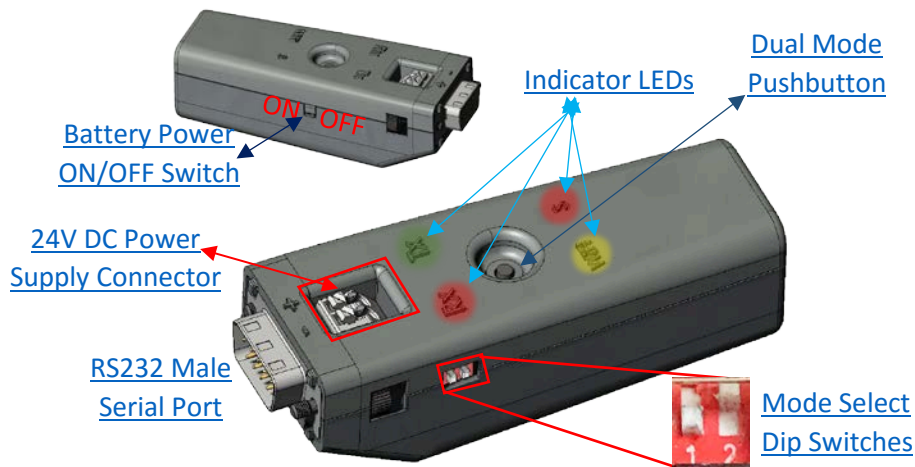


## AVG WiFi Module

AVG WiFi module allows you to connect over Wi-Fi to serial ports of AVG devices. The module is simple to setup and after the module is setup once then it never needs to be setup again and will remember the IP address that was assigned to it. The module is also easy to use with either a direct 24 V DC power or 2 AAA battery option.

### Features:

- Wi-Fi to serial bridge, specifically designed for AVG products, with Adhoc (AP) or Infrastructure (STA) modes
- Serial parameters preset to AVG serial port defaults
- 24 V DC power supply or option to use 2 AAA Batteries



### Help Topics

[How to install battery?](#)

[How to find current module IP address?](#)

[How to use with AVG Products](#)

[Configuring Infrastructure setup \(use existing WiFi router – STA mode\)](#)

[Configuring direct connection setup \(Adhoc setup – AP mode\)](#)

[How to upgrade Firmware](#)

[Frequently Asked Questions \(FAQs\)](#)

[License](#)

### Indicator LEDs

LED	Color	Blink Pattern	Function
Tx	Red	Flashes based on transmit speed	Module is currently transmitting serial data
Rx	Green	Flashes based on receive speed	Module is currently receiving serial data
S	Red	On for 1 second, off for 1 second	Find IP address Mode entered, hold dual mode pushbutton for 3-5 seconds
		Flashes once every 1/4 second	Reset to factory default, hold dual mode pushbutton for 10-13 seconds.
		Solid Light	Adhoc - AP (Access Point) Mode
WiFi	Yellow	On for 5 seconds, short off	Infrastructure - STA (Station) Mode
		Flashes once every 1/4 second	Not Connected to Wi-Fi Network
		On for 1 second, off for 1 second	Connected to Wi-Fi Network but no IP Address assigned
S & WiFi	Red & Yellow	Combination of S and WiFi LED Blink Pattern	In dual AP + STA mode. Will transition into this mode using the dual mode pushbutton if held for 3-5 seconds. The yellow LED will indicate the STA (Station) Mode status. If connected to Wi-Fi Network and have IP address then will transition to just STA mode after 1 minute.

### Dual Mode Pushbutton

To enter find IP address Mode: Press button and hold for 3-5 seconds. Red S LED will blink once per second.

Reset to factory default: Press button and hold for 10-13 seconds. Red S LED will start blinking very fast.

### Battery Power ON/OFF Switch

If you have installed 2 AAA batteries following this [procedure](#) then this switch is used to turn power ON / OFF. Power is ON when the switch is further away from the RS232 Serial Port.

When power is turned ON WiFi, S, and the Tx Indicator LEDs will always turn ON for a second. Then one LED will always be ON or Blinking.

If using 24 V DC power supply then EZ-WiFi module is always ON.

### Mode Select DIP Switches

DIP Switch	Function	Position	Result
1	Factory Programming	OFF (DOWN)	Normal Position do not change
2	Mode Change	ON (UP)	Adhoc Mode (Access Point [AP] Mode)
		OFF (DOWN)	Infrastructure Mode (Station [STA] Mode)

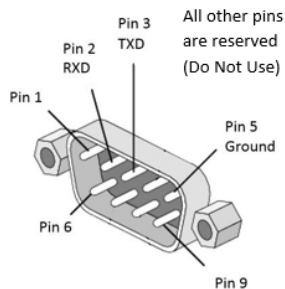
### RS232 Male Serial Port

Use to plug and screw into serial port on Panel or Marquee.

