

ACCESSAGILITY



WiFi Scanner

User Guide

Update 2.9.0.540

Revision History

This page is used to record information about the changes (additions, modification, and deletions) that have been made to this document.

Revision Date	App Version	Revision Summary
05/01/2023 - 05/10/2023	Update 2.8.31.b41	Document creation
05/10/2023 - 06/06/2023	Update 2.8.31.42	Updated Calibration method (Survey)
06/06/2023 - 07/05/2023	Update 2.8.36.46	Added new delete method, capability to continue last survey path, and show/hide markers (Survey); screenshot updates
07/05/2023 - 07/20/2023	Update 2.8.43.b53	Updated heatmap color scheme (Survey)
07/20/2023 - 09/13/2023	Update 2.8.47.b57	Heatmap color scheme ranges, show/hide survey paths in heatmap generation (Survey), renaming survey paths
09/13/2023 - 10/04/2023	Update 2.8.50.60	Updated screenshots, minor edits, added Optifi Agent for iOS
10/04/2023 - 11/20/2023	Update 2.8.50.b63	Various corrections and edits
11/20/2023 - 12/15/2023	Update 2.9.0.536	WLAN Pi firmware updates, Spectrum Graph primary channels now in quotes and screenshots updated, Optifi feature and screenshot updates, expanded Optifi Agent for iOS, added Optifi Agent for macOS
12/15/2023 - 4/19/2024	Update 2.9.0.540	Removed iOS setup for Optifi Agent. Added link to Optifi User Guide in intro and mobile setup. Adjusted formatting.

4/19/2024-Present	Update 2.9.0 548	Update new features to Optifi manager.
-------------------	------------------	--



Official Website: <https://wifiscanner.com/>

Support: support@accessagility.com

Twitter: [@accessagility](https://twitter.com/accessagility)

For MacOS users, please visit:

<https://support.accessagility.com/hc/wifi-scanner-for-mac-os-user-guide>

About:

Simple, fast wireless network discovery of 802.11 a/b/g/n/ac/ax access points. Use WiFi Scanner to select the best configuration for your WiFi access point / router and optimize network speed. Also includes upload and download speed testing to quickly measure and analyze WiFi Internet performance problems.

Using WiFi Scanner, you'll see nearby wireless access points and their details including channels, signal levels (RSSI), noise, channel width, and MAC address, signal quality, maximum data rate, encryption, and much more.

WiFi Scanner is great for determining the best position for an access point at home or in the office. After selecting the best position, the optimal channel to use can be determined by selecting the least used channel resulting in improved WiFi speeds.

Table of Contents

Prerequisites and Setup	7
Software Download and Installation.....	7
License.....	9
Trial.....	9
Activation.....	10
Deactivation.....	11
Limited Capability Mode.....	11
Updates.....	11
Rollback.....	11
Version History.....	11
Reset Configuration.....	12
Uninstall Method.....	14
Theme.....	15
Scanner Tab	16
Main Results Table.....	16
Copying Results to Microsoft Excel.....	18
Exporting Results as a CSV File.....	20
Filter Tree.....	22
Freeform Filtering.....	22
Play, Pause, Stop.....	24
Sub Tabs.....	24
Spectrum Graphs.....	24
Signal vs. Time.....	27
Signal Summary.....	27
Signal Rank.....	27
Adjacent Channel Interference.....	28
Co-Channel Interference.....	28
SSID Details.....	29
Copilot.....	30
Menu Navigation.....	31
WiFi Scanner.....	31
Preferences.....	31
General.....	31
Columns.....	32
Performance.....	32
Remote WiFi Scanner.....	33
Custom Filter.....	33
BSSID Notes.....	34

About WiFi Scanner.....	35
Capabilities.....	35
Network and Interface.....	35
License.....	36
File.....	37
Open Session.....	37
Save Session.....	37
Export Scan Results as CSV.....	37
Open pcap File.....	37
Help.....	38
Visit Support Website.....	38
Check For Updates.....	39
WLAN Pi.....	39
Using WLAN Pi as a Remote Wireless Scanner Probe.....	39
Performance Tab.....	43
Speed Test.....	43
Single Test.....	43
Continuous Testing.....	43
Location Selection.....	44
Table View.....	44
WiFi Survey Tab.....	45
Activating WiFi Survey.....	45
Creating a Project.....	46
Project Options.....	48
Buttons Guide.....	49
Zooming.....	50
Performing Surveys.....	50
Setup Floor Plan Boundary.....	50
Calibration Setup.....	52
Select Survey Mode.....	53
Active Survey.....	54
Passive Survey.....	56
Additional Survey Features.....	57
Minimum RSSI and Sound Alert.....	57
Continuous Scanning.....	57
Network Filtering.....	57
Renaming Survey Paths.....	58
Continuing Last Survey Path.....	58
Showing/Hiding Markers.....	58
Generating Heatmaps.....	59
Heatmaps by Connected SSID.....	59

Heatmaps by BSSID.....	60
Heatmaps by SSID.....	61
Changing Heatmap Color Ranges.....	62
Show/Hide Survey Paths for Heatmap Generation.....	62
Saving Heatmaps.....	62
Estimated RSSI Value.....	63
Performing Speed Tests.....	63
Speed Test Preferences.....	64
Undo, Redo, and Delete Actions.....	64
Place Access Points.....	65
Using Optifi With WiFi Scanner.....	66
Performing A Scan Through the End-User.....	66
Optifi Agent Introduction.....	66
Performing A Scan Using Optifi Agent.....	67
Performing A Scan Remotely.....	71
Setting Up Optifi Agent.....	71
Refreshing Share ID and Share URL.....	73
Stop Sharing Data.....	74
Setting Up Optifi Manager.....	74
Use Without Email Registration.....	75
Use With Email Registration.....	76
Connecting to Optifi Manager through Optifi Agent - Manager Pairing.....	79
Performing A Scan Using Optifi Manager.....	82
Optifi Manager Pricing.....	82
Optifi Agent for macOS.....	83
Optifi Agent for iOS and Android.....	84
Appendix A - Results Table Columns.....	86
WiFi Columns Visibility.....	86
Appendix B - SSID Details.....	90
Fixed Parameters.....	90
Tagged Parameters.....	90


Prerequisites and Setup

Software Download and Installation

To download WiFi Scanner, go to <https://www.accessagility.com/wifi-scanner-windows> and either buy the full featured version, or click the button to download the free trial.

