup / LAN page.
- If needed, change the IPv4 address of the access point's LAN interface and the mask of the local subnet. To do this, click the IPv4 tab and specify needed values in the IP address and Mask fields in the Local IP Address section.

Local II	PAddress
Mode of loc	al IP address assignment
Static	-
IP address*	
192.168.	0.50
Mask*	
255.255.	255.0
Hostname	
diinkap5i	Te.local
() Specify interface us in the addre	' a domain name ending with .local. In order to access the web-based sing the domain name, enter this name with a dot and slash at the end ess bar of the web browser (for example, dlinkap.local./)
DNS IP a	address
ADD	

3. If needed, change the static IPv6 address of the access point's LAN interface. To do this, click the **IPv6** tab. In the **Local IPv6 Address** section, specify the needed value in the **IPv6 address** field and click the **APPLY** button.

Local IPv6 Address
IPv6 address*
fd00::1/64
Gateway IPv6 address
For example: fd00::2
Hostname
dlinkap5ffe.local
Specify a domain name ending with .local. In order to access the web-based interface using the domain name, enter this name with a dot and slash at the end in the address bar of the web browser (for example, dlinkap.local.)
DNS IP address
ADD

4. IPv4 address assignment. By default, the DHCP server of the device in the access point mode is disabled (the Disable value is selected from the Mode of IPv4 address assignment drop-down list on the IPv4 tab). As a rule, the DHCP server should be disabled when the device is used in the access point mode. If you need to specify other settings, change the parameters of the DHCP server.

Dynamic IP Addresses		
Mode of IPv4 address assignment		
Disable		-

5. IPv6 address assignment. By default, the DHCPv6 server of the device in the access point mode is disabled (the Disable value is selected from the Mode of IPv6 address assignment drop-down list on the IPv6 tab). As a rule, the DHCPv6 server should be disabled when the device is used in the access point mode. If you need to specify other settings, change the parameters of the DHCPv6 server.

Dynamic IP Addresses	
Mode of IPv6 address assignment	
Disable	•

6. After specifying the needed parameters on the **Connections Setup** *I* **LAN** page, click the **APPLY** button.

# **SPECIFICATIONS**<sup>\*</sup>

Hardware	
Processor	· MT7621AT (880MHz, dual core)
RAM	· 128MB, DDR3 SDRAM
Flash	· 16MB, SPI
Interfaces	<ul> <li>10/100/1000BASE-T WAN port with PoE support</li> <li>10/100/1000BASE-T LAN port</li> </ul>
LEDs	<ul> <li>POWER / WLAN</li> <li>INTERNET</li> <li>LAN</li> </ul>
Buttons	· RESET button to restore factory default settings
Antenna	<ul> <li>Two internal antennas for 2.4GHz (3dBi gain)</li> <li>Two internal antennas for 5GHz (3dBi gain)</li> </ul>
МІМО	· 2 x 2, MU-MIMO
Power connector	• Power input connector (12V DC, 1A)

Software	
Operation Modes	Access point     Router
WAN connection types	<ul> <li>PPPoE</li> <li>IPv6 PPPoE</li> <li>PPPoE Dual Stack</li> <li>Static IPv4 / Dynamic IPv4</li> <li>Static IPv6 / Dynamic IPv6</li> <li>PPPoE + Static IP (PPPoE Dual Access)</li> <li>PPPoE + Dynamic IP (PPPoE Dual Access)</li> <li>PPTP/L2TP + Static IP</li> <li>PPTP/L2TP + Dynamic IP</li> <li>IPIP6 in DSLite mode</li> <li>6in4</li> <li>6to4</li> <li>6rd</li> </ul>

<sup>\*</sup> The device features are subject to change without notice. For the latest versions of the firmware and relevant documentation, visit <u>www.dlink.ru</u>.

