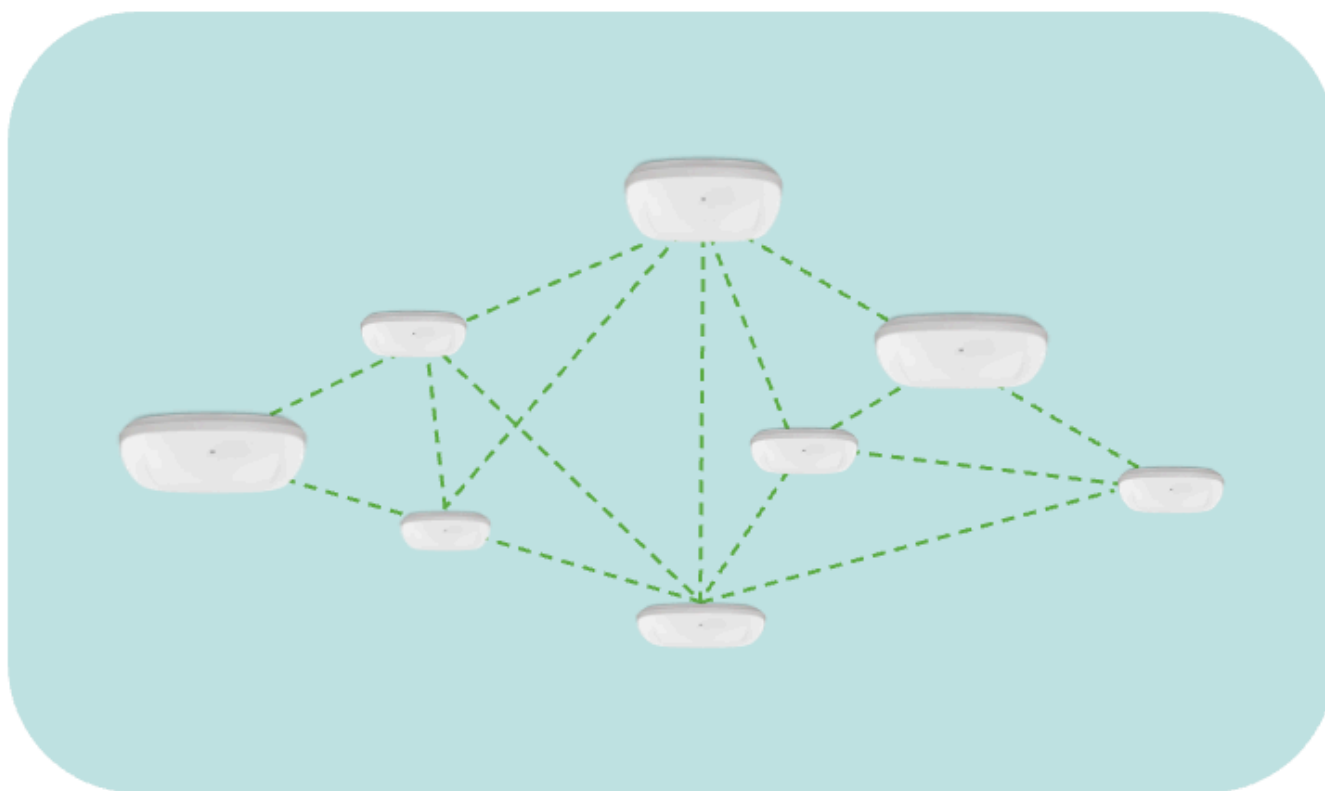

AP Auto Locate

AP Auto Locate



Network planning and deployment require significant time and effort, as each AP has to be carefully located and labeled in the network layout/floor plan. Additionally, maintaining accurate and up-to-date information about Access Point (AP) locations is an added difficulty. Time constraints, resource limitations, and the ever-evolving nature of network configurations can lead to inaccuracies that impact client device location accuracy.

AP Auto Locate automatically determines AP locations and places them on floor plans, saving time, reducing complexity, and enhancing overall network performance.

This solution delivers accurate, automated, up-to-date AP location leveraging Fine Timing Measurement (FTM) and Global Navigation Satellite System (GNSS) when available. If GNSS is not accessible, you must place a few manual anchors per floor. This feature requires an AP density such that neighboring APs can hear each other at maximum power. The accuracy of the Access Point Auto Location feature depends on the building type and the distances between APs.

