PROAPW300L- 300Mbps 2.4GHz In Wall Access Point with RJ45 Port

PROAPW750L- 750Mbps 2.4 & 5GHz In Wall Access Point with RJ45 Port

PROAPCEILING- 1200Mbps 2.4 & 5GHz Ceiling Access Point

Advanced Instructions

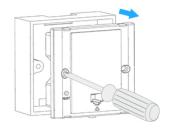




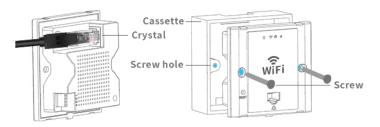




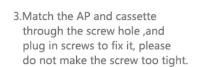
Compatible with all Operating



1. Take off the cover of 86 size cassette (if no cover, then ignore it)



2. Plug the Ethernet cable in the WAN port of AP .



WiFi

Cover the cassette to finish.

Default Data:

- In Default GATEWAY mode the management IP address is 192.168.188.253
- Default Login Password: admin
- Default Wi-Fi password 4wG7cZXd
- WAN: Ethernet Port, connect with router.
 LAN: Forward port onto local network.
- DC Input: Is 48V.
- AP is FAT (Default) but can also operate in FIT mode.
- Reset: Press 15 seconds to revert to factory default data.
 LED Indicator: To show the working status of 2.4G, 5G and Power.
 (LED can be switched off by timer in advanced settings.)

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SIX STEP EASY AND QUICK SETUP.

If the access point is still in its default **Gateway** mode, then connection is easier via Wi-Fi. If you are using Apple products simply scan the QR codes below with your Tablet. The 1st QR code connects to the Wi-Fi and the 2nd QR code connects to the Login screen. This can sometimes work with Android depending on the QR code app and the Tablet.

Apple Quick Connect

1st Scan here to connect

2nd Scan here to setup





- 1. On an Apple phone, using your camera, scan QR code 1
 On android download the free QR Code Reader
 by Duy Pham (MMLab) from Playstore and scan QR Code 1
 Wait 10 seconds for the phone to connect to the AP
- 2. Now Scan QR code 2

If after several seconds you get "webpage not available, simply switch off mobile data on your device and scan again

- 3. Log in with the word admin (lowercase)
- 4. Select Get IP from Gateway (Customers router)

If your connecting to a business network you may need to select static IP and set up with setting from the company network Admin.

- 5. **Set-up Wi-Fi name (SSID) and required password** *It is recommended that you leave all other setting to default unless you are familiar with these settings.*
- 6. Click Apply...

You have now successfully setup the Access point with your Wi-fi name and password. The Ap will now reboot, get a new IP from the customers router and start broadcasting Wi-Fi. This can take 2-3 mins for this to complete. You may see 2.4 GHz Wi-Fi start first and 5GHz Wi-Fi start a little later.

You will now need to reconnect to the Wi-Fi with your new SSID and password.

NOTE:- You can also connect to the Wi-Fi name Prowifi_2.4G with password 4wG7cZXd and browse to 192.168.188.253 if the QR code cannot be scanned.



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Using a Windows PC

1. By default, the AP is in Gateway mode. You can connect to the device by simply connecting to the Access Points existing Wi-Fi signal.

Select the **Network** icon on the taskbar. The icon that appears depends on your current connection state. If you don't see one of the network icons (or a similar one) shown in the following image, select the **Up arrow** to see if it appears there.

If you're reading this on a Windows 10 laptop with Wi-Fi click here <u>ms-settings:network-wifi?activationSource=SMC-IA-4027030</u>



- 2. Choose the Wi-Fi network ProWiFi _2.4G
- 3. Type the default network password **4wG7cZXd**) then select **Connect**. Choose **Yes** or **No**, depending on the type of network you're connecting to and if you want your PC to be discoverable by other PCs and devices on the network.
- 4. Using the Chrome, Firefox or Edge browser type 192.168.188.253 into the URL bar at the top and press enter.

