ez**WIFI** Planner
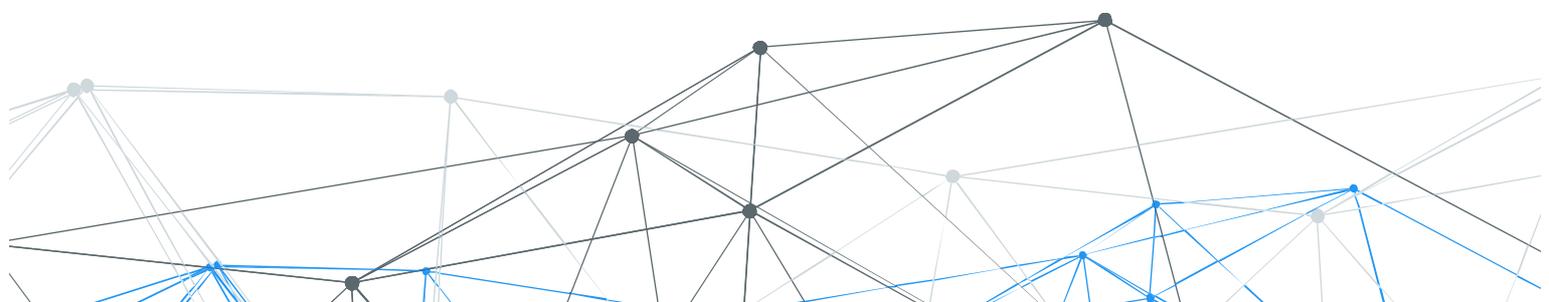
The Intuitive Web-Based Wi-Fi Planning Tool

User Manual   V 1.0

Overview

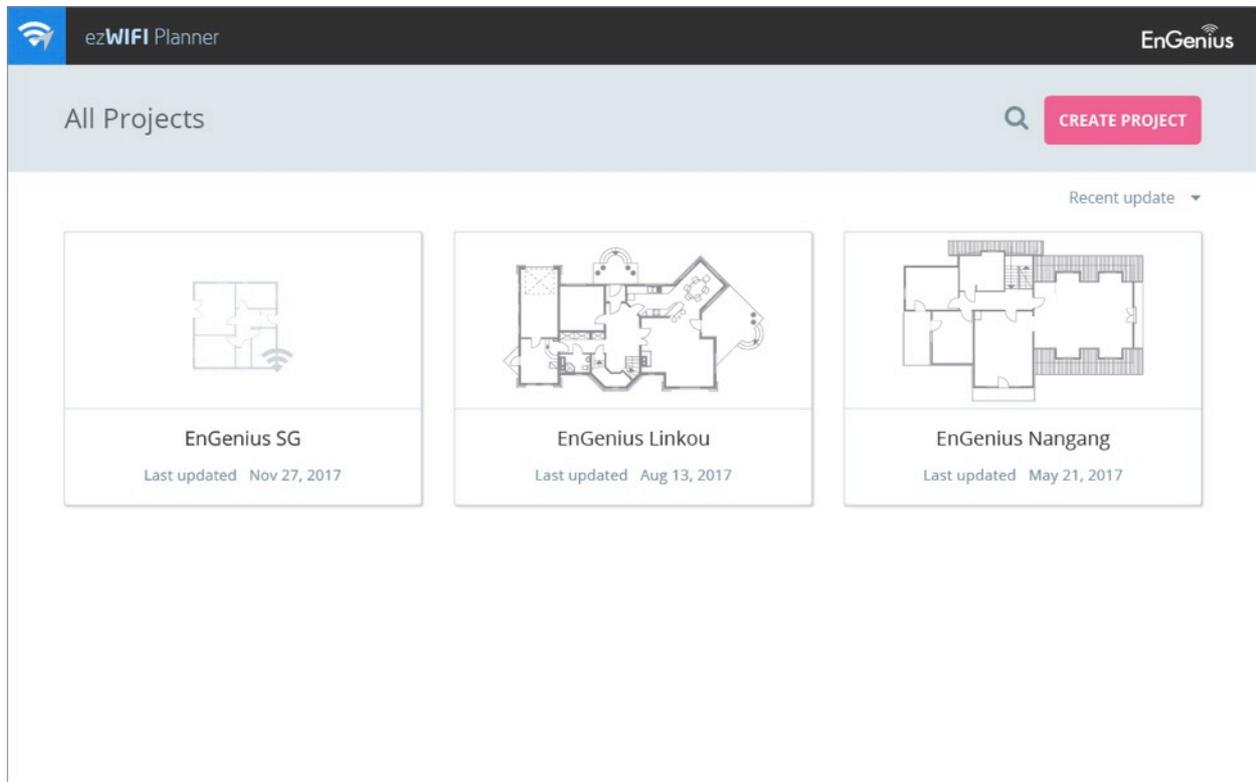Tools to simulate wireless deployment with EnGenius wireless products.

- Upload floor plan & set up environment parameters
- Place APs on floor plan (auto / manual)
- Adjust AP location and parameters
- View planned result (inventory / heatmap)
- Export report

Managing Wireless Projects

You can create different projects for different customer sites and deployments.

