

# Grandstream Networks, Inc.

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## GWN76xx Wi-Fi Access Points Standalone Guide



## Table of Content

<b>INTRODUCTION</b> .....	<b>3</b>
<b>USING DEFAULT SSID</b> .....	<b>4</b>
<b>USING CUSTOM SSID</b> .....	<b>5</b>
Discover GWN76xx .....	5
<i>Method 1: Discover GWN76xx using its MAC address</i> .....	5
<i>Method 2: Discover GWN76xx using GWN Discovery Tool</i> .....	6
Access the GWN76xx WebGUI .....	6
Wi-Fi Configuration.....	7
Additional SSID .....	11

## Table of Figures

Figure 1: Standalone Architecture Example.....	3
Figure 2: MAC Tag Label .....	4
Figure 3: Discover the GWN7600 using its MAC Address.....	5
Figure 4: GWN Discovery Tool.....	6
Figure 5: Login Page.....	7
Figure 6: Network Group Page Settings .....	7
Figure 7: Add New Network Group .....	8
Figure 8: Wi-Fi Settings.....	10
Figure 9: Device Membership .....	11
Figure 10: Network Group Config .....	11
Figure 11: Additional SSID .....	12
Figure 12: Additional SSID Created .....	12

## Table of Tables

Table 1: Network Group Settings – Basic .....	8
Table 2: Network Group Settings – Wi-Fi.....	8



## INTRODUCTION

The GWN76xx Series are high-performance 802.11ac wireless access point for small to medium sized businesses, multiple floor offices, commercial locations and branch offices.

This wireless access point can be paired with any third party routers. With support for advanced QoS, low-latency real-time applications, 250+ client devices per GWN7610 AP and 450+ client devices per GWN7600 AP, and dual Gigabit network ports with PoE/PoE+, the GWN76xx are ideal wireless access points for large and small wireless network deployments.

A GWN76xx Wireless Access Point model provides the ability to act either as Master Access Point or Slave Access Point.

This guide describes GWN76xx in standalone mode where it can be used in network environments requiring Wi-Fi access with a single access point.

The figure below shows a sample setup of GWN76xx in standalone mode:

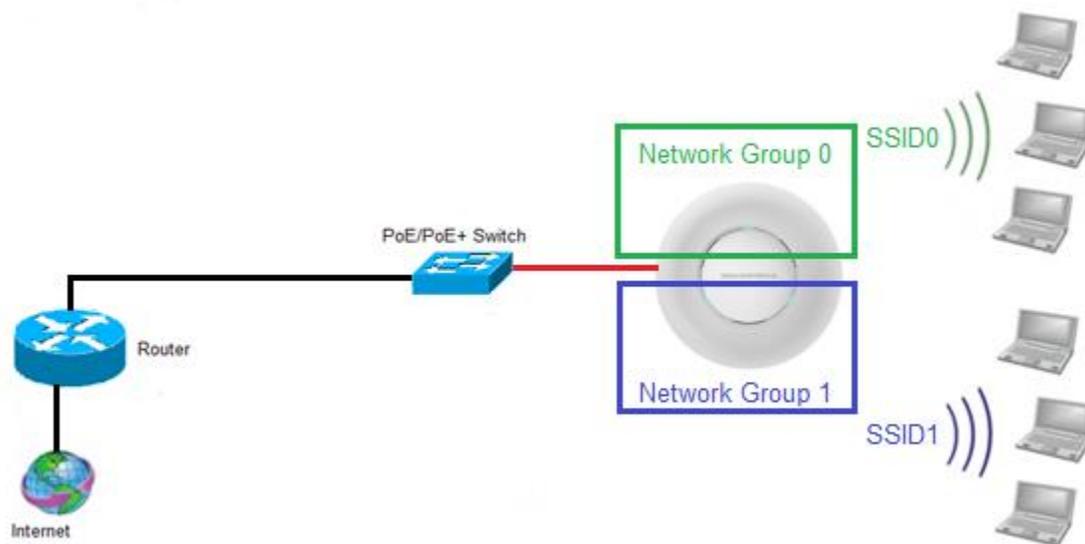


Figure 1: Standalone Architecture Example



## USING DEFAULT SSID

The GWN76xx can be used as standalone access point out of box, or after factory reset with Wi-Fi enabled by default.