Firmware

MR31 and above

Hardware

AP Auto Locate is supported on the following models:

- MR78
- MR36H
- MR36
- MR46
- MR56
- MR57 (GPS capable)
- CW9162 (GPS capable)
- CW9164 (GPS capable)
- CW9166 (GPS capable)

Anchor APs

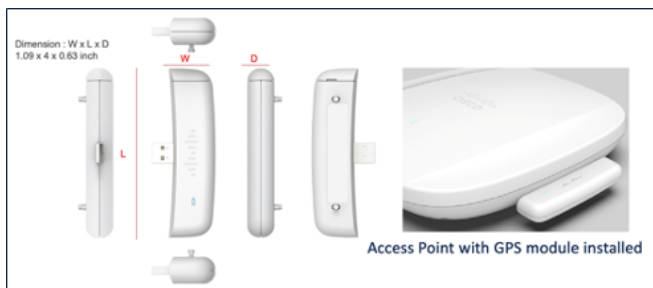
Ensure your network is equipped with a minimum of 4 anchor APs that can either have their location determined via GPS module or can be manually placed based on their relative position to serve in calculating the position of remaining APs in the network.

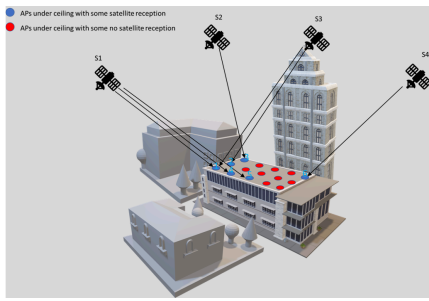
Anchor AP Placement

Compatible AP models with a built-in USB port i.e MR57, CW9166, CW9164, and CW9162 will be able to be automatically placed on the floor plan based on their reported GNSS measurements. APs without an attached GPS module can have their position manually set as an anchor on the floorplan to aid in the calculation of other AP positions on the floor.

CW-ACC-GPS1 Requirements

- Compatible with AP models with built-in USB port, i.e. MR57, CW9162, CW9164, CW9166
- Access Points (at least 1 or 2) need to be mounted where they can obtain satellite signals (e.g., near a window).



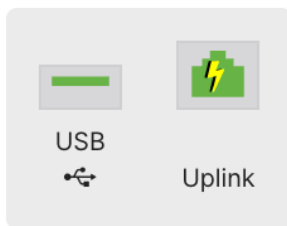


Installation

1. Insert the GPS module into the USB port of the access point.

Live data

Ports



2. Ensure the USB port is receiving power via dashboard.

GNSS Antenna Installation

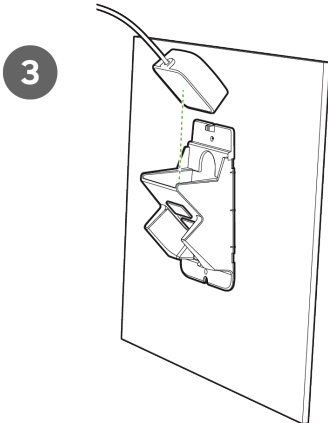
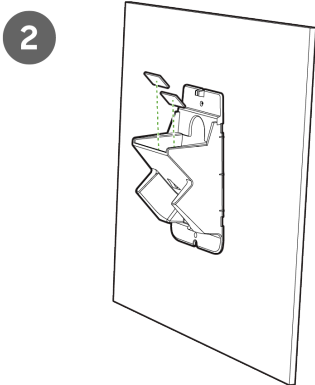
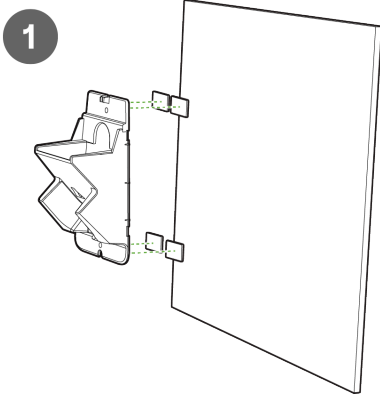
 PID: CW-ANT-GPS1-M-00