ACCESSAGILITY WiFi as a Service Products Partners About Support

WiFi Scanner for Windows

 Simple, fast wireless network discovery of 802.11 a/b/g/n/ac access points. Use WiFi Scanner to select the best configuration for your WiFi access point / router and optimize network speed.

Also includes upload and download speed testing to quickly measure and analyze WiFi Internet performance problems.

Using WiFi Scanner you'll see nearby wireless access points and their details, including channels, signal levels (RSSI), noise, channel width, and MAC address, signal quality, maximum data rate, encryption, and much more.

WiFi Scanner is great for determining the best position for an access point at home or in the office. After selecting the best position, the optimal channel to use can be determined by selecting the least used channel resulting in improved WiFi speeds.

Buy It Now!

Buy WiFi Scanner for Windows

FREE TRIAL
WIFI SCANNER FOR WINDOWS

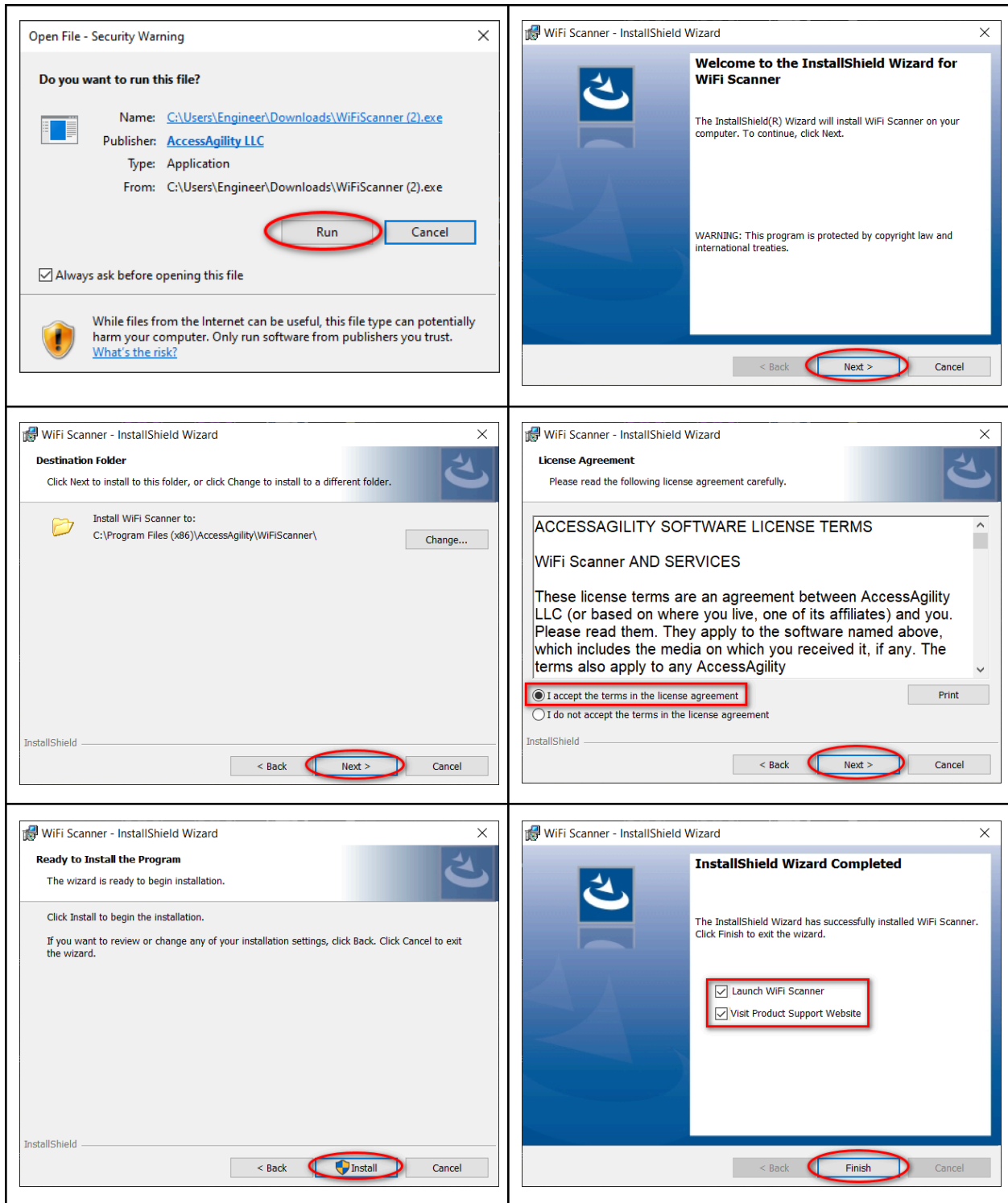
Windows Screenshots

Key Features

- Simple, fast wireless network discovery of 802.11 a/b/g/n/ac access points.

The free trial version will allow full functionality of WiFi Scanner for 7 days. After, there will be options to purchase a license for future use.

After choosing an option to download WiFi Scanner, click the downloaded .exe file and follow the on screen prompts to complete the installation.



After the Installation Wizard has finished, you can choose to launch WiFi Scanner immediately and/or visit the support website to learn more about WiFi Scanner and how to use the tools and functions it has to offer.