- Create Your Project

    a. Click the "***CREATE PROJECT***" button to create a new project

    b. Add a name for this project

    c. Specify the country for this project, this would apply different Wi-Fi regulations when system optimize Wi-Fi channels for AP placement.

    d. After creating the project, mouseover the project info card and click "***VIEW PROJECT***" to start your upload for floor plan

- Manage Your Project

    a. **Quick Overview of Project**
       Mouseover to each project's info card and you would see a list of general project information:
       - Country of project
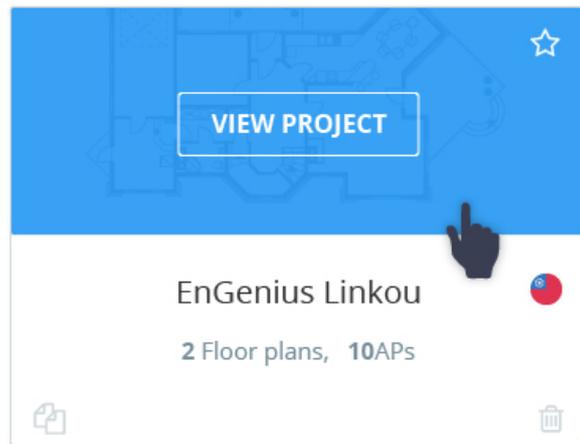   - Total floor plans within the project

- Total APs placed on floor plans of project

b. Duplicate Project

Mouseover project info card and click "⧉"
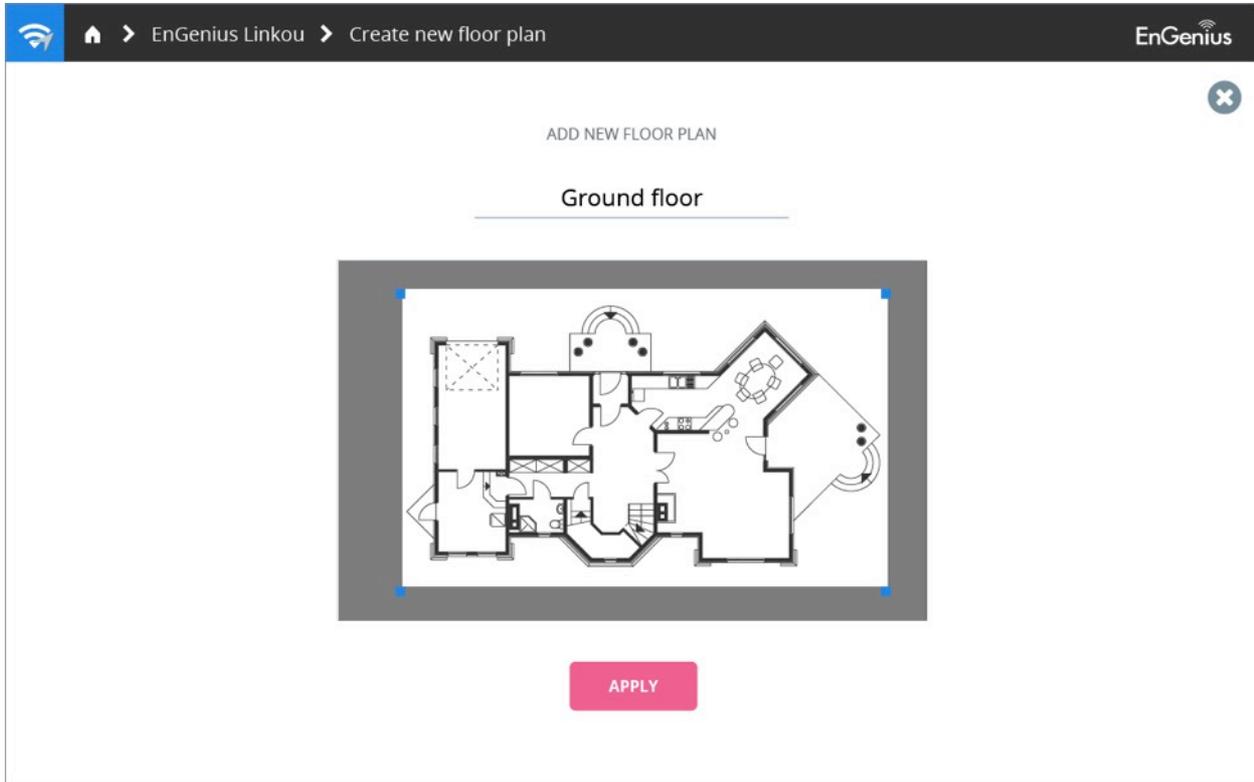
c. Delete Project

Mouseover project info card and click "🗑"

Creating Floor Plan For Project

You can upload multiple floor plans for your project based on the requirements of the customer's deployment. Floor plans can be subject to: areas, floors and buildings.