Users can simply power on the GWN76xx and connect it to the network to start using Wi-Fi access.

GWN76xx will broadcast a default SSID based on its MAC address **GWN[MAC's last 6 digits]** and a random password.

Note that GWN76xx's default SSID and password information are printed on the MAC tag of the unit as shown on the below figure.

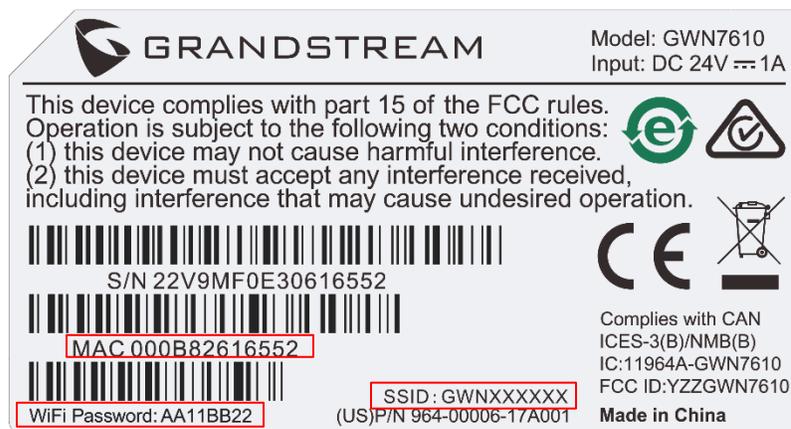


Figure 2: MAC Tag Label

To connect, Wi-Fi clients need to scan for Wireless networks, select SSID broadcasted from GWN76xx and enter password as printed in the label tag on the back of GWN76xx.



## USING CUSTOM SSID

This section describes needed steps to manage and customize SSID and Wi-Fi settings, first by discovering the unit IP address, accessing its web interface and editing its configuration depending on environment needs.

### Discover GWN76xx

Once the GWN76xx is powered up and connected to the network correctly, users can discover the GWN76xx using one of the following methods:

#### Method 1: Discover GWN76xx using its MAC address

1. Locate the MAC address on the MAC tag of the unit, which is on the underside of the device, or on the package.
2. From a computer connected to same network as the GWN76xx, type in the following address [https://gwn\\_\[MAC\\_address\].local/](https://gwn_[MAC_address].local/) using the GWN76xx's MAC address on your browser.

For example, if a GWN7600 has the MAC address **00:0B:82:8B:4D:D8**, this unit can be accessed by typing [https://gwn\\_000b828b4dd8.local/](https://gwn_000b828b4dd8.local/) on the browser.