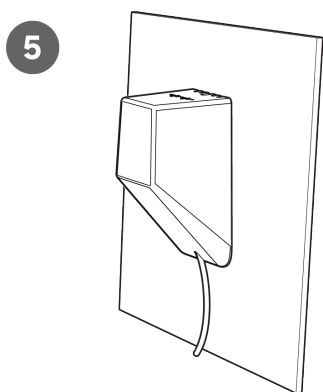
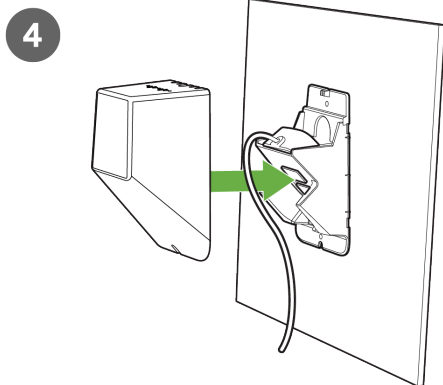
APs installed further away from a window can extend satellite reception by 10 meters by utilizing the CW-ANT-GPS1-M-00 GNSS antenna.

1. Insert the CW-ACC-GPS1 GPS module into the USB port of the access point.
2. Remove the covering on the GPS module to reveal the GNSS port and insert the antenna.
3. Determine the desired placement of the antenna bracket on a window pane that allows for a clear line of sight to the sky.
4. Apply the adhesive strips to the top and bottom portions of the bracket.
5. Apply adhesive strips to the inside of the bracket to secure the antenna.
6. Insert the antenna into the bracket and ensure proper adhesion to the strips.

7. Clip the outer casing to the bracket and thread the cabling through the case opening.

Indoor Deployment

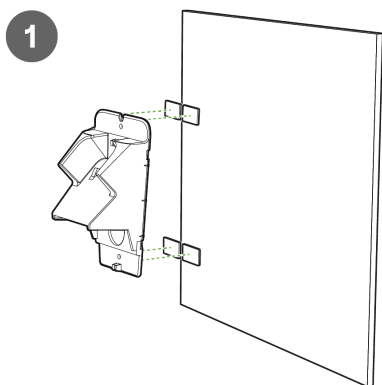


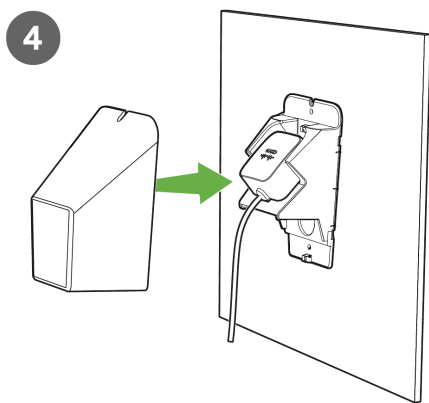
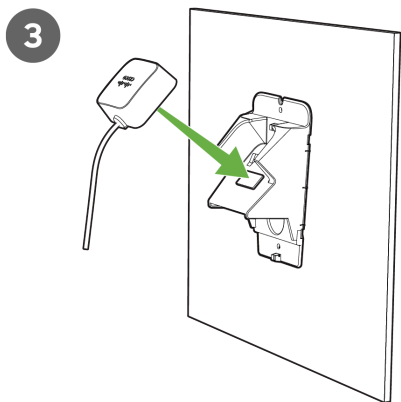
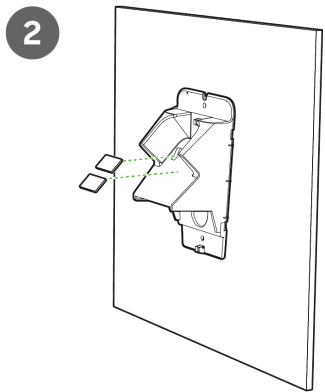


Outdoor Deployment

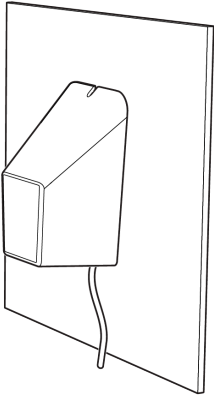


Outdoor GPS antenna deployments require a 180-degree rotation of the mounting bracket to allow the antenna to be positioned toward the sky.