- Upload Floor Plan
    - Click "✚ Add" to upload image of floor plan
    - Add a name for the floor plan
    - Select image file from your PC or drag & drop image to screen
    - Supported image format: PNG, JPG and GIF image size limitation is10MB
        - Click the corner of the blue rectangle and crop your floor plan for deployment if necessary
   - Click Apply

- Scale Floor Plan
    - Click "**SET SCALE**" and draw a line on floor plan
        - You will want to set the scale based on the **longest vertical distance** on your project. Ex: The longest wall within your project
    - Specify the length of the drawn line in "feet" or "meter"
    - Click Apply to set the scale for your project
    - If you need to reset you scale at any point, click on "reset scale"

- Modify Project
    - Right-click your *"floor plan"* and you can rename/ duplicate/ delete this floor plan

Setting the Environment for the Floor Plan

After you scale the floor plan, you need to set up environment parameters to resize your floor plan to reflect original space.
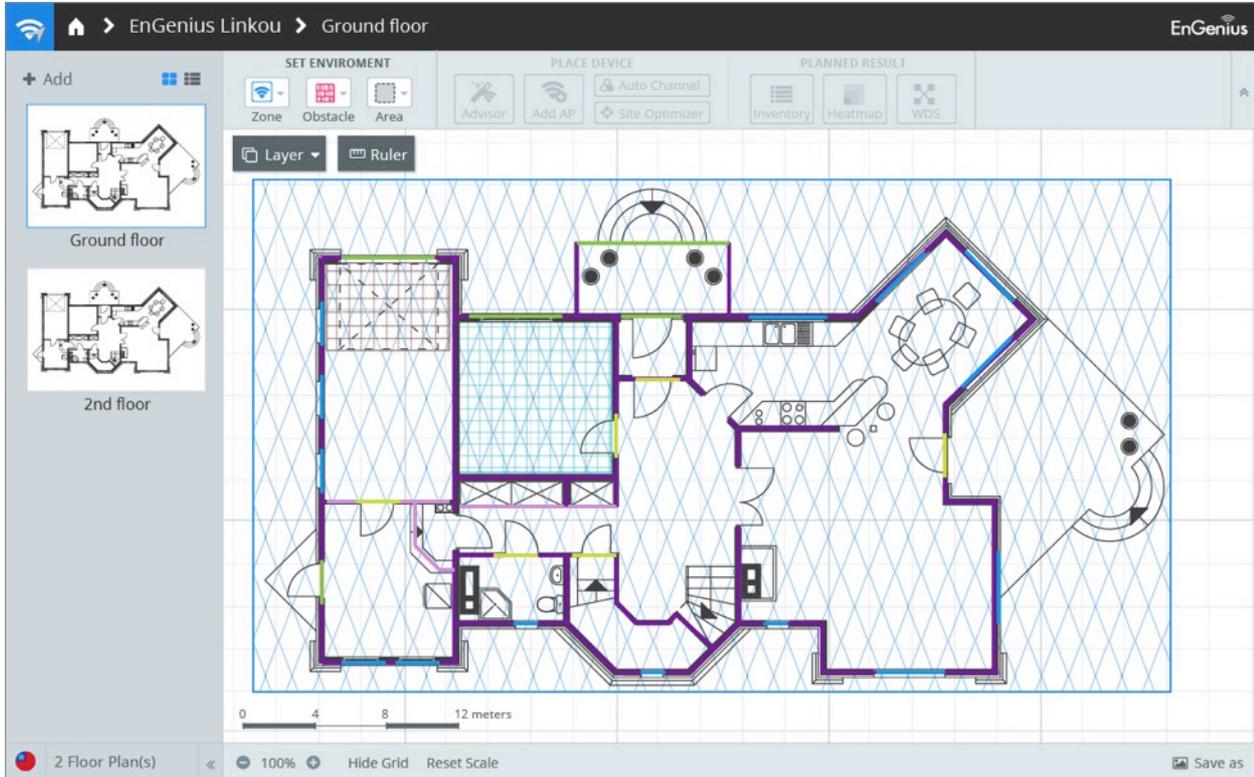
- Identify WiFi Zones

   a. To specify areas that need Wi-Fi Signal coverage, select "+ *Wi-Fi Coverage Zone*" and draw a rectangle area on floor plan
      - You can have multiple Wi-Fi coverage zones drawn out on your floor plan
   b. To specify any area that you are not able to install APs, select " — *AP   Exclusion Zone*" and draw exclusion zone areas on your floor plan
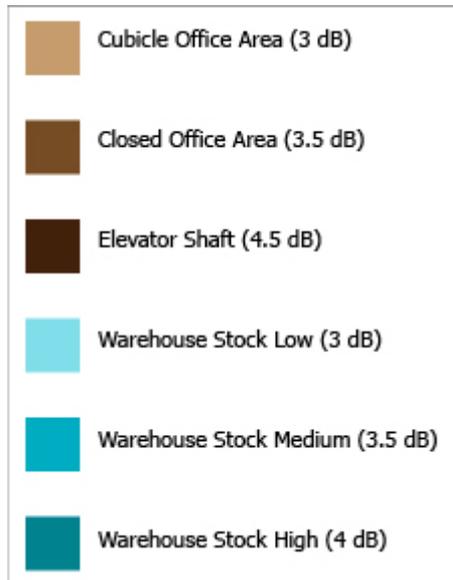
- Setup Environment Obstacles

   Different interior textures and materials have different impacts on constricting Wi-Fi signals

	Dry Wall (4 dB)
	Wood Wall (4dB)
	Plastic Wall (4 dB)
	Glass Wall (8 dB)
	Brick Wall (8 dB)
	Concrete Wall (12 dB)
	Light Door (4 dB)
	Metal Door (11 dB)
	Heavy Door (15 dB)
	Thin Window (2 dB)
	Thick Window (4 dB)

   a. To set up obstacles on the floor plan, click "**Obstacle**" and select specific obstacle type
   b. Click & hold any point on floor plan to draw obstacle line.

