



# AP58GV3

Wireless Bridge

---



## Introduction

**AP58GV3** is a 5G wireless bridge developed by Optiview for CCTV surveillance equipment. It is an easy-to-use yet delivers a complete CCTV solution for creating highly scalable, end-to-end systems of network devices including IP cameras, DVR and network video recorders. The maximum wireless data speed is 900Mbps. It is suitable for long distance environment with a farthest transmission distance of 1.2 miles or 2 Km with clear line of sight. Point-to-point wireless transmission helps you leverage installation cost associated with wired network structure. It support passive PoE power supply which makes the installation simpler, quick and easy.

## Features

- **Maximum 1.2 miles (2 Km )Wireless Data Transmission**

Point to point stable wireless transmission mode with clear line of sight. AP58GV3 allows you to easily deploy IP surveillance cameras and other CCTV equipment across multiple locations for day or night surveillance, indoors or outdoors.

- **5G frequency band with less interference and unwavering wireless signal**

Delivers considerably better performance for your project coverage area and a lesser amount of interference with nearby WiFi access points.

- **Built-in industrial directional antenna.**

Equipped with a professional-grade directional high-gain dual-polarized antenna with a wider range of wireless coverage.

- **External PA and LNA**

External American Skyworks PA and LNA, more suitable for long distance transmission

- **Solid Cap**

Design with Solid Capacitors to support better equipment stability and longer life.

- **Outdoor design**

It can easily handle harsh outdoor environment with its professional weather resistant case shell design and up to 8KV lightning protection.

- **Easy to use**

The default setting configured two access points paired for bridge connections to give users a real plug and play device.

## Product Specification

CPU	Industrial Chipset
Flash	8 Mbyte
DDR	64MB DDR2
Frequency	5.15~5.25GHz、 5.735~5.835GHz
Wireless Standards	802.11a/n/ac
Wireless Speeds	Up to 900Mbps
Transmission Power	MAX 20dBm
Maximum transmission distance	1.2 miles or 2 Km.(point to point) with clear line of sight environment
Multi-port transmission	Support 2 network ports; Default setting point to point
receive sensitivity	Up to -97dBm
Port	2 x 10/100M adaptive LAN ports, LAN1 support 24V Passive PoE power supply
Button	reset (long press 5-10 seconds to restore default setting)
LED	Radio signal: all bright signal best LAN indicator light: the bright represents the connection; the deputies are not connected; the flicker represents the data transmission; Power indicator light: on behalf of the system on the electricity; the failure to represent the power;
Antenna	Built-in 5G directional dual polarized antenna, gain: 14 dBi Horizontal angle: 40 degrees; vertical angle 30 degrees
Power Consumption	< 7W
Dimensions	7.8" * 4.3" * 2.4"
Environment	Operating Temperature: : -22°F~125°F Storage Temperature: : -40°F~150°F Operating Humidity: 10% ~ 90%RH non condensation Storage Humidity: 5% ~ 90%RH non condensing Support power on at -40°F

## Quick Setup Guide

### 1. Package contents

- Wireless bridge..... 2 pieces ( a pair )
- POE 24Vdc power adapter..... 2 pieces
- Stainless steel retainer..... 2 pieces
- Quick Installation Guide..... 1 piece

### 2. Installation notes

Installer/technician should pay attention to the following two points:

- **Height**

Pay attention to possible obstructions that may affect wireless signal such as trees, tall buildings and large steel structures that may will weaken wireless signals. In order to improve the wireless transmission performance and prevent the signal from being blocked, make sure that there is no obstruction within the line of sight of the wireless CPE during installation.

- **Direction**

When installing a CPE wireless device, adjust its front panel orientation to ensure that the receiving device is within its signal coverage.

### 2.1 Interface Description



- RESET button, long press 5-10 seconds to do system reset.
- LAN1 port, Passive PoE port, connect the 24 Vdc PoE power adapter.
- LAN2 port, common network port.

## 2.2 Connection diagram for preliminary setup

The PoE port from the DC power adapter is connected to the RJ45 port of the wireless bridge (LAN1 POE), and the LAN2 port of the power adapter is connected to terminal devices such as PC or any IP device such as IP camera or DVR/NVR.