License

Trial

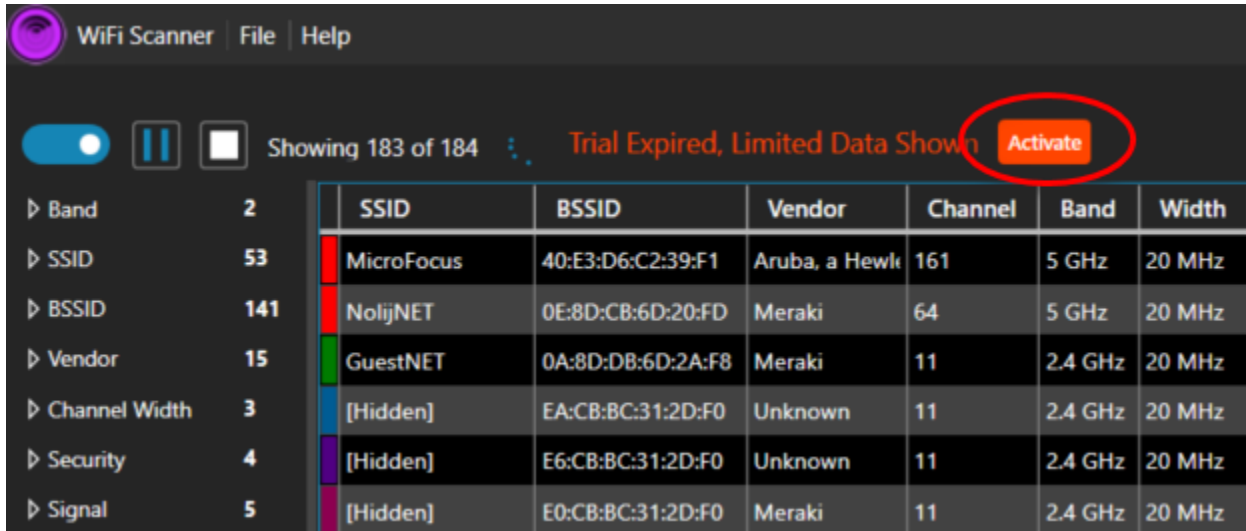
To try WiFi Scanner, there is a 7-day evaluation period with all functionality enabled. After this trial expires, functionality will be limited, and you will have the option to purchase a license for full, continued use.



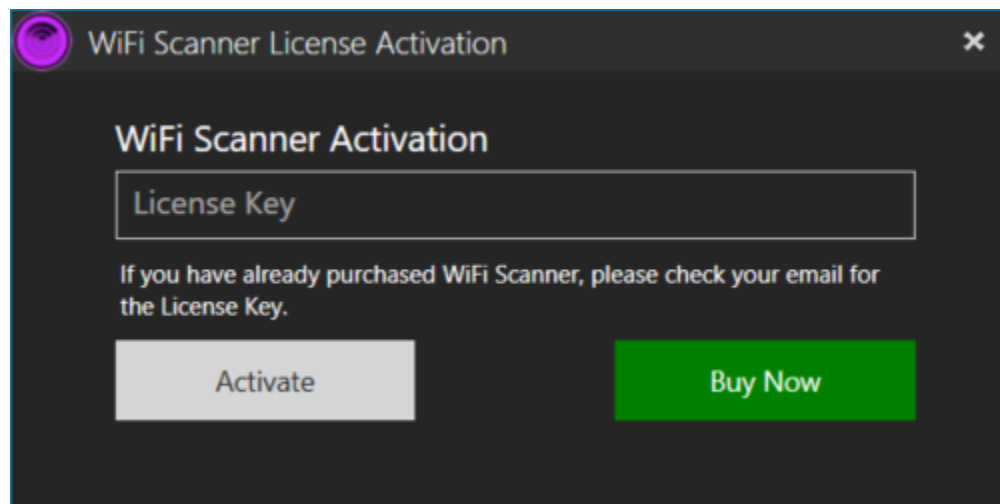
Professional License Popular	Teams License
<p data-bbox="381 739 667 795">\$ Contact /ANNUAL</p> <ul data-bbox="389 840 657 1176" style="list-style-type: none">1 User / 1 Computer1 Year License30-day money back guaranteeUser Training / OnboardingEmail and Phone Technical SupportConcierge Level Customer ServiceSSID Information Element DetailsRemote WiFi Sensor / Scanner Agent <p data-bbox="292 1207 755 1276">Select this license if you will be using WiFi Scanner at work or in a setting where you are paid for your services while using WiFi scanner.</p> <p data-bbox="451 1318 597 1360">REQUEST QUOTE</p>	<p data-bbox="945 739 1230 795">\$ Contact /ANNUAL</p> <ul data-bbox="958 840 1218 1176" style="list-style-type: none">Multiple usersMulti-year LicensesPurchase Orders AcceptedCustomized User TrainingEmail and Phone Technical SupportConcierge Level Customer ServiceSSID Information Element DetailsRemote WiFi Sensor / Scanner Agent <p data-bbox="852 1207 1323 1276">Select this option if you are interested in WiFi Scanner for your organization. We will contact you with custom pricing options that fit your exact requirements.</p> <p data-bbox="1011 1318 1157 1360">REQUEST QUOTE</p>

Activation

In order to activate a device, you must have a License Key, which can be purchased at <https://www.accessagility.com/buy-wifi-scanner>. You can also obtain a License Key within WiFi Scanner by clicking 'Activate' in the top left and pressing *Buy Now*. After successfully purchasing a License Key, type or copy and paste the code into the text box.



	SSID	BSSID	Vendor	Channel	Band	Width	
Band	2						
SSID	53	MicroFocus	40:E3:D6:C2:39:F1	Aruba, a Hewlt	161	5 GHz	20 MHz
BSSID	141	NolijNET	0E:8D:CB:6D:20:FD	Meraki	64	5 GHz	20 MHz
Vendor	15	GuestNET	0A:8D:DB:6D:2A:F8	Meraki	11	2.4 GHz	20 MHz
Channel Width	3	[Hidden]	EA:CB:BC:31:2D:F0	Unknown	11	2.4 GHz	20 MHz
Security	4	[Hidden]	E6:CB:BC:31:2D:F0	Unknown	11	2.4 GHz	20 MHz
Signal	5	[Hidden]	E0:CB:BC:31:2D:F0	Meraki	11	2.4 GHz	20 MHz