- Identify Specific Area Types in Floor Plan

    Different types of areas have different attenuation impacts on Wi-Fi signal

Cubicle Office Area (3 dB)	
Closed Office Area (3.5 dB)	
Elevator Shaft (4.5 dB)	
Warehouse Stock Low (3 dB)	
Warehouse Stock Medium (3.5 dB)	
Warehouse Stock High (4 dB)	

    a. To specify those spaces which might have Wi-Fi attenuation, click *"Area"* and select different types of space and draw those areas on your floor plan

Placing APs On Floor Plan

The Wi-Fi Planner provides different ways to manage APs on floor plan. If you are not familiar with wireless deployment, there is an intelligent algorithm to place APs on the floor plan without channel conflict, reflect zone, obstacles and area settings. After using auto-placement, you can add more APs, adjust AP locations and parameters to optimize your deployment.
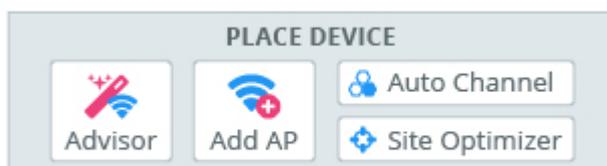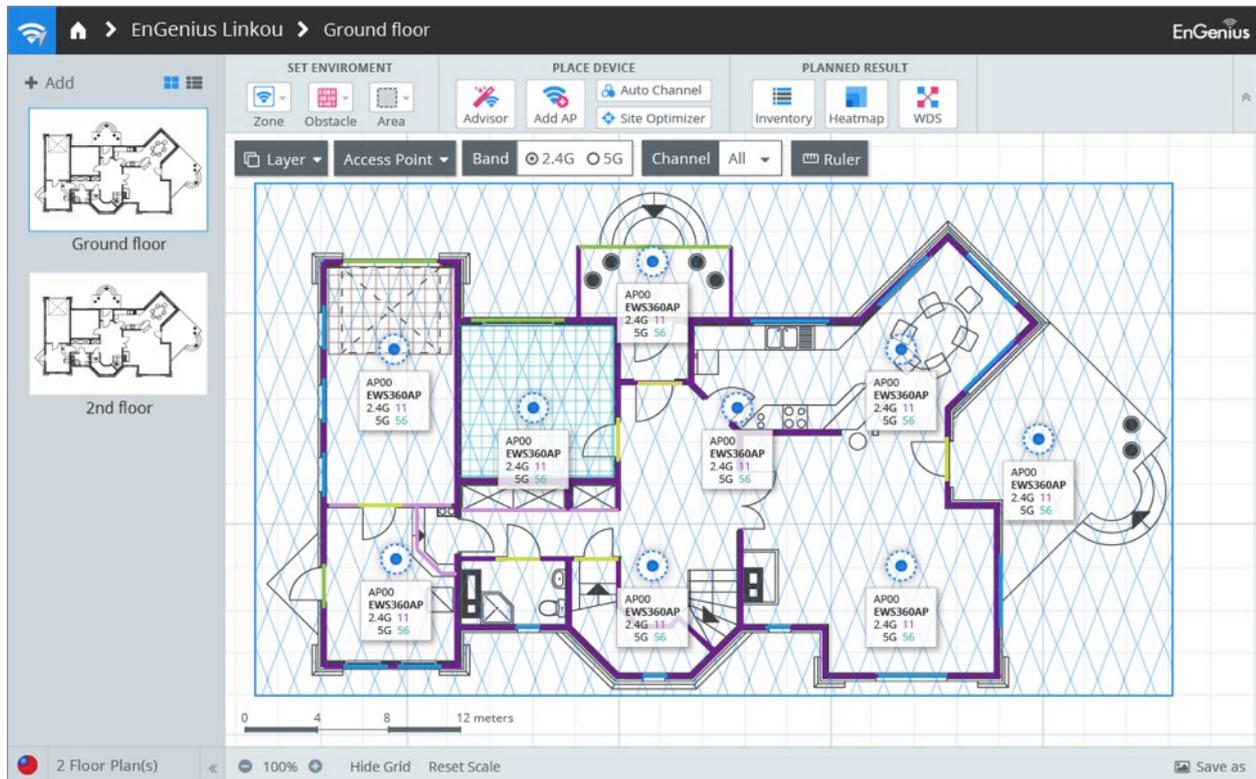
- Place Access Points on Floor Plan
  - To automatically place APs on floor plan, click "*Advisor*" and adjust parameters for auto-placement if necessary
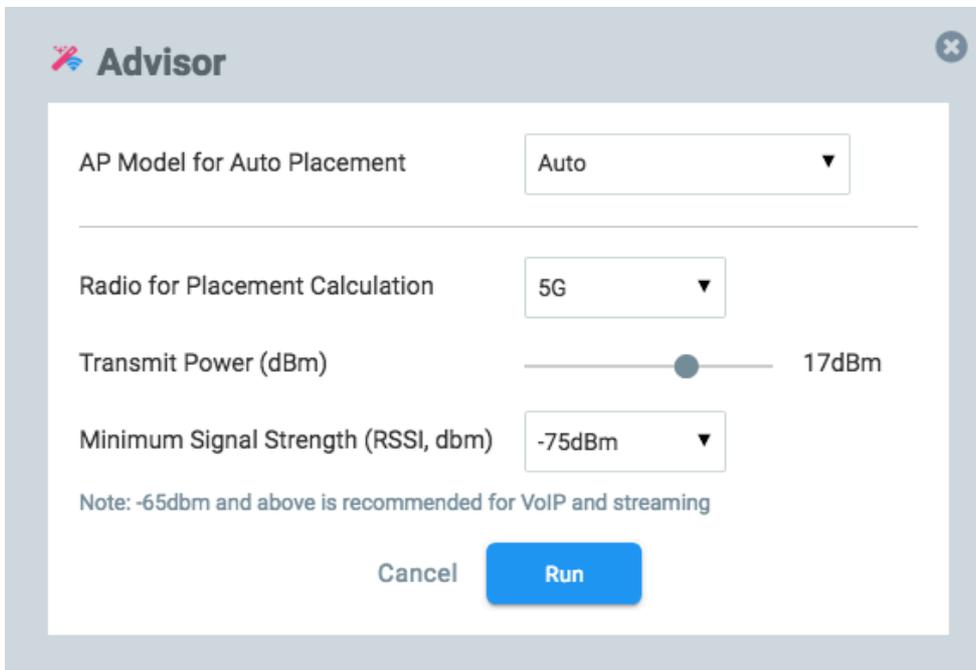
- ■ <u>AP model</u>:

  Specify AP model for auto-placement

- ■ <u>Radio</u>:

  Specify radio band for auto-placement

  EnGenius recommends planning your projects to 5GHz

- ■ <u>Transmit Power</u>:

  Specify AP transmit power to run auto-placement

- ■ <u>Minimum Signal Strength (RSSI)</u>:

  Specify the minimum RSSI for entire area with Wi-Fi signal

○ To add APs manually, click "***Add APs***" and choose specific model to add on floor plan
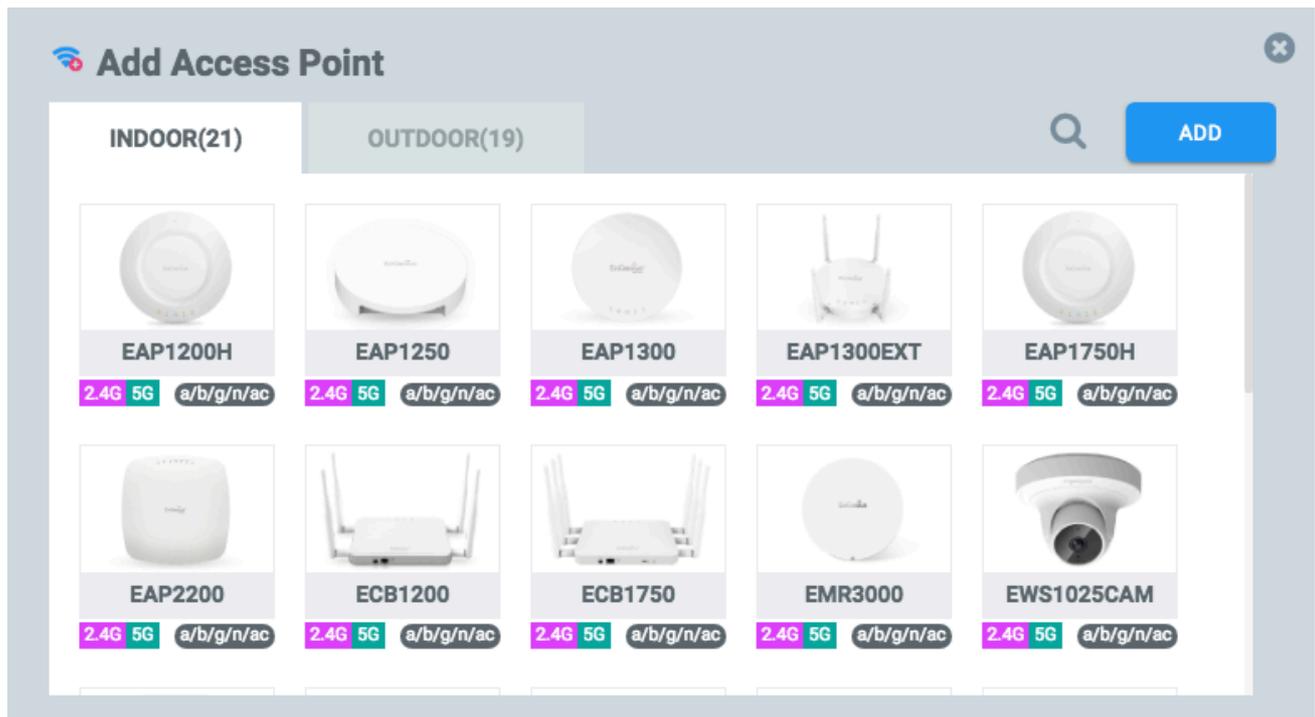
- Adjust AP Locations and Parameters
  - To move APs on floor plan, click and drag the AP icon to any location you want

  - To delete AP on floor plan, click the upper-right icon " "

  - To change AP parameters, double click on the AP icon and a pop-up window will slide out from the right for further information

The ezWIFI Planner is a predictive modeling tool.   We highly recommend that every predictive model be followed up with a site survey.