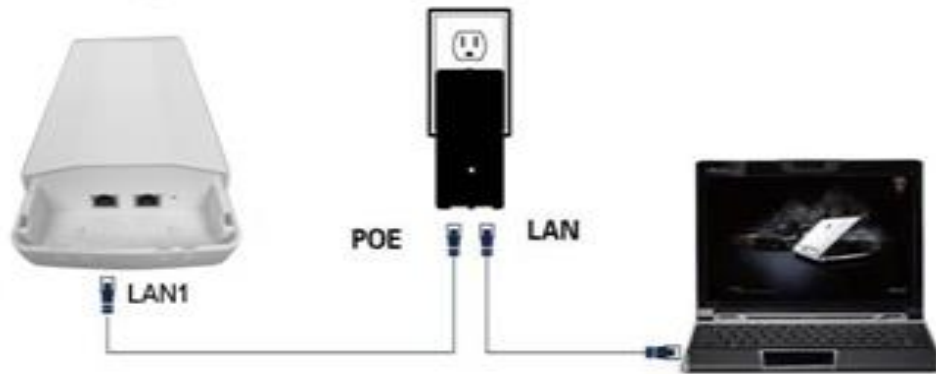
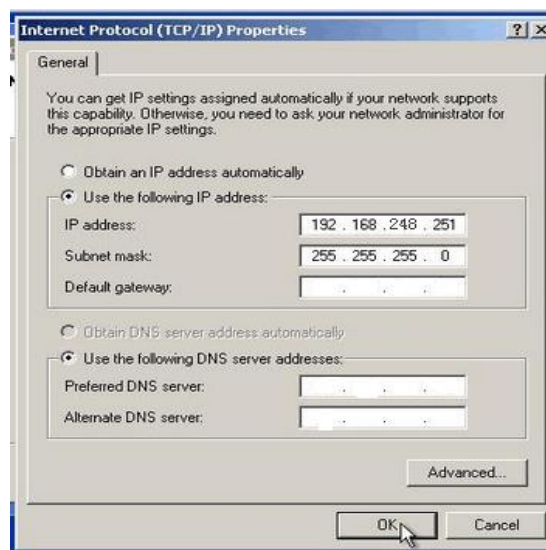


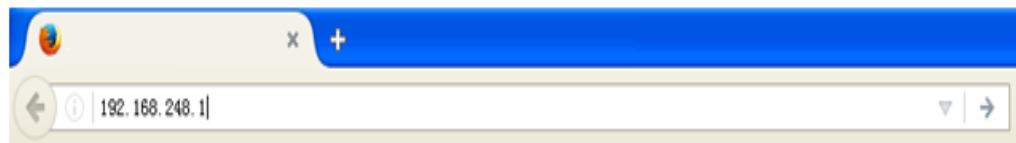
Figure 1.0

## 3. Login WEB interface

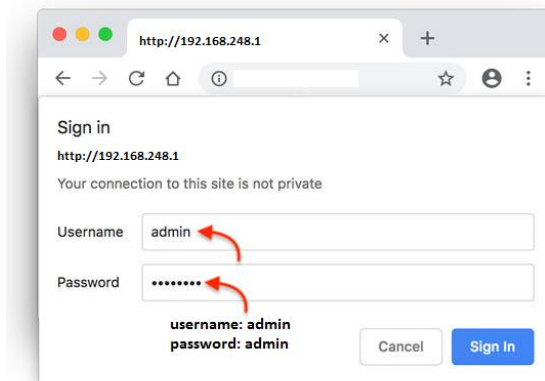
3.1 Directly connect the PC and the network cable from the POE injector as shown on figure# 1.0 below, configure your laptop computer with an IP address within the network segment, for example 192.168.248.251 and the corresponding subnet mask, 255.255.255.0