Software	
Network functions	<ul> <li>DHCP server/relay</li> <li>Advanced configuration of built-in DHCP server</li> <li>Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation</li> <li>Automatic obtainment of LAN IP address (for access point/repeater/client modes)</li> <li>DNS relay</li> <li>Dynamic DNS</li> <li>Static IPv4/IPv6 routing</li> <li>IGMP Proxy</li> <li>RIP</li> <li>Support of UPnP</li> <li>Support of VLAN</li> <li>WAN ping respond</li> <li>Support of SIP ALG</li> <li>Support of RTSP</li> <li>WAN failover</li> <li>Autonegotiation of speed, duplex mode, and flow control / Manual speed and duplex mode setup for each Ethernet port</li> <li>Built-in UDPXY application</li> <li>Port mirroring</li> <li>Wake-on-LAN support</li> </ul>
Firewall functions	<ul> <li>Network Address Translation (NAT)</li> <li>Stateful Packet Inspection (SPI)</li> <li>IPv4/IPv6 filter</li> <li>MAC filter</li> <li>URL filter</li> <li>DMZ</li> <li>Virtual servers</li> <li>Built-in SkyDNS web content filtering service</li> </ul>
VPN	<ul> <li>IPsec/PPTP/L2TP/PPPoE pass-through</li> <li>PPTP/L2TP tunnels</li> <li>L2TP over IPsec client</li> <li>IPsec tunnels Transport/Tunnel mode</li> <li>IKEv1/IKEv2 support</li> <li>DES encryption</li> <li>NAT Traversal</li> <li>Support of DPD (Keep-alive for VPN tunnels)</li> </ul>

Software	
Management and monitoring	<ul> <li>Local and remote access to settings through SSH/TELNET/WEB (HTTP/HTTPS)</li> <li>Multilingual web-based interface for configuration and management</li> <li>Support of D-Link Assistant application for Android smartphones</li> <li>Notification on connection problems and auto redirect to settings</li> <li>Firmware update via web-based interface</li> <li>Automatic notification on new firmware version</li> <li>Saving/restoring configuration to/from file</li> <li>Support of logging to remote host</li> <li>Automatic synchronization of system time with NTP server and manual time/date setup</li> <li>Ping utility</li> <li>Traceroute utility</li> <li>TR-069 client</li> <li>SNMP agent (SNMPv2/v3)</li> <li>Schedules for filters rules, automatic reboot, and enabling/disabling wireless network</li> <li>Automatic upload of configuration file from ISP's server (Auto Provision)</li> <li>Configuration of action for hardware buttons</li> </ul>

Wireless Module Parameters		
Standards	<ul> <li>IEEE 802.11ac Wave 2</li> <li>IEEE 802.11a/b/g/n</li> <li>IEEE 802.11k</li> </ul>	
Frequency range		
The frequency range depends upon the radio frequency regulations applied in your country	<ul> <li>2400 ~ 2483.5MHz</li> <li>5150 ~ 5350MHz</li> <li>5650 ~ 5850MHz</li> </ul>	
Wireless connection security	<ul> <li>WEP</li> <li>WPA/WPA2 (Personal/Enterprise)</li> <li>MAC filter</li> <li>WPS (PBC/PIN)</li> </ul>	

Wireless Module Parameters		
Advanced functions	<ul> <li>"Client" function (access point mode) Wireless network client Wireless network repeater</li> <li>"Client" function (router mode) WISP repeater</li> <li>WMM (Wi-Fi QoS)</li> <li>Information on connected Wi-Fi clients</li> <li>Advanced settings</li> <li>Smart adjustment of Wi-Fi clients</li> <li>Guest Wi-Fi / support of MBSSID</li> <li>Limitation of wireless network rate</li> <li>Periodic scan of channels, automatic switch to least loaded channel</li> <li>Support of 2.4GHz/5GHz TX Beamforming</li> <li>Autonegotiation of channel bandwidth in accordance with environment conditions (20/40 Coexistence)</li> <li>Support of STBC</li> <li>CoovaChilli authentication portal</li> </ul>	
Wireless connection rate <sup>2</sup>	<ul> <li>IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54Mbps</li> <li>IEEE 802.11b: 1, 2, 5.5, and 11Mbps</li> <li>IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps</li> <li>IEEE 802.11n (2.4GHz): 6.5–300Mbps (MCS0–MCS15) to 400Mbps (QAM256)</li> <li>IEEE 802.11n (5GHz): from 6.5 to 300Mbps (from MCS0 to MCS15)</li> <li>IEEE 802.11ac (5GHz): from 6.5 to 867Mbps (from MCS0 to MCS9)</li> </ul>	

<sup>2</sup> Maximum wireless signal rate is derived from IEEE standard 802.11ac and 802.11n specifications. In order to get the rate of 400Mbps in the 2.4GHz band, a Wi-Fi client should support MIMO 2x2 and QAM256 modulation scheme. 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 factors will adversely affect wireless signal range.