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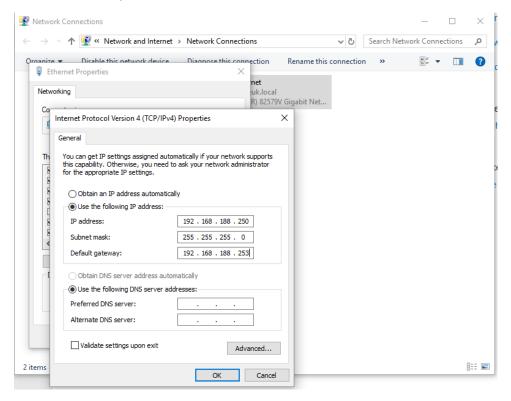
If you're reading this on a computer simply click here http://192.168.188.253

If you wish to reconnect to the AP for additional setting up (while in AP mode) then please scan the network with an app (We suggest Net Analyzer) and look for the AP on the network with MAC address starting **70:B3:D5:9D** (This MAC address range is exclusive to ProWiFi APs)

This will give you the IP that's been allocated to the AP by the router. Type this number usually starting 192.168.***.*** into your internet browser and the web login screen will appear. Default password is admin.

If this has been changed and lost then you will require to reset the AP.

If you have set the device in AP mode and you need to connect the devices LAN Port with A PC. Set static IP on PC to 192.168.188.250 and set the Gateway to the default IP address of 192.168.188.253 (as below). Open browser, input AP IP address 192.168.188.253 to log into the WEB GUI using the default password of admin.

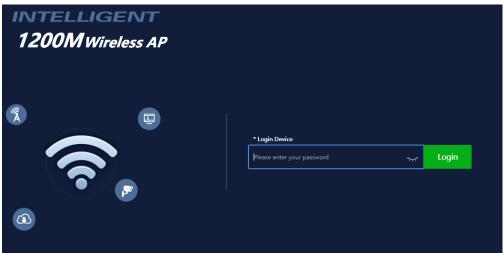


Remember to reset this once you have completed setup or you may not be able to connect to other networks.



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PC Web login interface (default password admin).



WEB GUI Configuration

Once logged in the home page will show as follows:



<u>Current mode:</u> This shows the current operating mode (Gateway in this example).

Online users:- The number of users currently connected.

Device description:- Change this to best describe the AP or perhaps it's location.

Uptime: The amount of time the access point as has been running since last reboot.

CPU and memory usage:- A good indication of whether the AP is working too hard.

LAN & WAN information: Shows current status of how the AP is connected to



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WAN or LAN.

<u>2G and 5G Wi-Fi:-</u> showing channel allocated.

Flow:- Shows upstream and downstream of current connections.

On the left side is the navigation buttons to other setup areas, as detailed below.



Setup Wizard

The mode the access point will work in:



<u>Gateway mode:-</u> The AP will allocate IP numbers to the connected devices. This mode is default as it permits you to connect and setup the AP very easily. The AP could be left in this mode however, any connections to the AP (wireless or not) will be allocated different IP addresses to the main network, potentially preventing communication between devices on the main network.

Repeater mode:- The AP will receive & re-transmit the Wi-Fi signal from another device.

It performs the same role as Access Point mode, but the key is that it talks over Wi-Fi instead. As such, this does not get around obstacles as well as an access point does. While an access point can be put in front of an obstacle, a repeater will need to be angled around it. However, the benefit of repeaters is that they do not need a cable to connect to the central hub.



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<u>WISP mode:-</u> Wirelessly connects to a WISP (Wireless Internet Service Provider) AP. In this mode, the AP also acts as a router for wired clients on your LAN and provides NAT (Network Address Translation) and a DHCP server to generate IP addresses for wired clients only. NAT and the DHCP server allow many computers to share the same wireless Internet connection.

<u>AP mode:-</u> Using Access Point mode is ideal if you want to extend the Wi-Fi range, but the router you're using to extend it isn't too far away from the main central router. The cable will ensure you get the best possible speeds between the access point and the router, and you do not have to worry about anything interfering with a Wi-Fi signal.

Setup screens in Gateway mode



Setup screens for Repeater mode

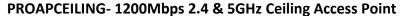


Setup screen in Wisp Mode



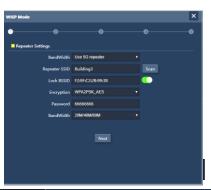
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Setup screen in AP Mode