- ■ AP Property
  - ● 2.4G&5G Enable/ Disable
  - ● Specify *Channel Size* for AP
  - ● Specify particular *Channel* for AP
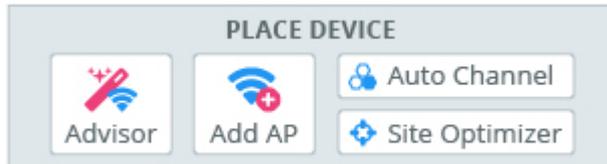 - ● Adjust *transmit power* of AP
- ■ Radio Pattern

  Show vertical & horizontal radio patterns for 2.4GHz and 5GHz bands
- ■ Antenna

  Attach external antenna to AP for heatmap calculation

Note: When making any changes on the AP, you need to click within the panel before leaving the pop-up window for data to save

- Auto-Channel Adjustment

  If you move APs to different locations or manually add APs on the floor plan after running the "**Advisor**" option, auto-placement, you can run auto-channel adjustment to avoid any channel conflict.
    - To run auto-channel adjustment, click "**auto-channel**" whenever you want to add APs on floor plan.

- Auto-Position Adjustment

  Whenever you add one or multiple APs on floor plan, you need to adjust AP locations for optimized Wi-Fi coverage on floor plan.
    - To run auto-location adjustment, click "*Site Optimizer*" to adjust all AP's location for optimized Wi-Fi Coverage.

      NOTE: If you have added various AP models to your floor plan, do not click back on "advisor" as it will change all APs back to a single model
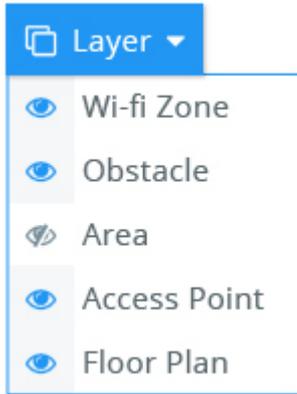
      NOTE: Site optimizer will only optimize location.   Be sure to select "auto channel" to channelize manually placed APs.
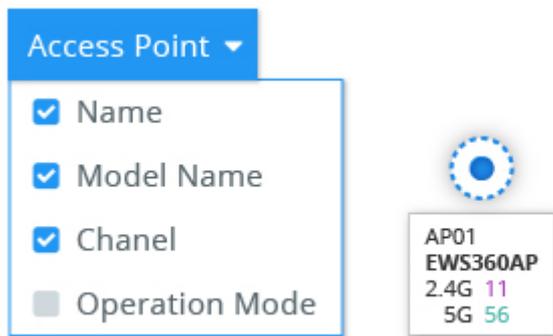
Viewing Options On Floor Plan

- Turn On/Off Different Object Layers

  You might add on different type of environment objects on floor plan, it's handy to turn on/off particular object layers for better manipulation of objects on floor plan.

- **Device Information**

  For each AP placed on floor plan, there are couple options for device information shown next to the AP icon.

- **Switch Radio Bands**

  Whenever you finish planning a floor plan with APs on it, you can switch to different radio bands to have different heatmap results based current radio band.
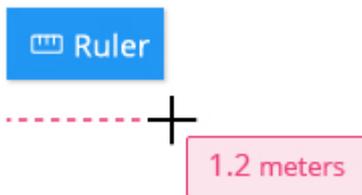

- **Specify Channel**

  Whenever you are finished planning on the floor plan with APs on it, you can have different heatmap results by specify different radio channel.
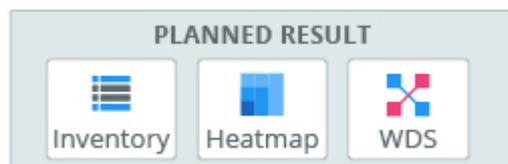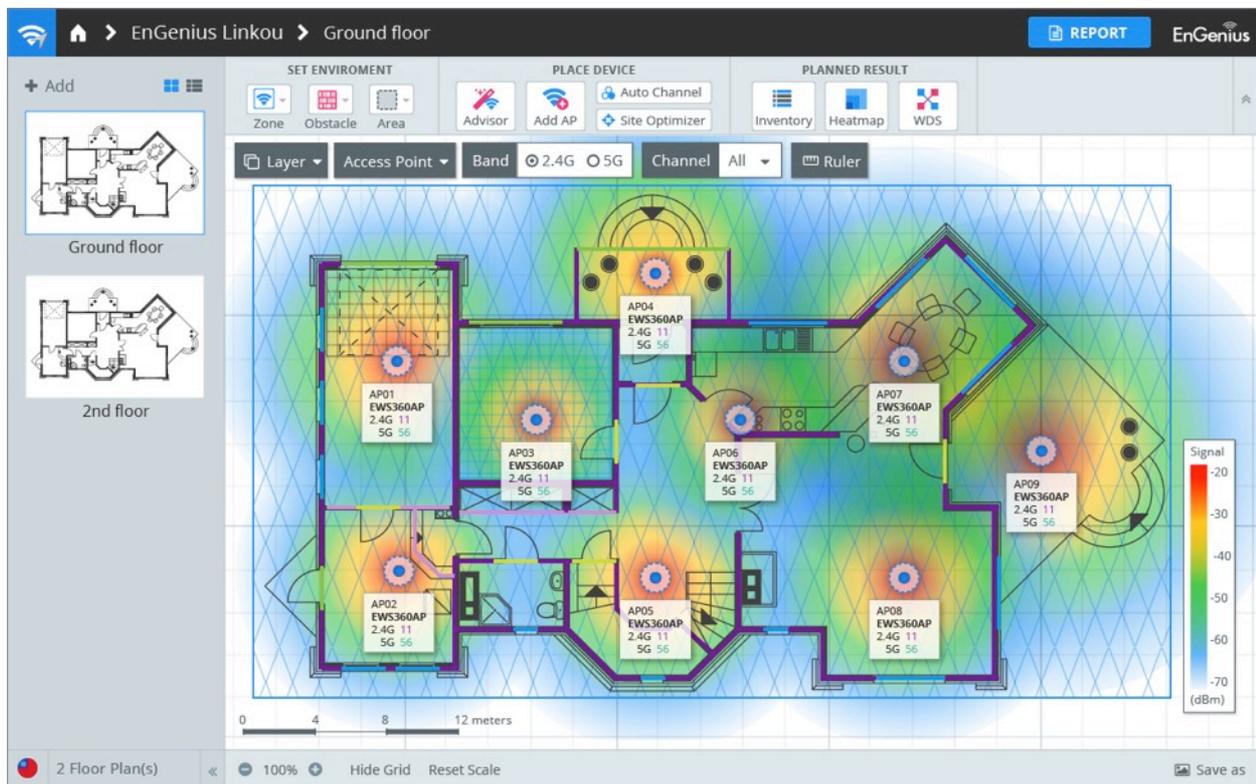
- Ruler Tool