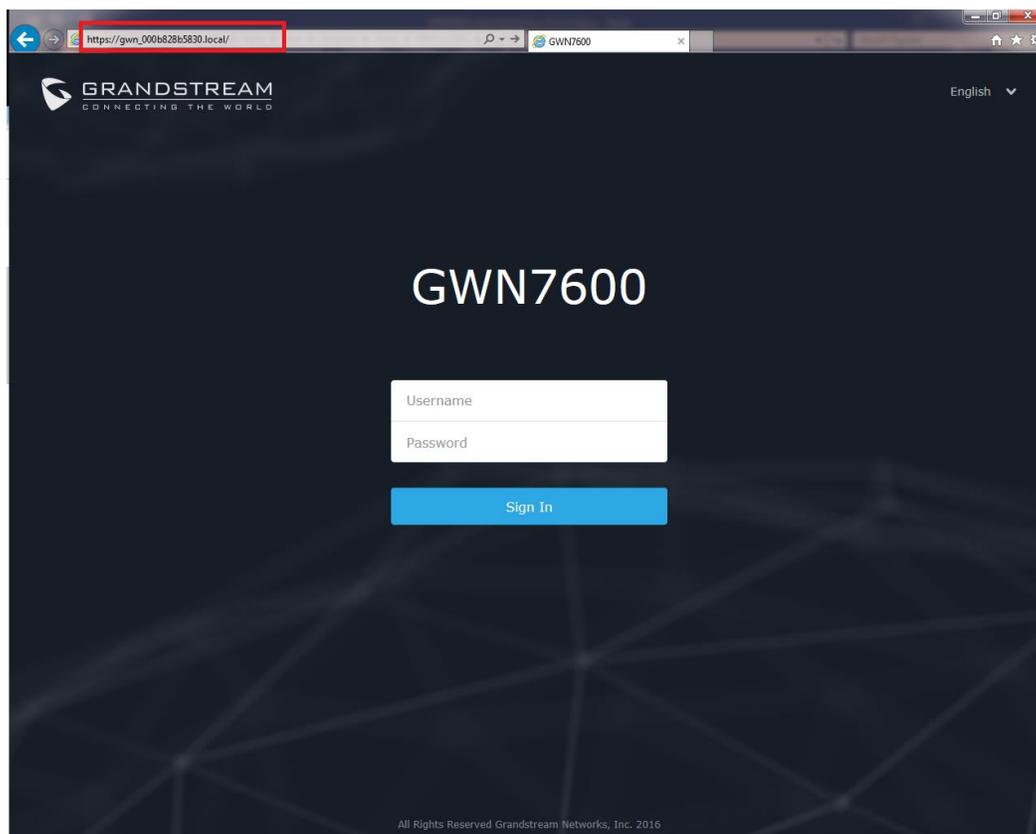


Figure 3: Discover the GWN7600 using its MAC Address



## Method 2: Discover GWN76xx using GWN Discovery Tool

1. Download and install **GWN Discovery Tool** from the following link:  
<http://www.grandstream.com/sites/default/files/Resources/GWNDiscoveryTool.zip>
2. Open the “GWN Discovery Tool”, click on **Select** to define the network interface, then click on **Scan**.
3. The tool will discover all GWN76xx Access Points connected on the network showing their MAC, IP addresses and firmware version.
4. Click on **Manage Device** to be redirected directly to the GWN76xx's configuration interface, or type in manually the displayed IP address on your browser.