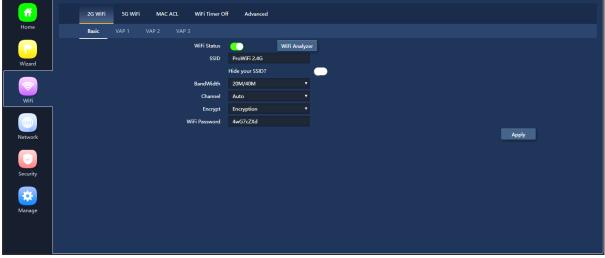


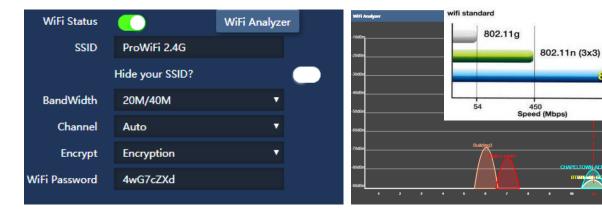




ception

1300





2G and 5G Wi-Fi: Setup the SSID (Name of the Wi-Fi), Bandwidth, channel, Encryption and password. This area also has a built-in Wi-Fi analyser to look for the best channel to set the 2.4/5G signal so that it does not clash with other channels.

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MAC ACL:- Access control lists (ACL) can control the traffic entering a network.

When you configure ACL, you can selectively admit or reject inbound traffic, thereby controlling access to your network or to specific resources on your network.

Wi-Fi Timer Off:- Set the time to start and stop Wi-Fi access.

Advanced:- Country Region MUST be set to ETSI (For legal UK channel allocation).

2G and 5G mode sets the Wi-Fi standard of the AP.



<u>Multicast Fast:-</u> Provides the ability to minimize packet loss in a network when there is a link or node failure by enhancing, but not changing, multicast routing protocols.

<u>Maximum per AP:-</u> Number of permitted on the AP. Prevents over loading and therefore slowing down of the AP.

<u>WLAN Partition:</u> Enabling WLAN Partition prevents associated wireless clients from communicating with each other for security.

Short GI:- Short Guard Interval can increases the data rate by up to 10%.

<u>Coverage Threshold:-</u> The signal level at the point where the AP drops the device.

TX Power:- Be careful with this setting, it can reduce the channel overlap and degrade the Wi-Fi signal if using with more than one AP. Especially useful when roaming and set with coverage threshold.

<u>Preferred 5G:-</u> The access point will first offer 5G to the device before falling back to 2.4G.

DFS:- When support for DFS is enabled, it will be necessary for Wi-Fi access points to verify that any radar in proximity is not using DFS frequencies. This process is called *Channel Availability Check*, and it is executed during the boot process of the AP as well as during its normal operations. If the AP detects that a radar is using a particular DFS channel, then it will exclude that channel from the list of available channels. This state will last for 30 minutes, after which the AP will check again if the channel can be used for Wi-Fi transmissions. The *Channel Availability Check* performed during the boot process can take anywhere between 1 and 10 minutes, depending on which country you're in. For this reason, DFS channels are not immediately available when an AP boots. Wi-Fi networks that are servicing real-time and mission-critical applications may want to avoid such disconnections caused by DFS frequencies.



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VAP 1-3: In each of the 2G & 5G sections you can allocate up to three VAPs (Virtual Access points). This is ideal for when you want to give guests or visitors access to Wi-

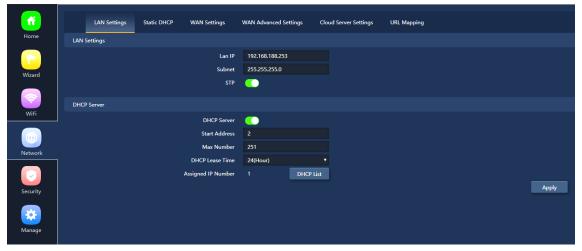
Fi but for security, don't want to give them your usual password. You can setup with a temporary VAP SSID and password and simply remove when finished.



The VAP user will not be able to scan or see other devices on your network.



Network setup menu:



Lan Settings:

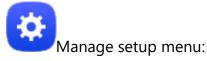
Lan IP:- Sets the IP and Subnet of the access point.

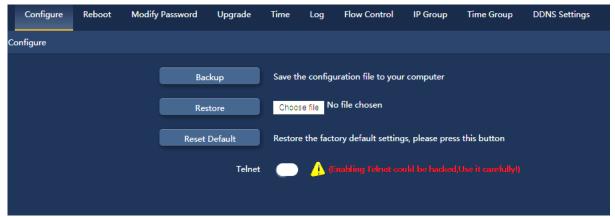
STP:- Spanning Tree Protocol (STP) is a network protocol designed to prevent layer 2 loops and it is standardized as IEEE 802.D protocol.

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Configure: Allows you to save the configuration file to your computer.