5



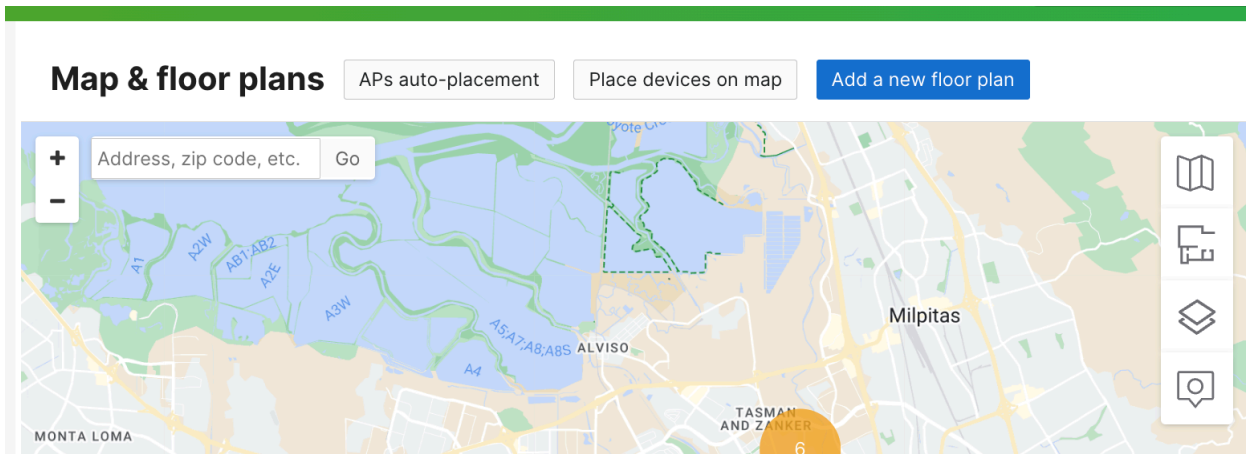
Mounting GPS-Capable Anchor APs



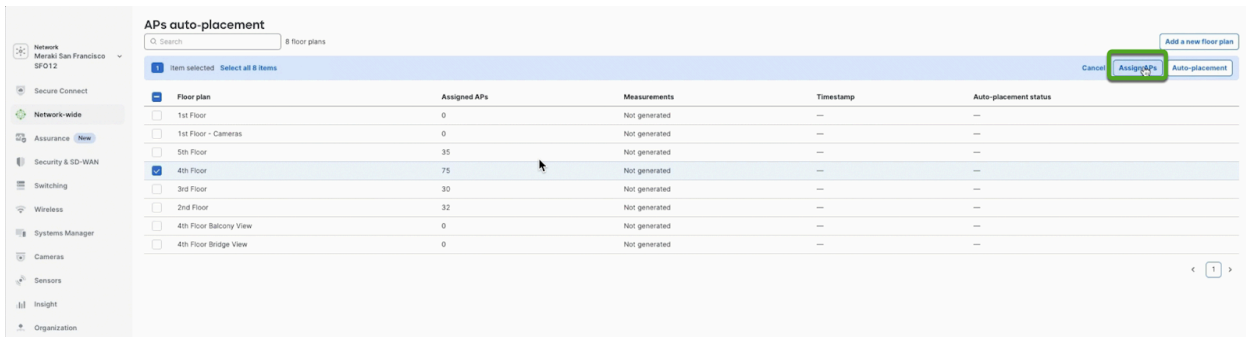
1. Ensure the AP is mounted near a window or has a clear line of sight to the sky to allow the GPS module to obtain the satellite signal.

AP Auto Locate Configuration

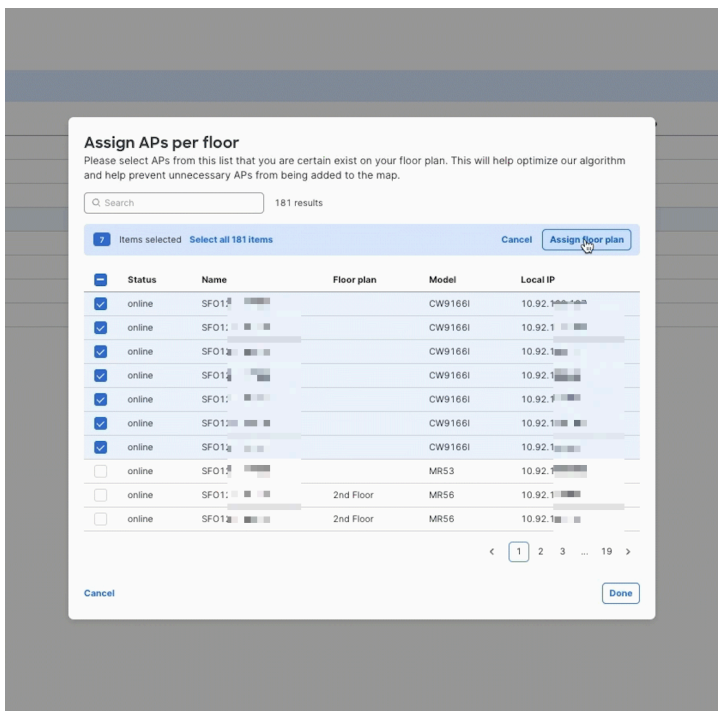
1. Navigate Wireless Network-wide -> Maps and Floor Plans,
2. At the top of the page, select "Schedule auto locate"