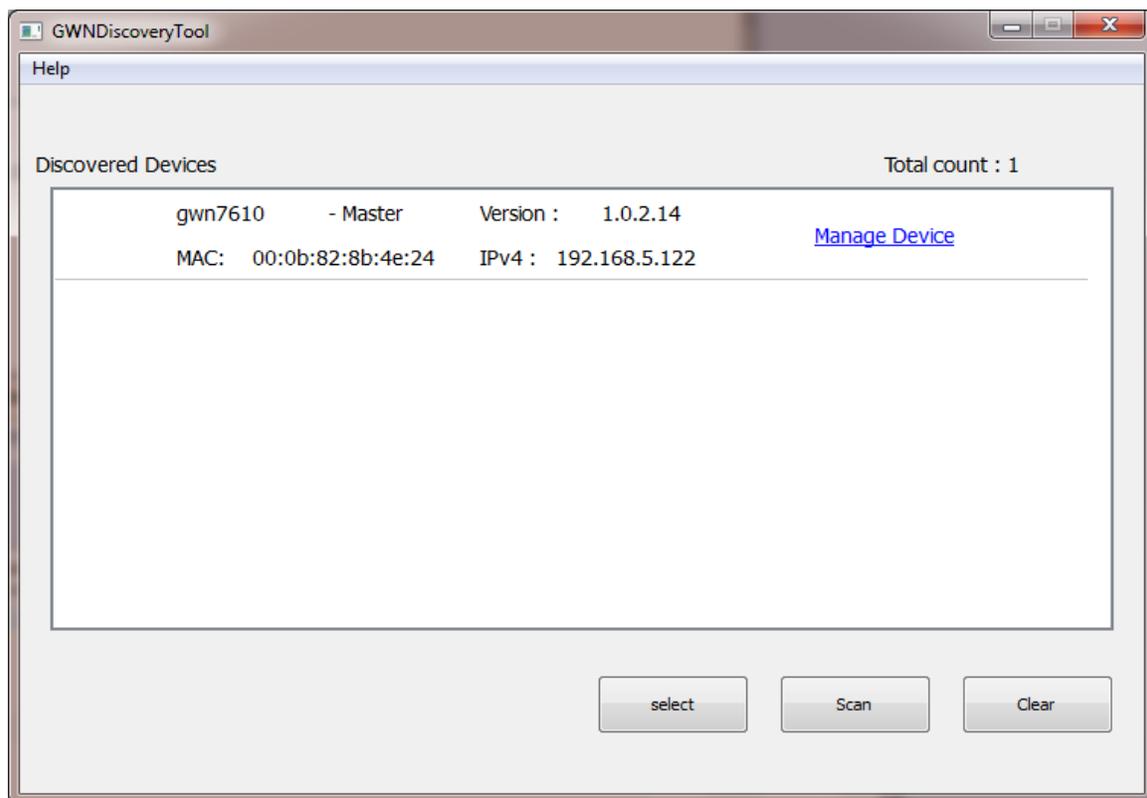


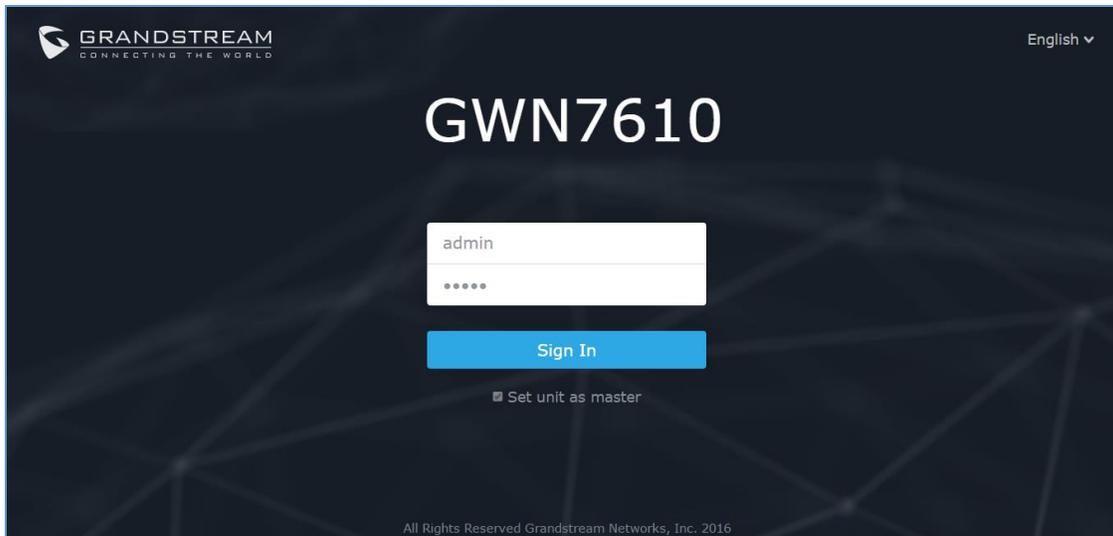
Figure 4: GWN Discovery Tool

## Access the GWN76xx WebGUI

In order to access into the GWN76xx WebGUI, please follow those steps:

1. Make sure to use a computer connected to the same local Network as the GWN76xx.
2. Ensure the device is properly powered up.
3. Open a Web browser on the computer and type in the URL using the MAC address as show previously or the IP address using the following format: **https://IP\_Address**
4. Enter the administrator's login and password to access the Web Configuration Menu. The default administrator's username and password are "admin" and "admin".