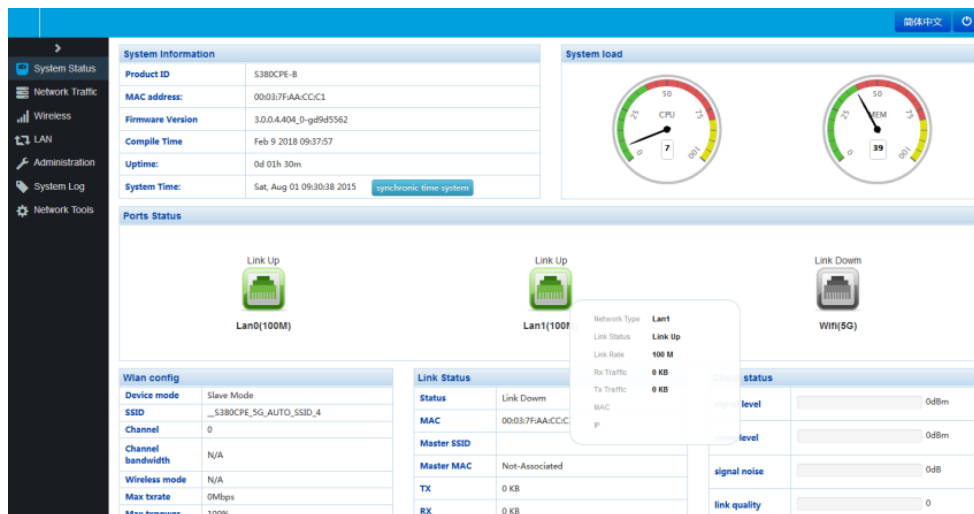
3.2 Open a browser, enter <http://192.168.248.1> on the address bar and press Enter to log in to the web management interface of the access point.



3.3 On the pop-up login screen, enter the user name and password (default is admin, password: admin), and click "Sign in" button



System information menu screen will pop up on the screen after login as shown below.

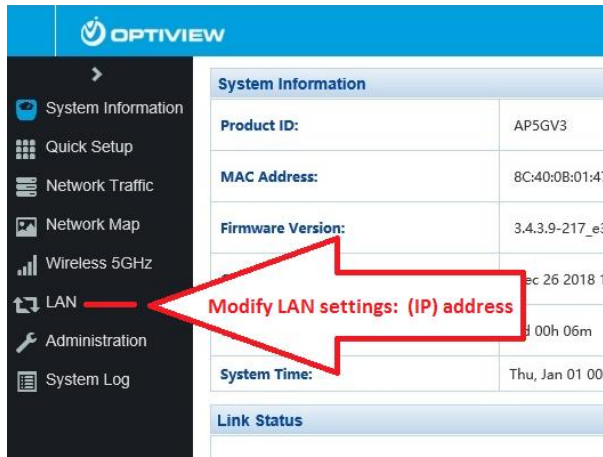


**Note:** Each WiFi access point is labeled to indicate which unit is the “master” or AP “Client”. Typically, the client is installed at the remote location while the master is at the building connected to the main network.

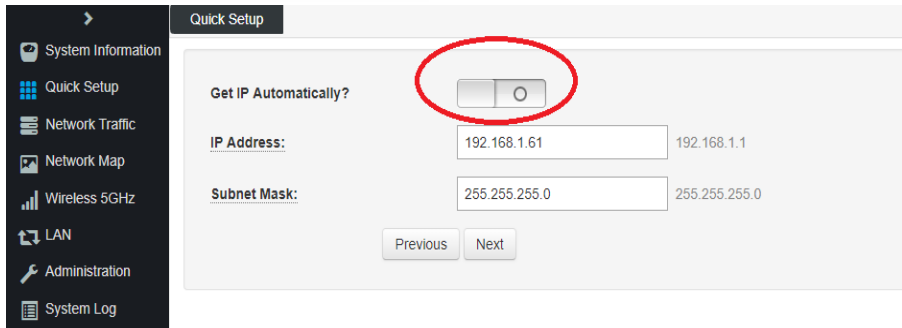
Each set of AP58GV3 in a box were already pre-configured and paired together to communicate. Once a correct and valid LAN address has been assigned to each access point, they are ready to be deployed in the field. *It is always a best practice for a technician to test the WiFi connectivity between two access points on a test bench before hanging them on a pole.*

3.4 Assign a local IP address to the WiFi access point. Consult your local IP staff (if any) to find out what network address can be used and assigned to your access point.