**EZ-WiFi RS-232**

Pin	Function
2	RXD
3	TXD
5	GND

**D-sub 9-pin Male**



### 24V DC Power Supply Connector

Allows for 24 VDC power to be supplied to unit for long term setup.



## How to Install Battery?

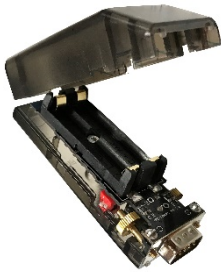
[<< Next](#) – [Main](#) – [Back >>](#)

To replace or install 2 AAA batteries follow directions below. Batteries should last approximately 10 hours of continuous operation (constantly monitoring or transmitting information).

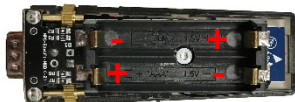
1. Press tab on back of EZ-WiFi unit.



2. Take off bottom of unit.



3. In the back of unit put in the 2 AAA batteries based on directions in unit



4. Replace back plastic and press together till here click of unit closing. Now you can turn ON and OFF the module using Battery Power ON / OFF Switch. Power is ON when the switch is further away from the RS232 Serial Port.

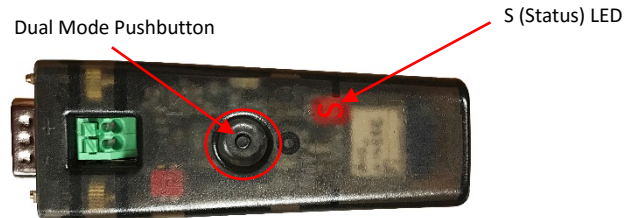


## How to find current module IP address?

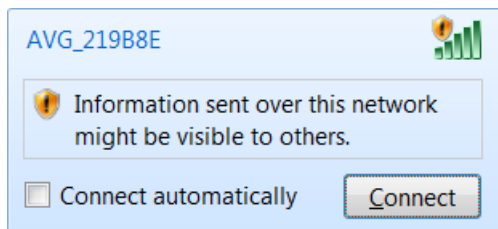
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This procedure is for when an EZ-WiFi module has been setup for Infrastructure Mode (STA mode) and you have forgotten the IP address assigned to the EZ-WiFi module. This method is also to be used to change the static IP address and the WiFi Router settings.

1. Press and hold the pushbutton for 3-5 seconds till the S (Status) LED starts blinking



2. The EZ-WiFi module is now in AP+STA mode for 60 seconds. This allows you to connect using a WiFi enabled device to the access point. Search for AVG\_##### WiFi Network.



3. Next using web browser access the EZ-WiFi Access Point/Serial Bridge IP address which is 192.168.4.1.
4. Now on the main screen the WiFi State item will show the current EZ-WiFi IP address and other settings.

**WiFi State**

In STA (Station) mode, the module and your PC, both connect to a WiFi Router. The module acts as a station or client to the router. The PC connect to the module via the router.

Configured network AVG	
WiFi status	got IP address
WiFi address	10.1.200.90
WiFi MAC	5c:cf:7f:21:9b:8e

Switch to [STA mode](#)

5. You can also change the settings on the WiFi router or even change to a different static IP. Note you do only have 60 seconds total till the EZ-WiFi will go back to STA mode.

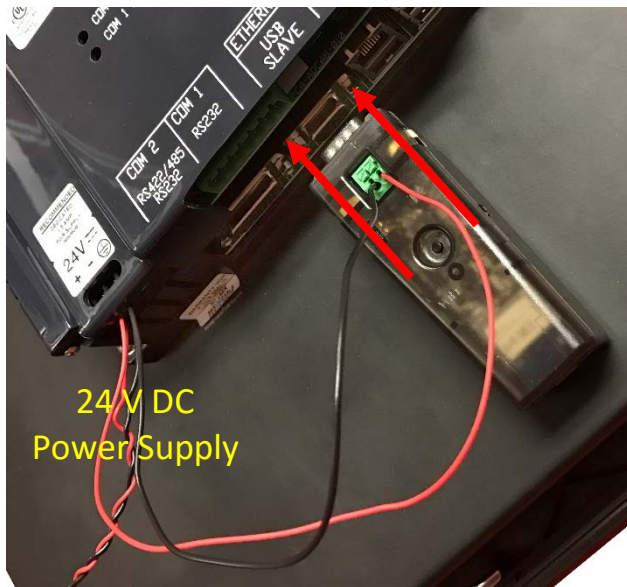


## How to use with AVG Products

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### Connecting to EZ Panel HMI

1. To use the EZ-WiFi module with an EZ Panel HMI just plug the module into the RS-232 port on the HMI. For power the 24 VDC from the EZPanel can be used for the EZ-WiFi module. But the 24 VDC is not needed could instead use the EZ-WiFi module with 2 AAA batteries instead.