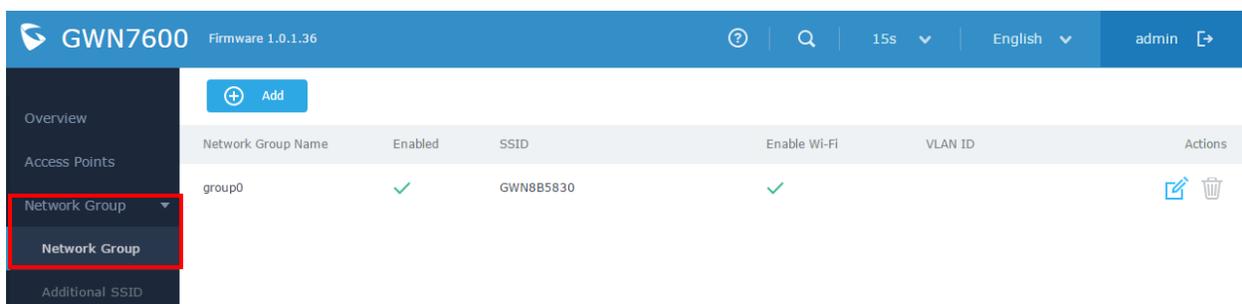
**Figure 5: Login Page**

**Notes:**

- At first boot or after factory reset, users will be asked to change the default administrator and user passwords before accessing GWN76xx web interface. The new password fields are case sensitive with a maximum length of 32 characters. Using strong passwords including letters, digits and special characters are recommended for better security.
- At factory reset, **“Set unit as Master”** will be checked by default, click on **“Sign In”** after typing the admin’s username and password as shown above.

## Wi-Fi Configuration

After accessing the GWN76xx web GUI navigate to **“Network Group -> Network Group”**, the page will show default group (**“group0”**) and default SSID for the GWN76xx as shown below:

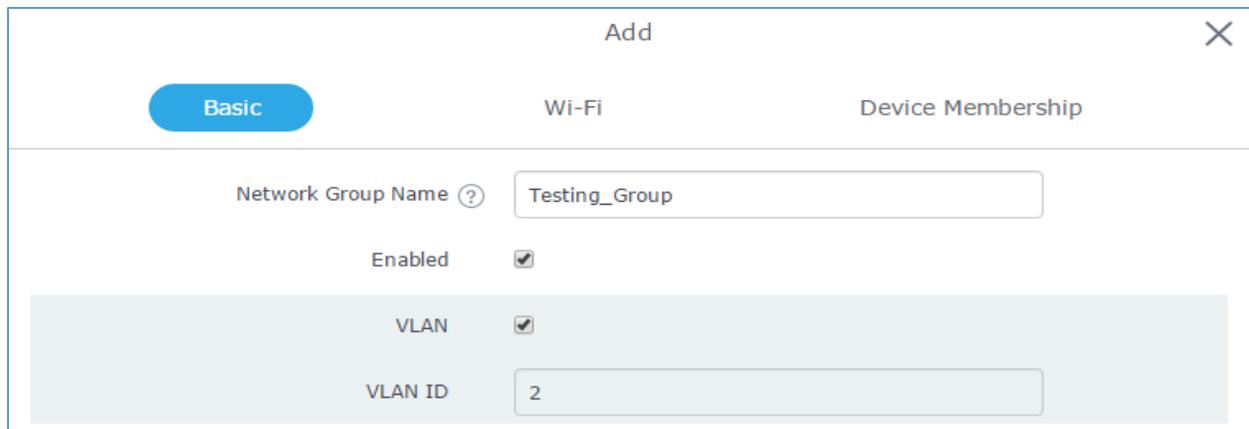


**Figure 6: Network Group Page Settings**

Click on  to modify the default group settings or  to add a new one.

The following window will be shown:





Add ✕

Basic
Wi-Fi
Device Membership

---

Network Group Name ?

Enabled

VLAN

VLAN ID

**Figure 7: Add New Network Group**

Network group configuration is available when editing or adding a new network group. The configuration is arranged in 3 tabs including **Basic**, **Wi-Fi** and **Device Membership**.

- **Basic:** This tab allows to define a name to identify the network group, enable or disable VLAN, and specify VLAN ID for the group.

**Table 1: Network Group Settings – Basic**

<b>Network Group Name</b>	Defines a name for the network group.
<b>Enabled</b>	Enables/disables a network group. <b>group0</b> is by default enabled.
<b>VLAN</b>	Enables/disables VLAN setting.
<b>VLAN ID</b>	Set VLAN ID when VLAN option is enabled.