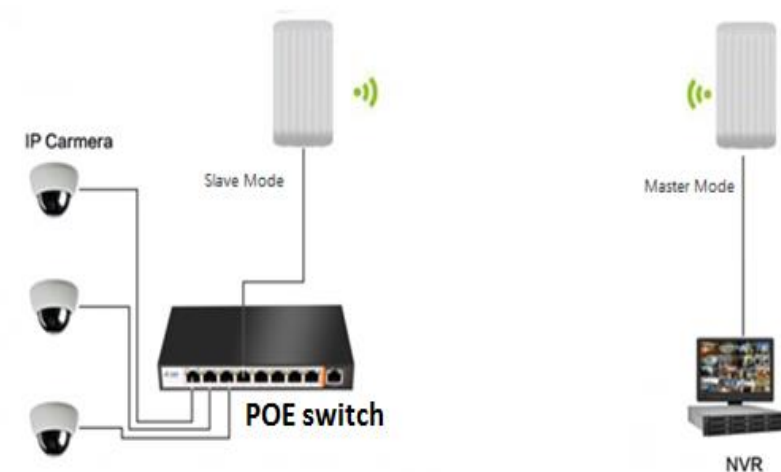
a. Click on LAN menu



b. Configure LAN IP address:



c. Follow the same steps mentioned above to change the IP address of the other WiFi access point.

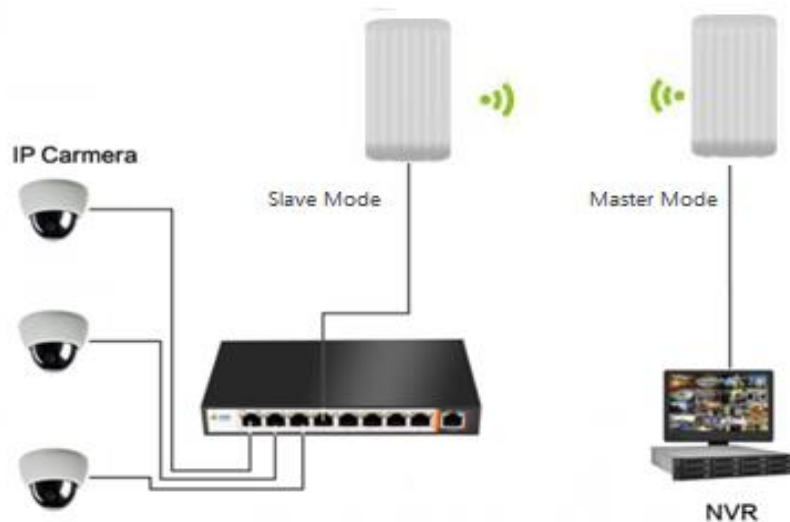


## Advanced Configuration Settings

**Warning! It is advisable to have an advanced networking skills and knowledge before making changes to the following menu. By default, the pair is already configured in Bridge mode, and there is no need to make changes on the LAN IP address of the access points, as long as IP devices on the AP client side have static IP address (based on the existing private LAN IP address scheme).**

The Point to Point mode is mainly used for long distance wireless connection of two bridges and it is the most commonly used networking mode for these access points. There are two ways to configure the network connection settings:

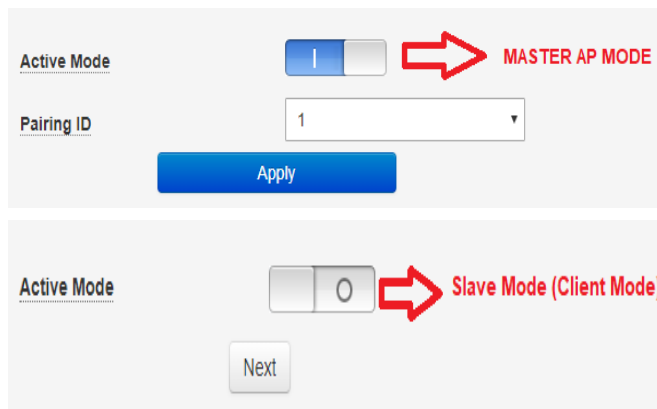
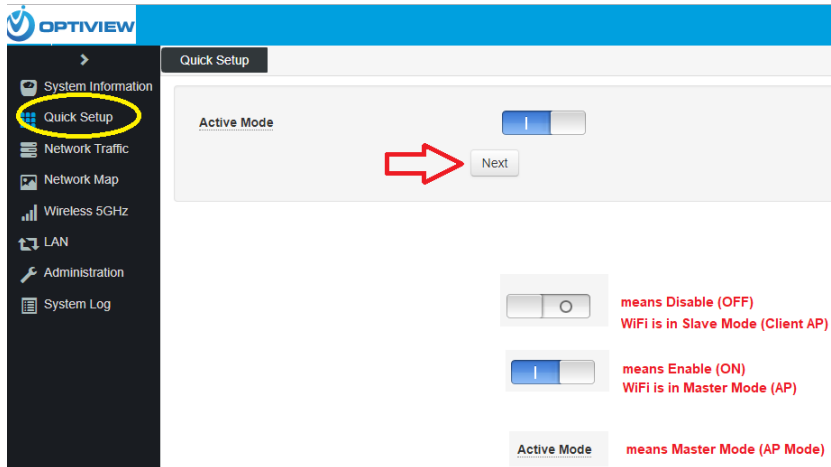
- a. Setup through Quick Setup menu screen
- b. Wireless 5GHz menu screen