2. Turn on power for the EZ-WiFi module. Then connect using the correct way for adhoc mode (AVG\_##### and 192.164.4.1) or infrastructure mode (use module IP address). For setup of these modes see [Adhoc setup](#) or [Infrastructure setup](#).
3. Now in the EZTouch Editor Software select the correct communication channel and then you can download to the panel.
  - Adhoc (AP mode) – Use AVG WiFi (Adhoc) selection in PC to Panel Connection.
  - Infrastructure (STA mode) – Use Ethernet and in Specify IP put in the module IP Address

**Adhoc  
(AP mode)**

PC to Panel Connection

Serial

Ethernet

Local Host

AVG WiFi ( Adhoc )

Ethernet (EzEther)

Modem

Check AVG WiFi  
[192.168.4.1/10001]

**Infrastructure  
(STA mode)**

PC to Panel Connection

Serial

Ethernet

Local Host

AVG WiFi ( Adhoc )

Ethernet (EzEther)

Modem

Specify IP/Port...  
[10.1.200.222/10001]



## Connecting to EZ Marquee

1. To use the EZ-WiFi module with an EZ Marquee you will need a RS-232 9 pin cable with 3 wires on the other end (see diagram below). Connect the EZ-WiFi module to the EZ Marquee using the cable to connect to the RS-232 port of the Marquee. For power you can use 2 AAA batteries or you can run a 24 VDC power to the EZ-WiFi module.
2. [EZ-WiFi Pinout](#)



3. Once you have connected the EZ-WiFi module to the EZ Marquee turn on power to both the Marquee and the EZ-WiFi module. The setup should look like below. Note: Marquee should be using Baud Rate 38400.



4. Now connect using the correct way for adhoc mode (AVG\_##### and 192.164.4.1) or infrastructure mode (use module IP address). For setup of these modes see [Adhoc setup](#) or [Infrastructure setup](#).
5. Now if using the EZMarquee software you can use either the Adhoc or Infrastructure mode to communicate. For the EZPLC to communicate to the Marquee using EZ-WiFi you will need to use the Infrastructure mode for the EZ-WiFi. The EZPLC will then communicate to the module using its IP address over Ethernet.
  - a. Adhoc (AP mode) – Use 192.168.4.1 from you WiFi enabled computer to communicate to the Marquee.
  - b. Infrastructure (STA mode) – Use your setup IP address to communicate to the Marquee.



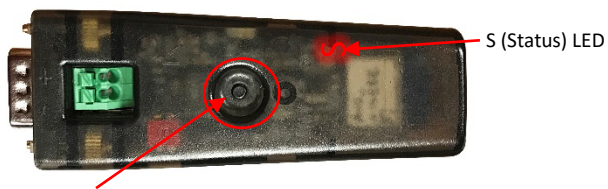
## Configuring Infrastructure setup (use existing WiFi router – STA mode)

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To configure the module to Infrastructure mode – STA mode, there are two ways. If using setup 1 please note that you need to complete the setup within 60 sec. Therefore it is recommended to use setup 2. Setup 1 is recommended to be used for changing the WiFi Router and IP Address.

### Setup 1

1. Press and hold the pushbutton for 3-5 seconds till the S (Status) LED starts blinking (DIP Switch #2 in Down position)



Dual Mode Pushbutton

2. Now the module is in STA+AP mode and will remain so for **ONLY 60** seconds. Follow directions in 3-6 of combined setup.

### Setup 2

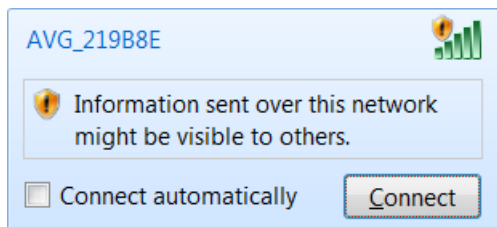
1. Put DIP Switch #2 in Up position, and **then power cycle** the unit. The module would be in AP mode.