Wireless Module Parameters		
<ul> <li>802.11a (typical at room temperature 25 °C)</li> <li>17dBm at 6, 54Mbps</li> </ul>		
<ul> <li>802.11b (typical at room temperature 25 °C)</li> <li>17dBm at 1, 11Mbps</li> </ul>		
<ul> <li>802.11g (typical at room temperature 25 °C)</li> <li>17dBm at 6, 54Mbps</li> </ul>		
<ul> <li>802.11n (typical at room temperature 25 °C)</li> <li>17dBm at MCS0~6/8~14</li> <li>16dBm at MCS7/15</li> </ul>		
<ul> <li>802.11ac (typical at room temperature 25 °C)</li> <li>17dBm at MCS0~6</li> <li>16dBm at MCS7</li> <li>15dBm at MCS8~9</li> </ul>		
<ul> <li>802.11a (typical at PER &lt; 10% (1000-byte PDUs) at room temperature 25 °C)         -82dBm at 6Mbps         -81dBm at 9Mbps         -79dBm at 12Mbps         -77dBm at 18Mbps         -74dBm at 24Mbps         -70dBm at 36Mbps         -66dBm at 48Mbps         -65dBm at 54Mbps         -65dBm at 54Mbps         -90dBm at 1Mbps         -90dBm at 1Mbps         -90dBm at 2Mbps         -90dBm         -90</li></ul>		
-88dBm at 5.5Mbps -86dBm at 11Mbps -86dBm at 11Mbps -802.11g (typical at PER < 10% (1000-byte PDUs) at room temperature 25 °C) -82dBm at 6Mbps -81dBm at 9Mbps -79dBm at 12Mbps -79dBm at 12Mbps -74dBm at 24Mbps -70dBm at 36Mbps -66dBm at 48Mbps		

Wireless Module Parameters		
	<ul> <li>802.11n (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C) HT20</li> <li>82dBm at MCS0/8</li> <li>-79dBm at MCS2/10</li> <li>-74dBm at MCS3/11</li> <li>-70dBm at MCS4/12</li> <li>-66dBm at MCS6/14</li> <li>-64dBm at MCS7/15</li> <li>HT40</li> <li>-79dBm at MCS1/9</li> <li>-74dBm at MCS1/9</li> <li>-74dBm at MCS5/13</li> <li>-65dBm at MCS5/14</li> <li>-64dBm at MCS5/15</li> <li>HT40</li> <li>-79dBm at MCS1/9</li> <li>-74dBm at MCS5/13</li> <li>-65dBm at MCS5/13</li> <li>-63dBm at MCS5/13</li> <li>-62dBm at MCS4/12</li> <li>-63dBm at MCS6/14</li> <li>-61dBm at MCS5/13</li> <li>-62dBm at MCS6/14</li> <li>-61dBm at MCS7/15</li> <li>802.11ac (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)</li> <li>VHT20</li> <li>-82dBm at MCS0</li> <li>-79dBm at MCS1</li> <li>-77dBm at MCS2</li> <li>-74dBm at MCS3</li> <li>-70dBm at MCS5</li> <li>-65dBm at MCS6</li> <li>-64dBm at MCS7</li> <li>-56dBm at MCS6</li> <li>-64dBm at MCS7</li> <li>-56dBm at MCS6</li> <li>-64dBm at MCS7</li> <li>-79dBm at MCS6</li> <li>-64dBm at MCS7</li> <li>-76dBm at MCS8</li> <li>VHT40</li> <li>-79dBm at MCS0</li> <li>-76dBm at MCS8</li> <li>VHT40</li> <li>-79dBm at MCS1</li> <li>-74dBm at MCS8</li> <li>VHT40</li> <li>-79dBm at MCS4</li> <li>-63dBm at MCS5</li> </ul>	
	-o20BM at MCS6 -61dBm at MCS7 -56dBm at MCS8 -54dBm at MCS9	