Restore:- Restore the back of the configuration file (also useful for installing many access points with the same configuration).

Reset Default:- Resets the access point back to the manufacturers default settings. Telnet:- Allows access to the devices Telnet port (port 22).

Due to security risk we suggest this is turned off unless specifically needed.

Initially the AP is setup in Gateway mode. This is for ease of connection to your device, for setup. In this mode the AP will allocate an IP, via its built in DCHP server, to each device connected. This will mean that you will have a different IP range to your usual network, on the devices connected to the AP and communication between devices on each side of the AP is not possible. This may be an issue where you have a printer connected to the usual network and a device connected via the AP.

If this is an issue then please select the AP mode within the Wizard. The AP then stops allocating IPs and leaves this job to the router, all devices will be on the same network.

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TIPS

Due to the Browser Cache process on a PC please be aware that we advise to refresh (shift F5) any screen before working on settings.

Usually a "force refresh" is enough.

Chrome: Press the following key combination: Shift + Ctrl + F5

IE: Press the following key combination: Ctrl + F5 Safari On PC: Ctrl + F5 or on Apple MAC: CMD + R

Alternatively, use the Chrome browser in Incognito mode can also reduce browser Cache issues.

Please see https://www.refreshyourcache.com for further details on the Cache process.

The Access point can take up to 2 minutes to reinitialize after reboot.

Using the In-Wall AP in "AP Mode" will require you to set your devices IP to static. Set 192.168.188.250 as the device IP and 192.168.188.253 as the gateway IP address.

For easiest install use the default Gateway mode for initial installation.

App for finding spare Wi-Fi channels (Android only) WiFi Analyser by farpr HERE

App for searching on the networks for IP address of the Access Point (Apple or Android) Network Analyzer here https://techet.net

Using a Wi-Fi analyzer on PC we suggest Winfi https://www.helge-keck.com/

Reset back to default by holding front button for 15 seconds.

Check out the Firefox Browser and its Cache add-ons.

FAQ

- Light is not illuminated on the Access Point.
 - 1. Check the Power supply is connected and the cable/RJ45 is correctly fitted.
 - 2. Check the LED timer setting.
- Speed is lower on the access point than expected.
 - 1. Check the Channel number that the AP is using, is not currency in use buy another device. Use a WIFI Analyser (as suggested above)
 - 2. Check the network cable is in good condition and there are not tight clips or kinks on the cable.
 - 3. Bear in mind that 2.4GHz connection is slower than 5GHZ
- I cannot find the IP number of the Access Point.
 - 1. Use a network scanner on your PC or mobile device. (As suggested above)
 - 2. If the AP is still not visible then reset the device.
- I cannot connect to the Wi-Fi.
 - 1. Always use SSID and password that do not have spaces or strange none alphanumerical characters.
 - 2. Your Wi-Fi password can be reset within the setting screen of the AP.
- Wi-Fi keeps disconnecting.
 - 1. Check Wi-Fi timer is not set to reboot, in settings
 - 2. Turn off DFS mode.