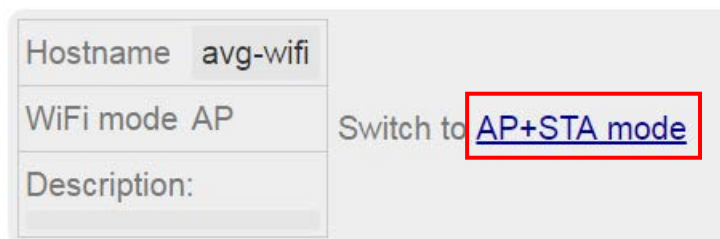
2. Now the module is in AP mode and will remain so till the module is setup. Follow directions in 3-6 of combined setup.

### Combined Setup

3. Now connect to the EZ-WiFi module using a WiFi enabled device. Use the WiFi adapter of the device to find the AVG\_##### network and connect to this access point.



4. Next using web browser access the EZ-WiFi Access Point/Serial Bridge IP address which is 192.168.4.1.
  - a. If using setup 2 then under AVG Module Overview change WiFi mode to AP+STA mode.



- Now going to the AVG Module to Other WiFi Router Connection / Station Mode (STA Mode) section.
- If you would like to use a static IP enter it in the special settings area with a netmask and gateway.

**Special Settings**  
Special settings, use with care!

DHCP  Static IP

Static IP address

Netmask (for static IP)

Gateway (for static IP)

- Then in the Available WiFi Routers area find the WiFi router you would like to use with the module. Now enter the WiFi password for the WiFi Router selected. Then click Connect.

**Available WiFi Routers**  
To connect to a WiFi network, please select one of the detected networks, enter the password, and hit the connect button...

Network SSID [\[Scan again for WiFi Routers\]](#)

- DIRECT-6C-HP OfficeJet 4650
- AVG\_216EBA
- AVG
- AVG\_216ED6
- DIRECT-06-HP OfficeJet 4650
- Signtronix463086
- 

WiFi password, if applicable:

- The EZ-WiFi module will now connect to the WiFi Router. It will then use DHCP (unless Static IP entered) to request an IP address.





9. It will inform you of this IP address with a pop up. You should write this IP address down for reference.



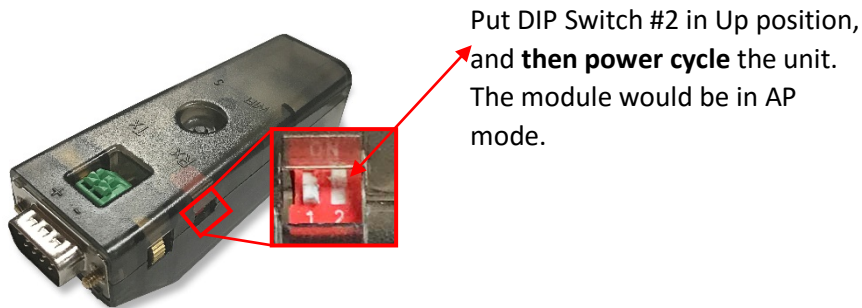
10. If using Setup 1 then you are finished and the module can be immediately used.
11. If using Setup 2 then you should turn off power to EZ-WiFi module. Change DIP switch #2 to the Down (OFF) position. Then turn on power.
12. The module can now be used with the IP address assigned to it. To transfer or communicate to a panel using this setup select Ethernet in PC to Panel Connection area. Then just input the IP address of the EZ-WiFi module as the IP address to communicate to.



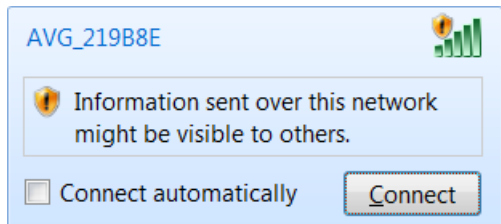
## Configuring direct connection setup (Adhoc setup – AP mode)

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To configure the module as Adhoc – AP mode, Position the Mode select DIP Switch as shown below. On Power Up, the module would be in AP mode.



In Adhoc setup – AP mode, the module acts as Access Point. Your computer will use its Wi-Fi connection to connect to the access point. Search for AVG\_##### WiFi Network. The IP address of the Access Point/Serial Bridge is 192.168.4.1. The computer should be in DHCP mode.



Once connected the AVG WiFi module can be now directly used to transfer/communicate with the panel. To transfer using EZTouch Editor 1.0, select the AVG WiFi option in PC to Panel Connection setup area.



## How to upgrade Firmware

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If there is ever a need to upgrade firmware of the EZ-WiFi module please place the module in AP mode and then connect to it. Then follow the direction below.