Wireless Module Parameters		
	VHT80 -76dBm at MCS0 -73dBm at MCS1 -71dBm at MCS2 -68dBm at MCS3 -64dBm at MCS4 -60dBm at MCS5 -59dBm at MCS6 -58dBm at MCS7 -53dBm at MCS8 -51dBm at MCS9	
Modulation schemes	<ul> <li>802.11a: BPSK, QPSK, 16QAM, 64QAM with OFDM</li> <li>802.11b: DQPSK, DBPSK, DSSS, CCK</li> <li>802.11g: BPSK, QPSK, 16QAM, 64QAM with OFDM</li> <li>802.11n: BPSK, QPSK, 16QAM, 64QAM, 256QAM with OFDM</li> <li>802.11ac: BPSK, QPSK, 16QAM, 64QAM, up to 256QAM with OFDM</li> </ul>	

Physical Parameters	
Dimensions (L x W x H)	· 213 x 213 x 38 mm (8 x 8 x 1.5 in)

Operating Environment		
Power	<ul> <li>External DC power adapter 12V/1A (not included in the delivery package)</li> <li>PoE: 802.3at (12W), 48V/0.5A</li> </ul>	
Temperature	<ul> <li>Operating: from 0 to 40 °C</li> <li>Storage: from -20 to 65 °C</li> </ul>	
Humidity	<ul> <li>Operating: from 10% to 90% (non-condensing)</li> <li>Storage: from 5% to 95% (non-condensing)</li> </ul>	

# TERMSANDCONDITIONSFORINSTALLATION, SAFE OPERATION, STORAGE,TRANSPORTATION, AND DISPOSAL

Please carefully read this section before installation and connection of the device. Make sure that the device and cables are not damaged. The device should be used only as intended (reception/transmission of data in computer networks); installation should be performed in accordance with the documents available on the official website.

The device is intended for use in dry, clean, dust-free, and well ventilated areas with normal humidity away from strong heat sources. Do not use the device outdoors or in the areas with high humidity. Do not place foreign objects on the device. Do not obstruct the ventilation openings of the device. The environmental temperature near the device and the temperature inside the device's cover should be within the range from 0 °C to +40 °C.

The power supply must correspond to the power options from the device specifications list. When a power adapter (not included in the delivery package) is used, the electrical outlet must be installed near the equipment and must be easily accessible.

Do not open the cover of the device! Unplug the device before dusting and cleaning. Use a damp cloth to clean the device. Do not use liquid/aerosol cleaners or magnetic/static cleaning devices. Prevent moisture getting into the device or the power adapter.

The device may be stored and transported only in the original packaging at the temperature and humidity indicated in the specifications. No restrictions apply to sales. Please contact an authorized distributor to dispose of the equipment upon the end of its operation.

The service life of the device is 2 years.

The warranty period starts on the date of purchase from an authorized distributor within Russia or the CIS countries and extends for one year.

Irrespective of the date of purchase, the warranty period cannot exceed 2 years from the date of manufacture, which is determined by  $6^{\text{th}}$  (year) and  $7^{\text{th}}$  (month) digit in the serial number printed on the device label.

Year: F = 2015, G = 2016, H = 2017, I = 2018, J = 2019, 0 = 2020, 1 = 2021, 2 = 2022, 3 = 2023, 4 = 2024.

Month: 1 - January, 2 - February, ..., 9 - September, A - October, B - November, C - December.

If a fault is detected, please contact D-Link service center or technical support group.

## **TECHNICAL SUPPORT**

You can find software updates and user documentation on our website.

D-Link provides its customers with free support within the product's warranty period.

Customers can contact the technical support group by phone or by e-mail/Internet.

#### FOR TELEPHONE NUMBERS AND ADDRESSES OF D-LINK OFFICES WORLDWIDE VISIT

http://www.dlink.com