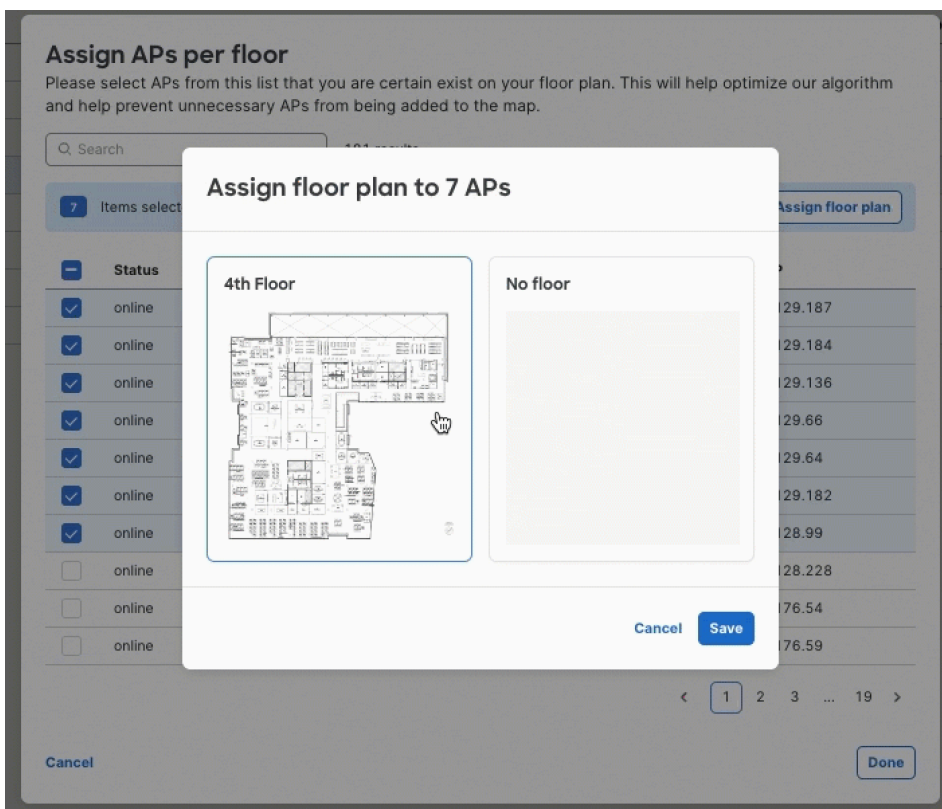
- From the provided list, select the appropriate floor plans you wish to auto-place APs to. You can either upload a new floor plan or select from the existing one.



- Select APs from the presented list that you are certain to exist on the floor plan.
- Click Assign floor plan



6. Select the floorplan to assign APs to.



7. Click Save.

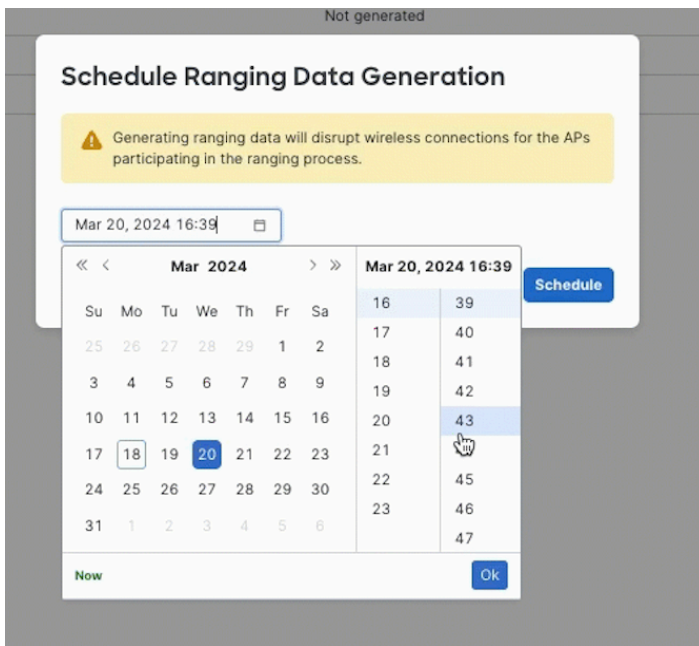
8. Once the Assign APs pop-up closes, select Done.