1. Using web browser access the EZ-WiFi Access Point/Serial Bridge IP address which is 192.168.4.1.
2. Once on the website go to the sidebar on the left and choose Upgrade Firmware.
3. On the website follow the direction there. In the case below browse to the user2.bin file provide for the Firmware upgrade using the Choose File option. It will request the user1.bin file the second time or vice versa. **Please make sure to update twice so that both user1 and user2 are the newest version.**

**Upgrade Firmware**

Firmware Info

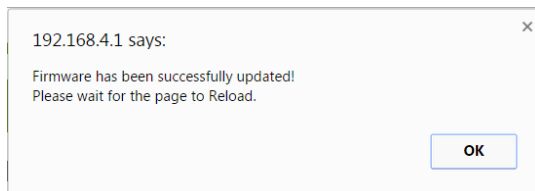
Current firmware: 1.0

Make sure you upload the file called: **user2.bin**

Firmware File

No file chosen

4. Now click Update the firmware. The firmware will be update and it will inform you that it has been successfully updated.



5. All settings should usually be retained. If settings are reset then follow direction here to redo settings for infrastructure mode: [Directions](#).



## Frequently Asked Questions (FAQs)

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### How do I tell what mode the module is in?

The WiFi and S LED has different states based on the module mode. See defined states below:

#### WiFi LED – STA (Station) mode

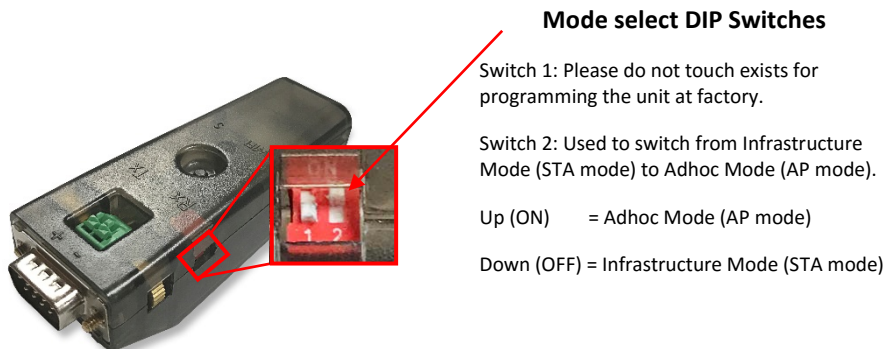
Connected to Wi-Fi Network and ready to use:	WiFi LED is ON for 5 seconds, blinks
Connected but no IP Address	WiFi LED is ON for 1 second, OFF 1 second
Not connected to Wi-Fi Network	WiFi LED is ON for ½ second, OFF ½ second

#### S LED – AP (Access Point) mode

Configured and ready to use:	S LED is ON solid red
------------------------------	-----------------------

### How do I switch modes?

The DIP Switch #2 position determines which mode you are in, STA or AP mode. You can also change modes using the web interface.



The web interface allows for changing to STA+AP mode. From this mode you can then change to AP mode again or STA mode. Note that if a WiFi Router is defined and the module can connect to it then STA+AP mode will switch to STA mode with 60 seconds.

### The module is already configured in STA mode. How do I find out its IP address?

Press and hold the pushbutton for 3-5 seconds till the S (Status) LED starts blinking. The EZ-WiFi module is now in AP+STA mode for 60 seconds. This allows you to connect using a WiFi enabled device to the access point. Then using web interface you can see the IP address when going to 192.168.4.1.

### How do I reset the EZ-WiFi module?

Press and hold the pushbutton for 10-13 seconds till the S (Status) LED starts quickly blinking. The EZ-WiFi module is now reset to factory settings.



## How do I upgrade my EZ-WiFi module?

Please follow directions in the [How to upgrade Firmware](#) section.

## Can I password protect my EZ-WiFi module Adhoc connection?

Yes the EZ-WiFi module Adhoc connection can be password protected. Use the AP settings area to decide on the Authorization Mode type and the password for the Adhoc connection.

### AP Settings

AP main settings, use with care!

AP SSID

AVG\_219B8E

AP Password

AP Auth Mode

AP SSID hidden

[Change AP settings!](#)

## Marquee not displaying message sent to it?

Please make sure that the EZMarquee is using Baud Rate 38400 when communicating.

## What to do if you need help or have more questions?

Although most questions can be answered by consulting the EZ-WiFi Help, you may find additional answers on our web site at [www.EZAutomation.net](http://www.EZAutomation.net). However, if you still need assistance, please free to call our technical support, Monday through Friday between 6:00am to 12:00pm CST at 1-877-774-EASY.

**Tech Support: 1-877-774-EASY**



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