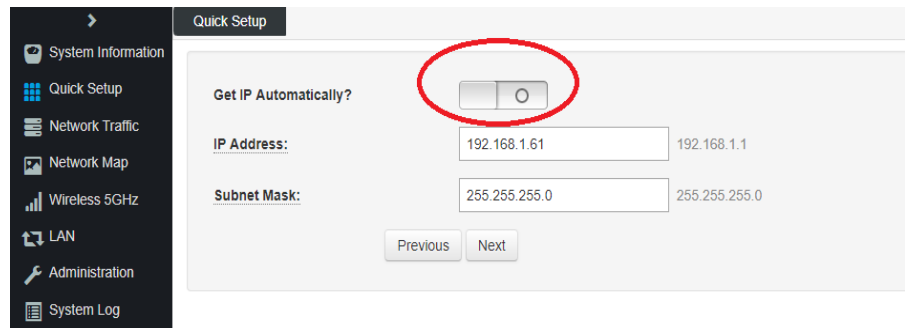
**Master mode configuration (also known as AP Mode)**

1. Enter the “Quick Setup” menu; turn ON or OFF the **【Active Mode】**. “O” means the master mode is turned OFF and the WiFi is now in “Client” Access Point mode. Otherwise, leave it ON position to set it up in Master AP mode. Click “Next” to go to the next networking menu screen.

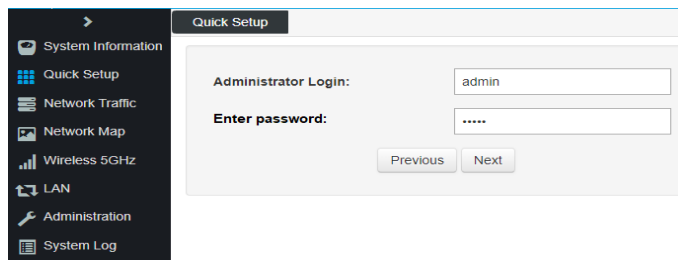




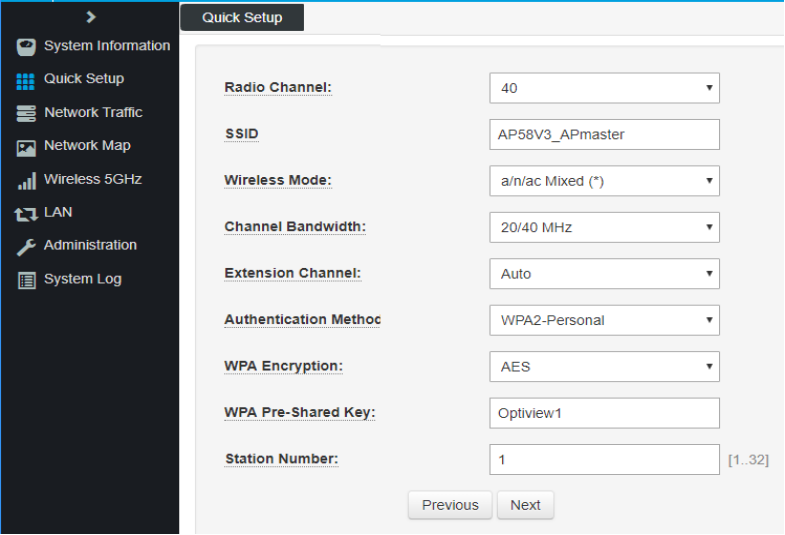
2. Disable DHCP by turning OFF the function labeled as “Get IP Automatically”. Enter your own local IP address and subnet mask for access point as illustrated below then click “Next” for the next menu screen.