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PROAPW750L

Hardware:						
Chipset	Qualcomm QCA9563 + Q	CA9886 +QCA8334	1			
Standard	802.11ac/b/g/n, MIMO technology					
Memory	128MB DDR2 RAM					
Flash	16MB					
Interface	1 *10/100 /1000Mbps RJ45WAN Port					
	1 *10/100/ 1000Mbps RJ45LAN Port					
Antono	1* Reset button, press 15	seconds to revert to	o default setting			
Antenna	Build in 5dBi MIMO Anten	Build in 5dBi MIMO Antenna				
Power consumption	48V PoE<30W					
Size	198mm X 28mm	198mm X 28mm				
RF Data	1					
Frequency	2.4G:802.11b/g/n:2.4GHz – 2.484GHz,					
0 1	5GHz:802.11a/n/ac:5.150GHz~5.850GHz					
Country code	FCC, IC, ETSI, MKK.	FCC, IC, ETSI, MKK, MKK1, MKK2, MKK3, NCC, RUSSIAN, CN				
Modulation	OFDM = BPSK, QPSK, 16-QAM, 64-QAM, 128-QAM, 256-QAM					
Throughput	DSSS = DBPSK, DQPSK, CCK					
	1200Mbps	<u> </u>	1		Т	
2.4G RF Power	802.11b	11M	28±2dBm	1M	29±2dBm	
	802.11g	54M	27±2dBm	6M	29±2dBm	
	802.11n HT20	MCS7	26±2dBm	MCS0	28±2dBm	
	802.11n HT40	MCS7	25±2dBm	MCS0	27±2dBm	
5G RF Power	802.11a	54M	23±2dBm	6M	25±2dBm	
	802.11n HT20	MCS7	22±2dBm	MCS0	24±2dBm	
	802.11n HT40	MCS7	21±2dBm	MCS0	24±2dBm	
	802.11ac HT80	MCS9	20±2dBm	MCS0	23±2dBm	
2.4G Receive Sensitivity	802.11b	11M	-85dBm	1M	-94dBm	
	802.11g	54M	-72dBm	6M	-90dBm	
	802.11n HT20	MCS7	-70dBm	MCS0	-88dBm	
	802.11n HT40	MCS7	-68dBm	MCS0	-86dBm	
5G Receive Sensitivity	802.11a	54M	-72dBm	6M	-90dBm	
	802.11n HT20	MCS7	-70dBm	MCS0.	-88dBm	
	802.11n HT40	MCS7	-68dBm	MCS0.	-86dBm	
	802.11ac HT80	MCS9	-58dBm	MCS0.	-85dBm	
EVM		2.4G: 802.11b : ≤-10 dB; 802.11g: ≤-25 dB; 802.11n: ≤-28 dB				
Max Users	5G: 802.11a: ≤-25dB; 802 128+	5G: 802.11a: ≤-25dB; 802.11n: ≤-28 dB; 802.11ac: ≤-32 dB 128+				
Firmware Features:						
Operation mode	Wireless AP, Gateway, W	ISP, WiFi Repeater				

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WAN Type	Dynamic IP/Static IP/PPPoE/L2TP(Dual Access) /PPTP(Dual Access)	
Wireless Security	64/128-bit WEP, WPA / WPA2, WPA-PSK/ WPA2-PSK encryption	
SSID	Multiple SSID (4 SSID for 2.4G, 4 SSID for 5.8G)	
Firewall	DoS, SPI Firewall, IP Address Filter/MAC Address Filter/Domain Filter IP and MAC Address Binding	
Protocols	IPv4	
Others:		
Environment	Operating Temperature: -30~55 °C Storage Temperature: -40~70 °C Humidity: 5%~95% non-condensing	
Management	Firmware GUI, Remote Management, WLAN Controller, Cloud Management System	

PROAPW300L

Wireless		
Standards	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b	
Data Rate	11n:300Mbps 11g: 54Mbps 11b: 11Mbps	
Frequency Range	2.4-2.4835GHz	
Wireless Transmit Power	11n @MCS7:14±2DB, @MCS0:16±2DB. 11g @54M:15±2DB, @6M:17±2DB. 11b @11M:18±2DB, @1M:20±2DB.	
Modulation Type	OFDM = BPSK,QPSK,16-QAM,64-QAM;DSSS = DBPSK,DQPSK,CCK	
Receive Sensitivity	11n: -70dbm@MCS7, -88dbm@MCS0. 11g: -72dbm@54Mbps,-88dbm@6Mbps. 11b: -85dbm@11Mbps,-94dbm@1Mbps.	
EVM	802.11n: ≤-28 DB 802.11g: ≤-25 DB 802.11b: ≤-10 DB	
PPM	±20ppm	
MAX Users	64	
Operation Mode	Gateway, AP, Repeater	
Wireless Security	64/128-bit WEP, WPA/WPA2, WPA /WPA2-Personal (TKIP/AES)	
System Requirements	Windows 7/Vista/XP/2000,Mac OS®, Linux or Android OS	
Hardware		
Chipset	Qualcomm Atheros QCA9531	
Flash	16M	
SDRAM	64M	
Interfaces	2 x 10/100Mbps LAN/WAN Port	
Button	Reset Button	
Antenna	MIMO 3dBi Build-in omni-directional Antenna	
Power Supply	802.3af PoE	
Dimensions(W x D x H)	86*86*68mm	
Others		
Operating Temperature	-20°C~55°C	
Storage Temperature	-40°C~70°C	
Relative Humidity	10% ~ 90%, Non-condensing	
Storage Humidity	5%~95%, Non-condensing	

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Certifications	RoHS

EU Declaration of Conformity

Blake UK hereby declares that the radio equipment type PROAPW300L, PROAPW750L & PROAPCEILING are in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.blake-uk.com/DoC