  Ruler is a handy tool to let you know the actual distance of planned environment drawing a line on floor plan.

Viewing The Result

You can get a quick view on APs deployed on your projects as well as see heatmap and WDS coverage.

- ● See AP Inventory On Floor Plan

  - ○ To view all information on APs, click the inventory icon " " for more information. You can adjust parameters for each AP as well within the inventory view.
    - ■ Name: AP name
    - ■ Model Name: EnGenius AP model name
    - ■ Radio Band: Working radio on AP

- ■ Mode: AP operation mode

- ■ Channel: Current channel AP is working on

- ■ Channel Size: Current AP channel size

- ■ Power: Current transmission power of AP

- ■ Location: Default page is blank and you can comment on each AP as an installation cheat sheet.
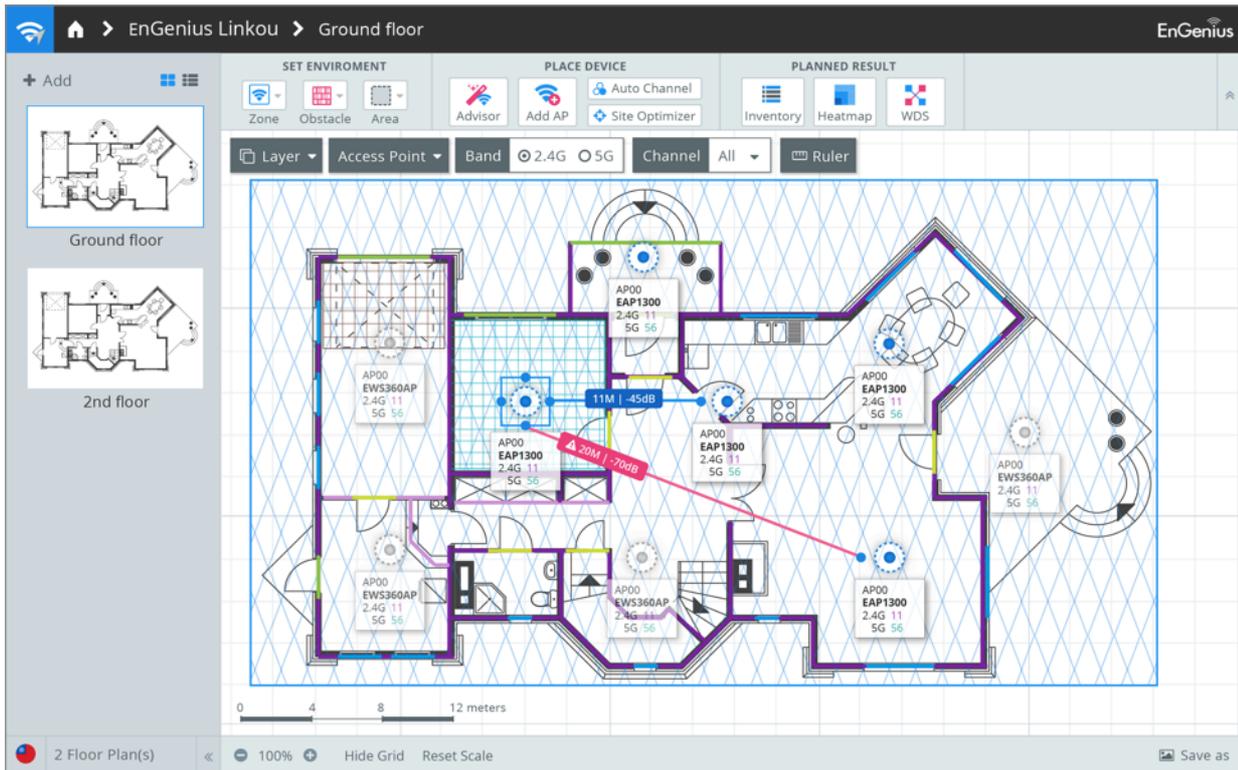
- ● See Heatmap Coverage of APs

  - ○ To view heatmap coverage, click the heatmap icon " Heatmap ". This tool enables heatmap view for Wi-Fi coverage. Each color indicates the different signal strengths.