9. On the floor plan list screen, select Auto-placement.

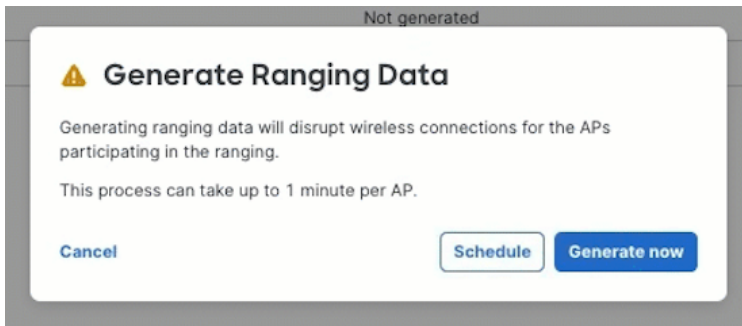


10. Choose the scheduling option to generate AP Any Locate measurement data.

1. **Schedule:** Select this option to specify a date and time to generate AP Any Locate Measurement data.



2. **Generate now:** Select this option to proceed with generating AP Any Locate Measurement data.



i Note: The RF measurement process can be scheduled to run during off-peak times to minimize impact on client performance.

11. Once a date and time are set for the floorplan's ranging process, select **Define more anchors** from the **Auto-placement status** column to be used in the ranging calculation.

APs auto-placement 8 floor plans [Add a new floor plan](#)

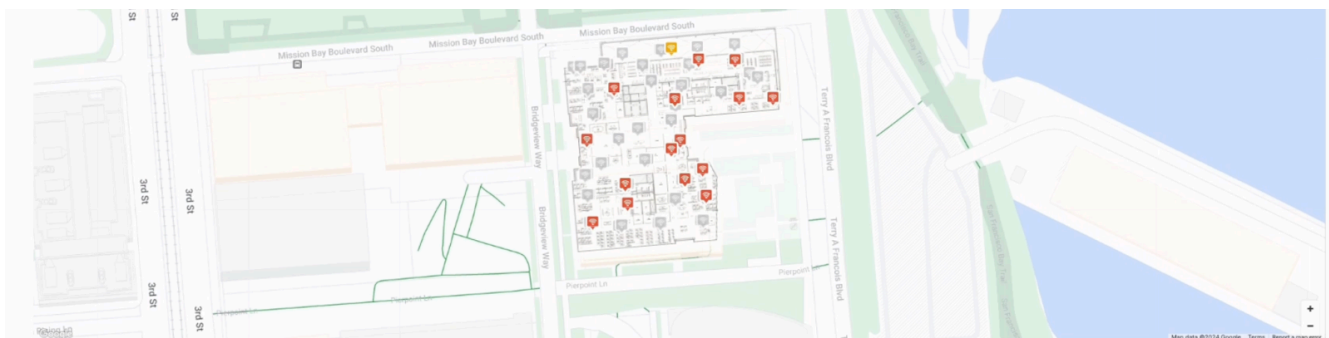
1 Item selected [Select all 8 items](#) [Cancel](#) [Assign APs](#) [Auto-placement](#)

Floor plan	Assigned APs	Measurements	Timestamp	Auto-placement status
<input type="checkbox"/> 1st Floor	0	Not generated	—	—
<input type="checkbox"/> 1st Floor - Cameras	0	Not generated	—	—
<input type="checkbox"/> 5th Floor	35	Not generated	—	—
<input checked="" type="checkbox"/> 4th Floor	75	Not generated	Mar 18, 2024, 12:35	Define map anchors
<input type="checkbox"/> 3rd Floor	30	Not generated	—	—
<input type="checkbox"/> 2nd Floor	32	Not generated	—	—
<input type="checkbox"/> 4th Floor Balcony View	0	Not generated	—	—
<input type="checkbox"/> 4th Floor Bridge View	0	Not generated	—	—

< 1 >

12. Select APs from the list to be used as anchors in calculating the relative location of other APs on the floor.

Note: All GPS-capable APs are automatically placed on the map based on their reported GPS measurements. Adjust the positions of any APs to establish them as anchors to provide more accurate positions for all APs on the floor.