**Note:** “Enabled”, “VLAN” and “VLAN ID” options are available for created network groups only.

- **Wi-Fi:** This tab contains all Wi-Fi settings to be used by the group, including definition of SSID, security mode, MAC filtering...

**Table 2: Network Group Settings – Wi-Fi**

<b>Status</b>	Shows the device’s status information such as firmware version, IP address, link speed, uptime and users count via different Radio channels.
<b>Users</b>	Shows the connected users to the GWN76xx access point.
<b>Configuration</b>	<ul style="list-style-type: none"> <li>• <b>Device Name:</b> Set GWN76xx’s name to identify it along with its MAC address.</li> <li>• <b>Fixed IP:</b> Used to set a static IP for the GWN76xx, if checked, the following fields will need to be configured:             <ul style="list-style-type: none"> <li>▪ <b>IPv4 Address:</b> Enter the IPv4 address to be set as static for the device.</li> <li>▪ <b>IPv4 Subnet Mask:</b> Enter the Subnet Mask.</li> <li>▪ <b>IPv4 Gateway:</b> Enter the Network Gateway’s IPv4 Address.</li> <li>▪ <b>Preferred IPv4 DNS:</b> Enter the Primary IPv4 DNS.</li> </ul> </li> </ul>



- **Alternate IPv4 DNS:** Enter the Alternate IPv4 DNS.
- **Frequency:** Set the GWN76xx's frequency, it can be either 2.4GHz, 5GHz or Dual-band.
- **Enable Band Steering:** When Frequency is set to Dual-Band, checking this option will enable Band Steering on the Access Point, this will help redirecting clients to 5GHz radio band if supported on the device (otherwise, 2.4GHz radio band will be used) for efficient use and to benefit from the maximum throughput.
- **Mode:** Choose the mode for the frequency band, 802.11n/g/b for 2.4Ghz and 802.11ac for 5Ghz.
- **Channel Width:** Choose the Channel Width. Note that Wide channel will give better speed/throughput, and narrow channel will have less interference. 20Mhz is suggested in very high density environment.
- **40MHz Channel Location:** Configure the 40MHz channel location when using 20MHz/40MHz in Channel Width; it can be set to "Secondary Below Primary", "Primary Below Secondary" or "Auto".
- **Channel:** Select "Auto" or a specific channel. Default is "Auto". Note that the proposed channels depend on **Country** Settings under **System Settings**→**Maintenance**→**Basic**.
- **Enable Short Guard Interval:** Check to activate this option to half the guard interval (from 800ns to 400ns) ensuring that distinct transmissions do not interfere with one another, this will help increasing throughput.
- **Active Spatial Streams:** Choose active spatial stream. Available options: "Auto", "1 stream", "2 streams" and "3 streams" (3 streams is supported on GWN7610 model only).
- **Radio Power:** Set the Radio Power depending on desired cell size to be broadcasted, three options are available: "Low", "Medium" or "High". Default is "High".

The following figure shows SSID configuration on the new group.



Add ✕

Basic
Wi-Fi
Device Membership

Enable Wi-Fi

SSID ?

SSID Hidden

Security Mode

WPA Key Mode

WPA Encryption Type

WPA Pre-Shared Key ?  👁

Use MAC Filtering

Client Isolation ?

Enable RSSI ?

Minimum RSSI (dBm) ?