WiFi Scanner License Activation

WiFi Scanner Activation

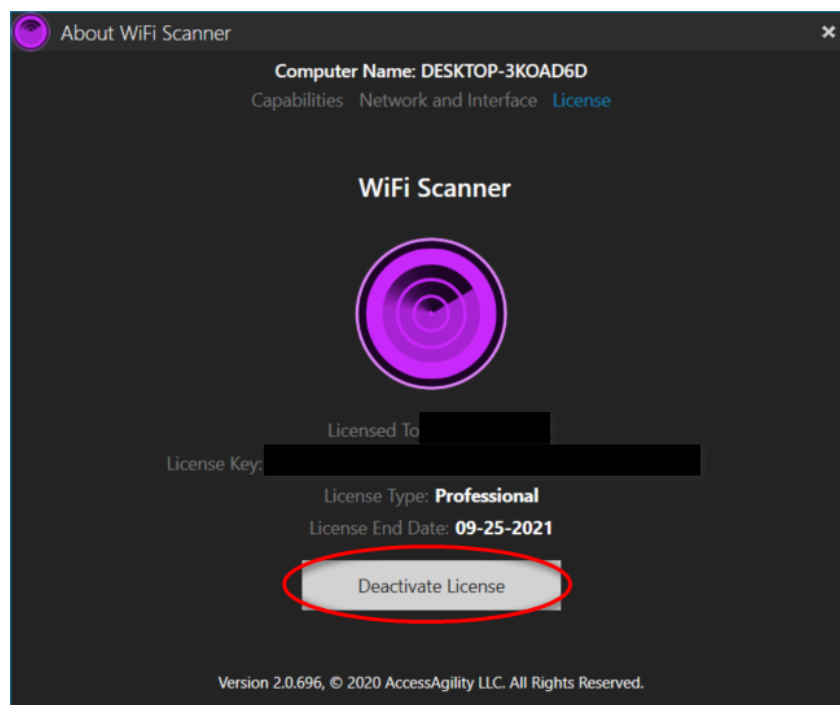
License Key

If you have already purchased WiFi Scanner, please check your email for the License Key.

Activate Buy Now

Deactivation

You will have the option to deactivate your license on your device at any time. To do so, go to 'Help' → 'About WiFi Scanner' → 'License' and click *Deactivate License*.



Limited Capability Mode

After a trial ends or a license expires, the application will enter Limited Capability mode. This mode allows continued use of WiFi Scanner, but with limited functionality.

Updates

WiFi Scanner automatically checks for updates during launch. If there is an update available, a prompt will appear to download and install it. You can manually check for updates by going to the 'Help' button (see 'Menu Navigation' under 'Help Button' on page [Help](#)).

Rollback

If a rollback for an earlier version is needed for any reason, contact support@accessagility.com.

Version History

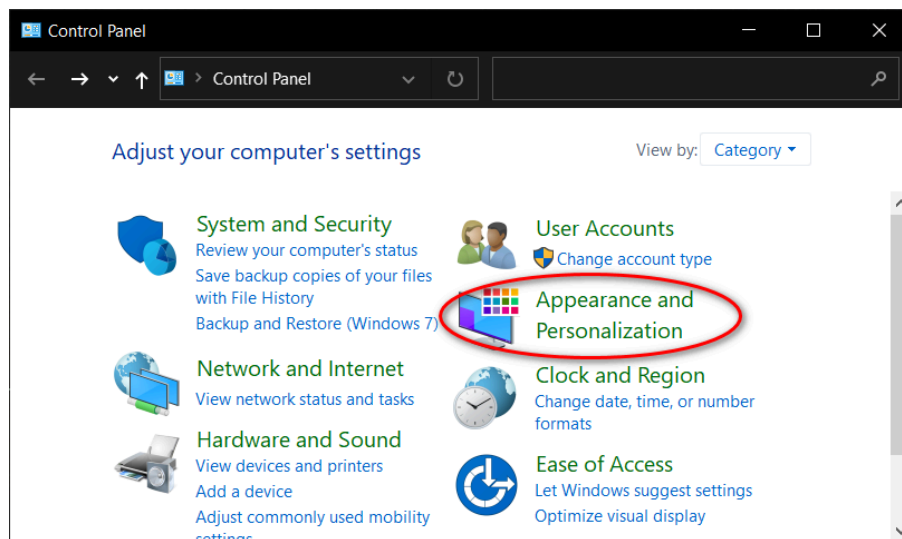
To view version release notes, visit

<https://support.accessagility.com/hc/windows-wifi-scanner-release-notes>

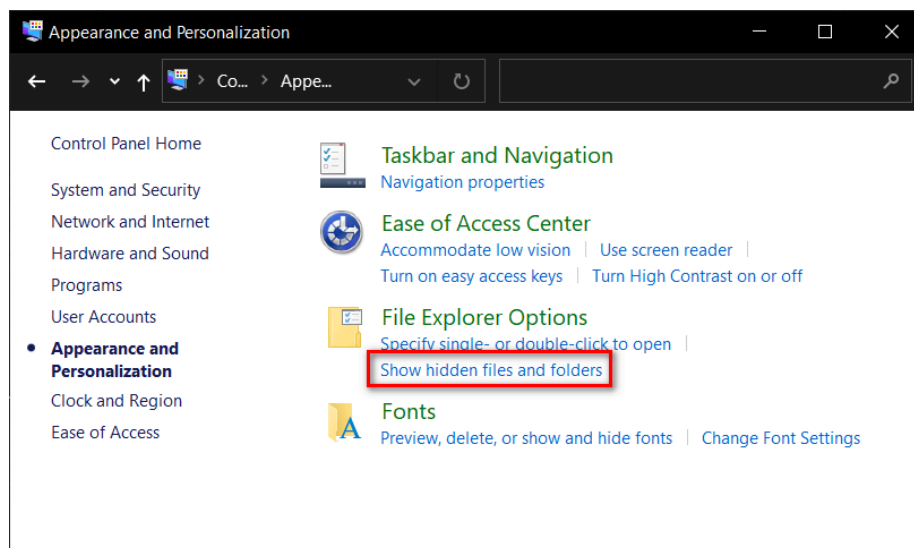
Reset Configuration

For a clean install of WiFi Scanner, follow the steps below to reset configuration. This could fix issues a user may have or prevent issues from occurring in the future.