- ● Wireless Distribution System (WDS)

To see the WDS connection between compatible devices.　WDS is most commonly used to connect 2 or more remote buildings.

- Click on "**WDS**"
  - o Click on AP you want to start the WDS connection at

    - ▪ You will see a **+** appear over the AP

  - o Drag it to the other AP you are connecting
- The WDS tool will auto calculate RSSI and distance.
  - o You can set up for PtP or PtMP

    - ▪ It will appear **RED** if the APs are too far in distance.
    - ▪ It will appear **BLUE** to indicate a positive signal strength between APs
  - o WDS can be used with any EnGenius WDS enabled device

 Note: Please ensure WDS links have adequate RF line of site

Creating a Report

The ezWIFI planner comes with a project-based report generator which covers all floor plans and perspectives. Users can choose from any specific floor plan and download them as a Word Document or a PDF.
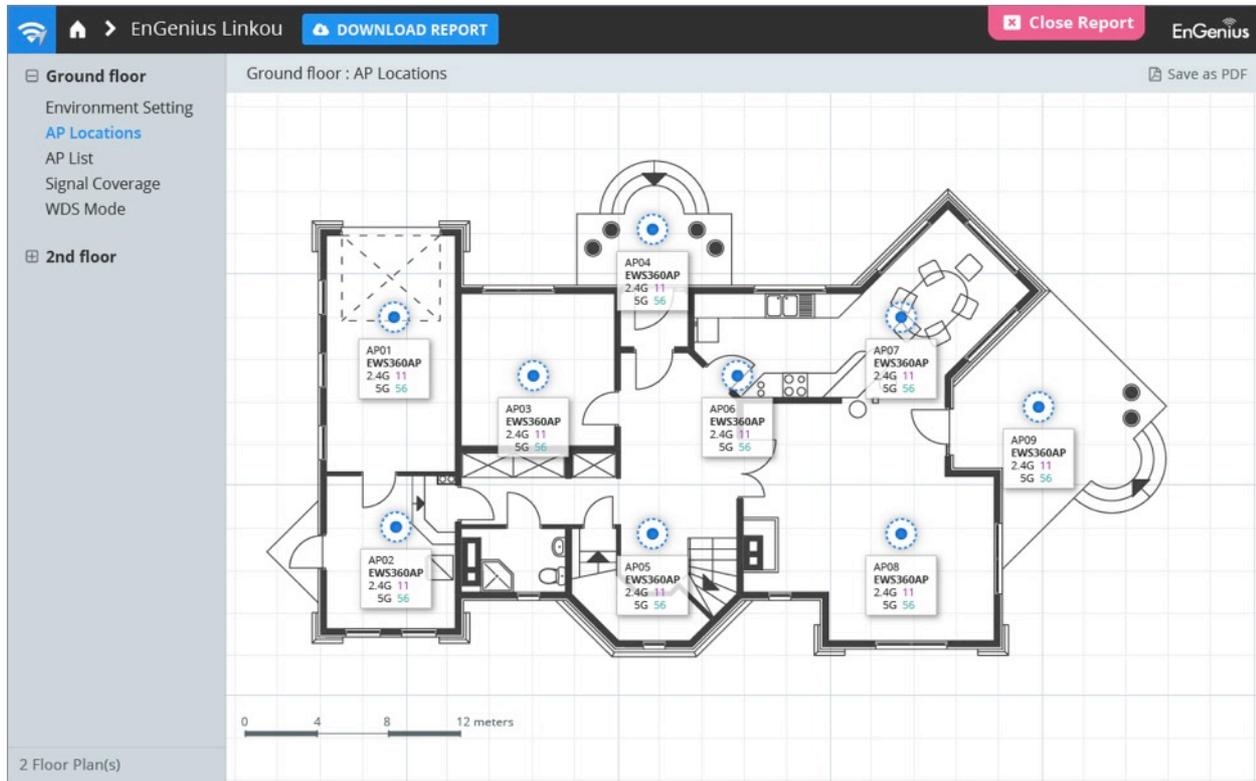
- Run Report Generator for Project
  - To view project report, click the "***REPORT***" button for all floor plans and various reports will display on the left panel
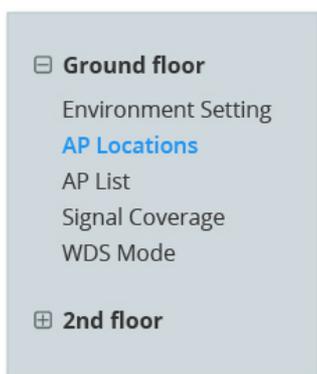
- Environment Settings: To view all existing environment parameters that has been set on floor plan, such as Wi-Fi Zones, Obstacles, etc.

- ■ <u>AP Location</u>: View all locations for APs on the floor plan without heatmap coverage
- ■ <u>AP List</u>: A table of contents for all APs on floor plan
- ■ <u>Signal Coverage</u>: Heatmap view for all APs on floor plan

- ● Download as PDF
  - ○ To download report, click "***DOWNLOAD REPORT***". You can customize content by selecting specific floor plans within your project.