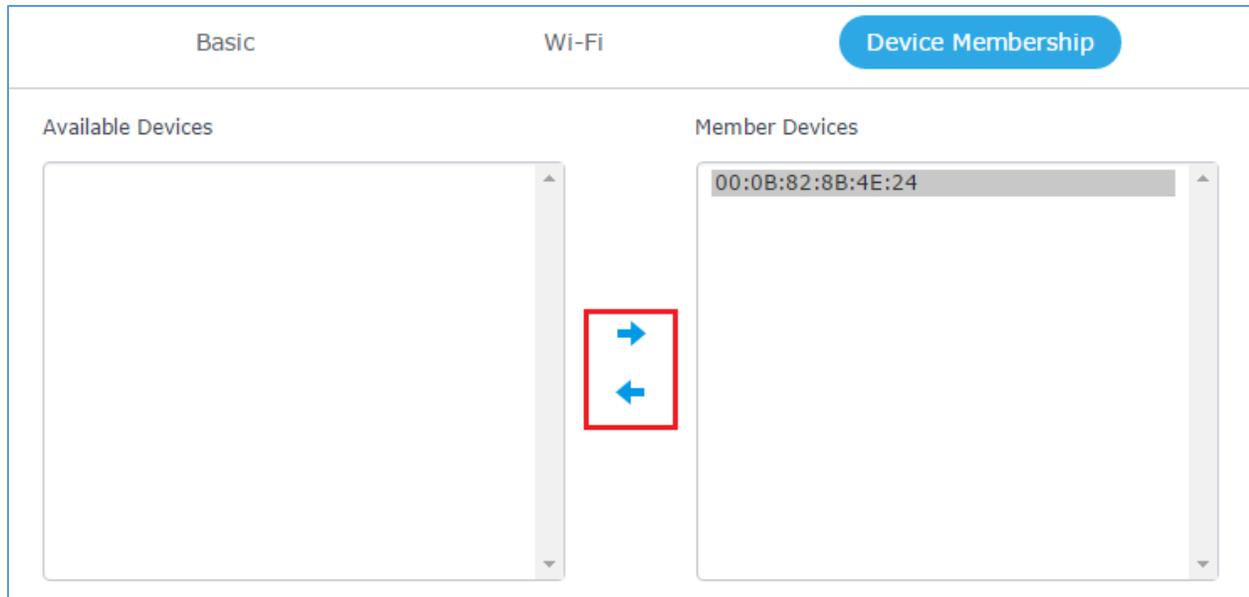
Save
Cancel

**Figure 8: Wi-Fi Settings**

- **Device Membership:** This tab lists available devices on the network, it is used to add members to the group if more than one AP is available to manage the slaves AP from the Maser AP. In the standalone mode, only the master AP will present on the “Member Devices” as shown below.

Click on ➔ to add GWN76xx to the network group, or click on ➔ to remove it.





**Figure 9: Device Membership**

Click on **Save** and **Apply** to apply the new configuration. The network group page will show as follow:

Network Group Name	Enabled	SSID	Enable Wi-Fi	Actions
Testing_Group	✓	Lab	✓	 
group0	✓	Lobby	✓	 

**Figure 10: Network Group Config**

At this stage, Wi-Fi clients can connect using created SSID upon successful authentication.

## Additional SSID

Additional SSID allows users to create multiple SSIDs under the same group. If configured, different SSIDs will be available for devices within GWN76xx access point range under the same network group.

1. To create an additional SSID go to **Network Group->Additional SSID**.



Add ✕

Enable Additional SSID

SSID (?)

Network Group Membership 

group0  
Testing\_Group

SSID Hidden

Security Mode

WPA Key Mode

WPA Encryption Type

WPA Pre-Shared Key (?)  👁

Use MAC Filtering

Client Isolation

Enable RSSI (?)

Minimum RSSI (dBm) (?)

**Figure 11: Additional SSID**

2. Select one of the available network groups from **Network Group Membership** dropdown menu. This will create an additional SSID with the same Device Membership configured when creating the main network group.

SSID	Enabled	Network Group	Hidden	Security Mode	MAC Filtering	Client Isolati...	RSSI	Actions
Additional_SSID	✓	group0	✗	WPA2	Disabled	✗	✗	<span style="font-size: small;">🔗</span> <span style="font-size: small;">🗑</span>

**Figure 12: Additional SSID Created**

3. Click on 🗑 to delete the additional SSID, or 🔗 to edit it.

**Note:** The GWN76xx supports up to 16 SSIDs. This will allow creating SSIDs under different groups or on the same group within this limit.

At this stage, Wi-Fi clients will be able to find different SSIDs as previously defined and connected to selected one upon successful authentication.