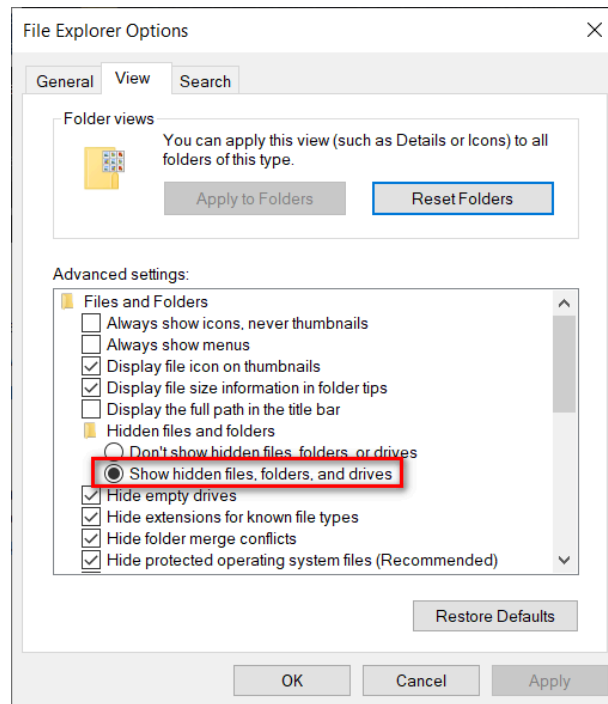
1. Go to the Windows Control Panel
2. Click on 'Appearance and Personalization'
3. AccessAgility provided [How-To Page](#)



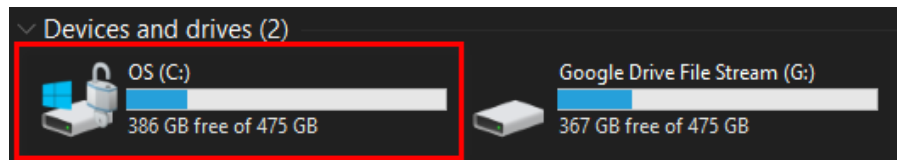
4. Click on 'Show hidden files and folders'



5. Within 'Files Explorer Options', check 'Show hidden files, folders, and drives'. Click Apply.







6. Open 'File Explorer' and navigate to the (C:) drive.



7. Now, locate the 'Program Data' file and open it.

Apps	12/3/2018 8:12 PM	File folder
Dell	10/8/2019 10:40 AM	File folder
Drivers	12/3/2018 8:12 PM	File folder
Intel	9/14/2020 11:04 AM	File folder
PerfLogs	12/7/2019 4:14 AM	File folder
Program Files	9/14/2020 11:04 AM	File folder
Program Files (x86)	10/8/2020 9:34 AM	File folder
ProgramData	10/1/2020 8:03 AM	File folder
Recovery	9/14/2020 11:02 AM	File folder

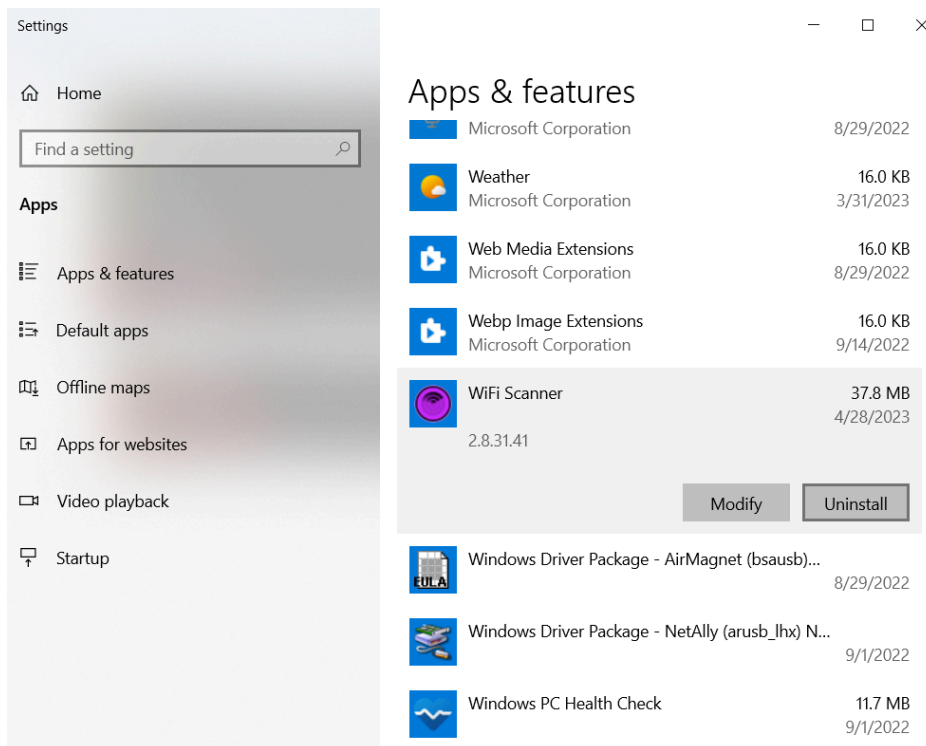
8. From here, find the 'WiFiScanner' folder and delete it.

 USOPrivate	9/14/2020 11:08 AM	File folder
 USOShared	12/7/2019 4:14 AM	File folder
 WiFiScanner	9/24/2020 9:33 AM	File folder
 WindowsHolographicDevices	12/7/2019 4:54 AM	File folder

9. Once these steps are complete, download and install the latest version of WiFi Scanner.

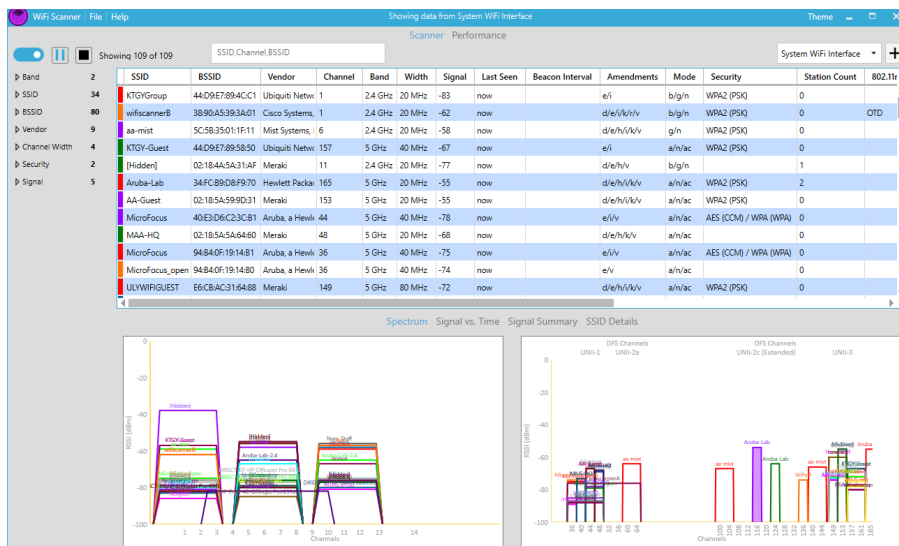
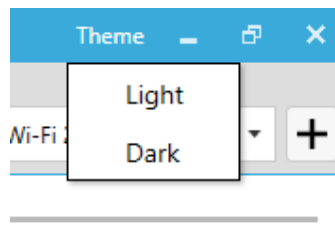
Uninstall Method