Map data ©2024 Google Terms Report a map error

Q Search 75 results

Name	Placement status	Lat long
SFO12-4-AP11	—	—
SFO12-4-AP11.BETA_PVT	—	—
SFO12-4-AP12	—	—
SFO12-4-AP12.BETA_PVT	Manual placement	37.7704, -122.3871
SFO12-4-AP13	—	—
SFO12-4-AP13.BETA_PVT	Manual placement	37.7705, -122.3871
SFO12-4-AP14	—	—
SFO12-4-AP14.BETA_PVT	—	—
SFO12-4-AP15	—	—
SFO12-4-AP15.BETA_PVT	Manual placement	37.7705, -122.3868

< 1 2 3 4 ... 8 >

13. Select the AP to adjust its position manually. The APs are color-coded as:
 Red- Manually placed
 Green- Automatically placed (GNSS and FTM, or FTM only)

APs auto-placement 8 floor plans [Add a new floor plan](#)

Floor plan	Assigned APs	Measurements	Timestamp	Auto-placement status
<input type="checkbox"/> 1st Floor	0	Not generated	—	—
<input type="checkbox"/> 1st Floor - Cameras	0	Not generated	—	—
<input type="checkbox"/> 5th Floor	35	Not generated	—	—
<input checked="" type="checkbox"/> 4th Floor	75	<div style="width: 80%; background-color: #007bff; height: 10px;"></div> 80%	Mar 18, 2024, 12:35	In progress
<input type="checkbox"/> 3rd Floor	30	Not generated	—	—
<input type="checkbox"/> 2nd Floor	32	Not generated	—	—
<input type="checkbox"/> 4th Floor Balcony View	0	Not generated	—	—
<input type="checkbox"/> 4th Floor Bridge View	0	Not generated	—	—

< 1 >

14. Once at least 4 Anchor APs have been selected and placed on the floor plan, select Done to start the measurement process.

AP Auto Locate utilizes FTM to accurately measure the time it takes for a signal to travel between APs. When the calculation is run AP channel settings are temporarily adjusted to establish FTM links between APs. This creates a webbed layout of APs' calculated locations in the network. Unknown APs will get their relative location by measuring distances to anchor APs. Measurements are stored in dashboard, and once the process is complete, AP channel settings are returned to their previous state, and AutoRF is re-enabled.

Note: The calculation process will take ~10 mins to complete for manually placed anchor APs. If anchor APs are using GPS auto location will take 24 hours to complete.

APs auto-placement

8 floor plans

Add a new floor plan

Floor plan	Assigned APs	Measurements	Timestamp	Auto-placement status
<input type="checkbox"/> 1st Floor	0	Not generated	---	---
<input type="checkbox"/> 1st Floor - Cameras	0	Not generated	---	---
<input type="checkbox"/> 5th Floor	35	Not generated	---	---
<input type="checkbox"/> 4th Floor	75	<div style="width: 100%;"><div style="width: 100%;"></div></div>	Mar 18, 2024, 12:35	Review and publish
<input type="checkbox"/> 3rd Floor	30	Not generated	---	---
<input type="checkbox"/> 2nd Floor	32	Not generated	---	---
<input type="checkbox"/> 4th Floor Balcony View	0	Not generated	---	---
<input type="checkbox"/> 4th Floor Bridge View	0	Not generated	---	---

15. Once the FTM Measurement process is complete the Auto-placement status will update to review and publish.

The screenshot shows a dashboard with a map of Mission Bay Boulevard South. The map displays several AP locations marked with red and green icons. Below the map is a table with the following columns: Name, Placement status, and Lat/long.

Name	Placement status	Lat/long
SFO	Manual placement	37.7765, -122.3867
SFO	Manual placement	37.7764, -122.3875
SFO	Auto-placement	37.7764, -122.3874
SFO	Auto-placement	37.7764, -122.3873
SFO	Auto-placement	37.7764, -122.3872

Buttons for 'Cancel' and 'Publish' are visible at the bottom right of the table.

16. Once satisfied with the final placement, click '**Publish**' to save the AP's location coordinates.



Note: While reviewing placement, you will be able to drag and drop APs to override the auto location latitude and longitude values of the APs.