3. Enter your password (default password: admin).



3. Enter Wireless Access configuration and customize according to your local preference or application.



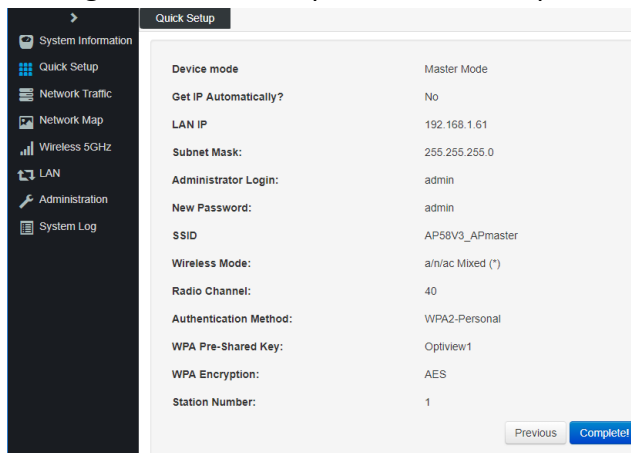
The screenshot displays the 'Quick Setup' configuration page for a wireless access point. The left sidebar contains navigation options: System Information, Quick Setup (selected), Network Traffic, Network Map, Wireless 5GHz, LAN, Administration, and System Log. The main configuration area includes the following fields:

Radio Channel:	40
SSID	AP58V3_APmaster
Wireless Mode:	a/n/ac Mixed (*)
Channel Bandwidth:	20/40 MHz
Extension Channel:	Auto
Authentication Method	WPA2-Personal
WPA Encryption:	AES
WPA Pre-Shared Key:	Optiview1
Station Number:	1 [1..32]

At the bottom of the configuration area, there are 'Previous' and 'Next' buttons.

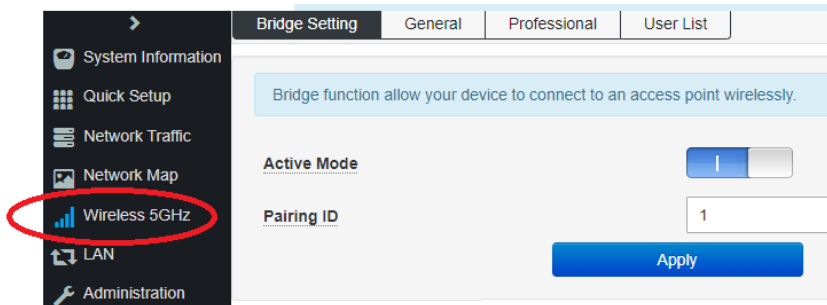
- 4.1 Radio Channel – should match later on with the partner access point;
- 4.2 SSID – you may customize your SSID name for later WiFi identification;
- 4.3 Wireless Mode – select your preferred mode: a/n/ac or mixed;
- 4.4 Channel bandwidth – this setting is preferred to match the partner access point;
- 4.5 Extension channel – leave it in Auto mode;
- 4.6 Authentication & Encryption mode – select your preferred WIFI authentication and data encryption mode.
- 4.7 WPA Pre-shared Key – enter your own key or passphrase.
- 4.8 Station number/Max. Users – assign number of client stations to be linked to the master or number which will be an identifier for this AP. **If this value remains at 1, there will only be 1 master-client units that can be linked together.**

5. Review settings and click “Completed” to finish quick setup.



6. Click “Wireless 5GHz” and set the pairing ID for the access point.

**IMPORTANT! → Pairing ID must match with the partner access point**



#### Important Wireless Bridge Notes:

- Master and slave's pairing ID must be the same;
- Master and slave channel must be consistent;
- The master and slave wireless passwords must be the same;
- Point-to-multipoint mode must be configured in the same way for all access points, and the Pairing ID number of each slave must be the same as that of the Master AP.
- Max. Users or Station Number must be higher than 1 if linking more than one AP Clients to the AP Master (see page 10). AP Clients must do a Scan Search and connect to the AP Master after the Max. Users has been set up.