Open Apps & Features, which could be found by typing it in your search bar. Search for WiFi Scanner and click uninstall.

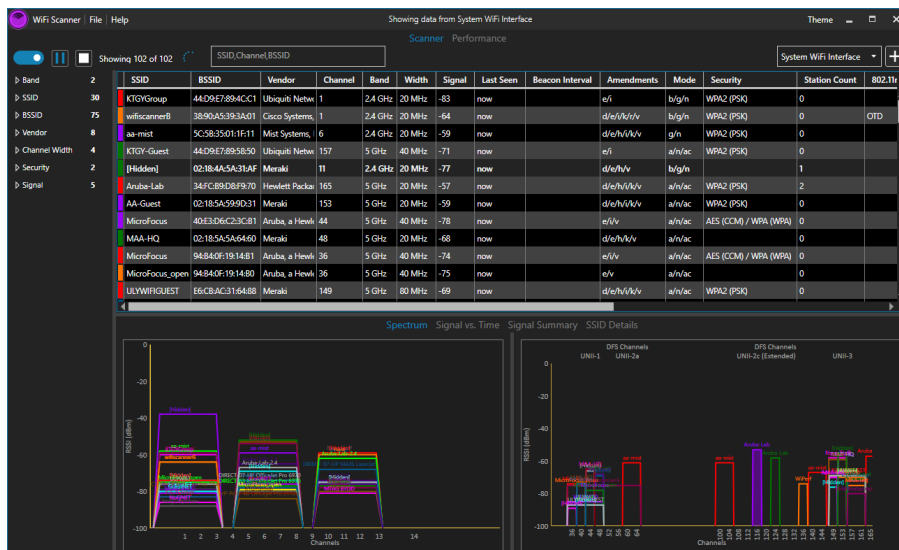


Theme

To change themes, click on the *Theme* tab on the top Right of the screen.



Light Theme



Dark Theme

Scanner Tab

Main Results Table

This table displays the data taken from a packet capture of all the surrounding networks your device can see. The data is presented in a table view with rows and columns in order to convey relevant information in an easily readable, understandable, and accessible format.



You can customize the table by right clicking on the column headers and choosing which categories you would like to display.

The screenshot displays a Wi-Fi scanner interface with a table of detected networks. A context menu is open over the table, allowing for column customization. The table columns include SSID, Vendor, Channel, Band, Width, Signal, Last Seen, MCS, TPC, Mode, Security, Station Count, Streams, Min Rate, AP Uptime, Channel Utilization, and Basic Rates. The context menu options include BSSID Note, Vendor, Channel, Band, Width, Signal, Last Seen, Beacon Interval, MCS, Amendments, TPC, Mode, Security, Station Count, Country, BSSID, Ad-Hoc, Streams, Min Rate, Max Rate, WPS, AP Name, AP Uptime, MFP, Protection Mode, Channel Utilization, Basic Rates, and Speed Results.

SSID	Vendor	Channel	Band	Width	Signal	Last Seen	MCS	TPC	Mode	Security	Station Count	Streams	Min Rate	AP Uptime	Channel Utilization	Basic Rates	
RX Wellness	Ubiquiti Inc	1	2.4 GHz	20 MHz	-79	now	8		b/g/n	WPA2 (PSK)	0	3	1 Mbps	31d 10:57:10	24%	1, 2, 5.5, 11	
KIDY_STAFF	Cisco Meraki	6	2.4 GHz	20 MHz	-50	now	11	23	b/g/n/ax	AES (CCM) / WPA (WPA)	0	4	11 Mbps	50d 05:53:17	45%	11	
Nighthawk 2.4	Netgear	9	2.4 GHz	20 MHz	-45	now	11	24	b/g/n/ax	WPA2 (PSK)	0	4	1 Mbps	24d 00:29:44	27%	1, 2, 5.5, 11	
WIFIBYOD	Meraki	157	5 GHz	20 MHz	-70	now	9	24	a/n/ac	WPA2 (PSK)	0	2	12 Mbps	14d 18:46:03	8%	12, 24	
WIFIBYOD	Meraki	100	5 GHz	80 MHz	-73	now	9	24	a/n/ac	WPA2 (PSK)	0	2	12 Mbps	14d 18:45:49	6%	12, 24	
ULYWIGUEST	Meraki	100	5 GHz	80 MHz	-72	now	9	24	a/n/ac	WPA2 (PSK)	0	2	12 Mbps	14d 18:45:49	6%	12, 24	
WIFIBYOD	Meraki	64	5 GHz	80 MHz	-73	now	9	24	a/n/ac	WPA2 (PSK)	0	2	12 Mbps	14d 18:45:58	2%	12, 24	
KIDY_GUEST	Beacon Interval	Unknown	6	2.4 GHz	20 MHz	-50	now	11	23	b/g/n/ax	WPA2 (PSK)	0	4	11 Mbps	50d 05:53:17	45%	11
KIDY_GUEST	MCS	Meraki	64	5 GHz	80 MHz	-73	now	9	24	a/n/ac	WPA2 (PSK)	0	2	12 Mbps	14d 18:45:58	2%	12, 24
AA-Guest	Amendments	Meraki	48	5 GHz	20 MHz	-67	now	8	9	a/n/ac	WPA2 (PSK)	1	2	24 Mbps	13d 18:55:03	4%	24
KIDY_DEVICES	TPC	Unknown	44	5 GHz	40 MHz	-56	now	11	23	a/n/ac/ax	WPA2 (PSK)	0	4	12 Mbps	50d 05:53:18	11%	12, 24
NetgearPerformanceDefe	Mode	Cyq Shanghai Co Ltd	6	2.4 GHz	20 MHz	-57	now	11	9	b/g/n/ax	WPA2 (PSK)	0	2	11 Mbps	27d 20:23:35	51%	6, 12, 24
Nighthawk 5	Security	Netgear	44	5 GHz	160 MHz	-60	now	11	24	a/n/ac/ax	WPA2 (PSK)	0	4	6 Mbps	24d 00:29:41	12%	6, 12, 24
KIDY_GUEST	Station Count	Unknown	11	2.4 GHz	20 MHz	-81	now	11	9	b/g/n/ax	WPA2 (PSK)	0	4	11 Mbps	0d 06:10:05:02	64%	11
(Hidden)	Country	Unknown	1	2.4 GHz	20 MHz	-79	now	8		b/g/n	WPA2 (PSK)	1	3	6 Mbps	31d 10:57:10	28%	6, 12, 24
EnergyVault	BSSID	Technicolor CH USA Inc.	1	2.4 GHz	20 MHz	-72	now	8		b/g/n	WPA2 (PSK)	1	2	1 Mbps	0d 10:16:07	17%	1, 2, 5.5, 11
ULYWIFI	Ad-Hoc	Meraki	100	5 GHz	80 MHz	-72	now	9	24	a/n/ac	WPA2 (PSK)	0	2	12 Mbps	14d 18:45:49	6%	12, 24

For more information about each individual column available for the Results Table, navigate to [Appendix A](#) at the end of this document.

Copying Results to Microsoft Excel

You can copy this data by right clicking on values within the table and paste the results into Microsoft Excel or another application. To highlight and copy multiple rows, hold the ctrl key while clicking with the mouse.

The screenshot shows the WiFi Scanner application interface. The top section displays a table of detected WiFi networks. A red box highlights a context menu that appears when right-clicking on a row, with options: 'Copy Vendor', 'Copy All Columns and Fields', 'Copy All Columns and Header Names', and 'Edit BSSID Note'. Below the table, there are two spectrum graphs. The left graph shows signal strength (RSSI) in dBm across 14 channels. The right graph shows DFS channels (UNP-1, UNP-2a, UNP-2, UNP-3) with their respective signal strengths.

SSID	BSSID	BSSID Note	Vendor	Channel	Band	Width	Signal	Last Seen	MCS	TPC	Mode	Security	Station Count	Streams	Min Rate	AP Uptime	Channel Utilization	Basic Rates
EX Wellness	18E8-29A4-7F85		Ubiquiti Inc	1	2.4 GHz	20 MHz	-80	now	8		802.11n	WPA2 (PSK)	0	3	1 Mbps	316 105710	29%	1, 2, 5.5, 11
KTGY_STAFF	0C9C3E-ED8B00		Cisco Meraki	6	2.4 GHz	20 MHz	-47	now	11	23	802.11n	WPA2 (PSK)	0	4	11 Mbps	506 055317	41%	11
Nighthawk 2.4	6CDD061CFFA8		Netgear	9	2.4 GHz	20 MHz	-45	now	11	24	802.11n	WPA2 (PSK)	0	4	1 Mbps	246 002944	31%	1, 2, 5.5, 11
WiFiBYOD	FAFCBAC319D59		Meraki	157	5 GHz	80 MHz	-56	now	9	24	802.11ac	WPA2 (PSK)	0	2	12 Mbps	146 184603	3%	12, 24
WiFiBYOD	FAFCBAC48D02C		Meraki	100	5 GHz	80 MHz	-62	now	9	24	802.11ac	WPA2 (PSK)	0	2	12 Mbps	146 184549	4%	12, 24
UNWIFI_GUEST	16CBA348D02C		Meraki	100	5 GHz	80 MHz	-62	now	9	24	802.11ac	WPA2 (PSK)	0	2	12 Mbps	146 184549	4%	12, 24
WiFiBYOD	FAFCBAC317042		Meraki	100	5 GHz	80 MHz	-62	now	9	24	802.11ac	WPA2 (PSK)	0	2	12 Mbps	146 184558	2%	12, 24
KTGY_GUEST	0C9C3E-ED8B00		Unknown	11	2.4 GHz	20 MHz	-77	now	11	23	802.11n	WPA2 (PSK)	0	4	11 Mbps	506 055317	41%	11
UNWIFI_GUEST	16CBA317042		Meraki	100	5 GHz	80 MHz	-62	now	9	24	802.11ac	WPA2 (PSK)	0	2	12 Mbps	146 184558	2%	12, 24
AA-Guest	0318A5A2B851		Meraki	100	5 GHz	80 MHz	-62	now	9	24	802.11ac	WPA2 (PSK)	1	2	24 Mbps	126 105503	3%	24
KTGY_DEVICES	0C9C3E-ED8B00		Unknown	44	5 GHz	40 MHz	-45	now	11	23	802.11ac	WPA2 (PSK)	0	4	12 Mbps	506 055318	13%	12, 24
Netgear-Default-SSID	F4B89F00078E		Cy Shanghai Co Ltd	5	2.4 GHz	20 MHz	-49	now	11	23	802.11n	WPA2 (PSK)	0	2	11 Mbps	218 202335	51%	6, 12, 24
Nighthawk 5	6CDD061CFFA7		Netgear	44	5 GHz	160 MHz	-52	now	11	24	802.11ac	WPA2 (PSK)	0	4	6 Mbps	246 002941	15%	6, 12, 24
KTGY_GUEST	0C9C3E-ED8B00		Unknown	11	2.4 GHz	20 MHz	-72	now	11	9	802.11n	WPA2 (PSK)	0	4	11 Mbps	698 100502	44%	11
Hidden	22E829A47F85		Unknown	1	2.4 GHz	20 MHz	-78	now	8		802.11n	WPA2 (PSK)	0	3	6 Mbps	316 105710	30%	6, 12, 24
EnergyVault	3CB7AB79802D		Technicolor CH USA Inc	1	2.4 GHz	20 MHz	-70	now	8		802.11n	WPA2 (PSK)	1	2	1 Mbps	68 101607	14%	1, 2, 5.5, 11
UNWIFI	16CBA348D02C		Meraki	100	5 GHz	80 MHz	-62	now	9	24	802.11ac	WPA2 (PSK)	0	2	12 Mbps	146 184549	4%	12, 24

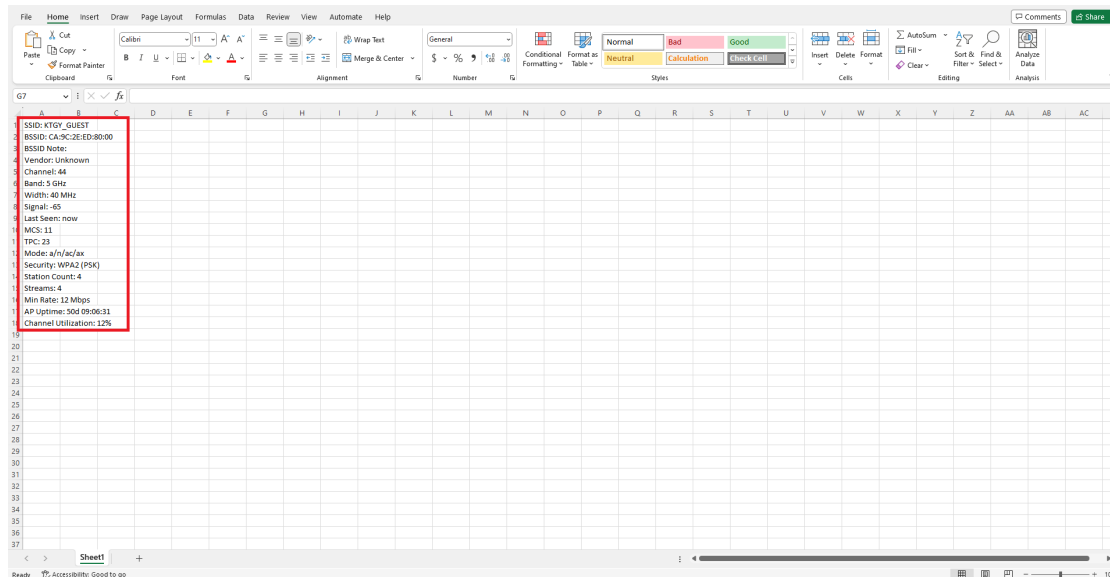
To avoid the entirety of the data being copied into a single Excel cell, or an error in copying multiple WiFi Scanner entries:

1. Select a single, desired WiFi Scanner entry.

The screenshot shows the WiFi Scanner application interface with a single entry selected in the table. The selected entry is 'KTGY_GUEST' with BSSID '0C9C3E-ED8B00'. Below the table, there are two spectrum graphs. The left graph shows signal strength (RSSI) in dBm across 14 channels. The right graph shows DFS channels (UNP-1, UNP-2a, UNP-2, UNP-3) with their respective signal strengths.

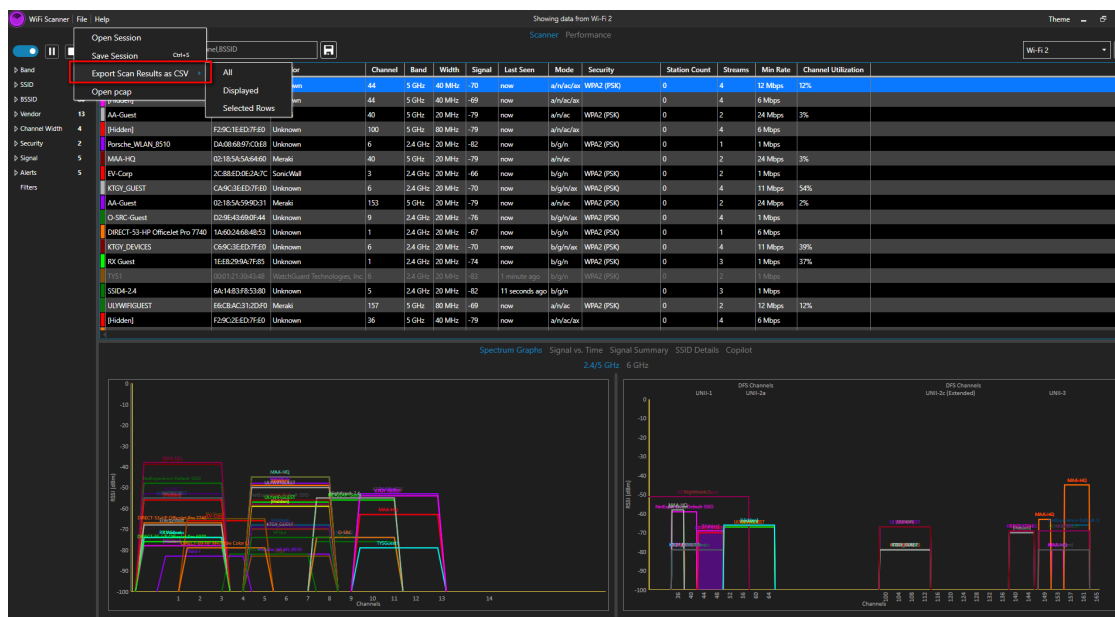
SSID	BSSID	BSSID Note	Vendor	Channel	Band	Width	Signal	Last Seen	MCS	TPC	Mode	Security	Station Count	Streams	Min Rate	AP Uptime	Channel Utilization	Basic Rates
KTGY_GUEST	0C9C3E-ED8B00		Unknown	44	5 GHz	40 MHz	-66	now	11	23	802.11ac	WPA2 (PSK)	4	4	12 Mbps	506 090631	50%	12, 24

- Paste data (e.g., ctrl+v). The entirety of the data for the selected WiFi Scanner entry should now be shown in the Excel spreadsheet. Repeat process, with the next WiFiScanner entry and another selected Excel cell.



Exporting Results as a CSV File

It is also possible to convert the Results Table into a CSV file, which can be opened with Excel. Click on *File* at the top left corner, and highlight *Export Scan Results as CSV*. From the Results Table, you will have the option to export *All*, *Displayed*, or *Selected Rows*.



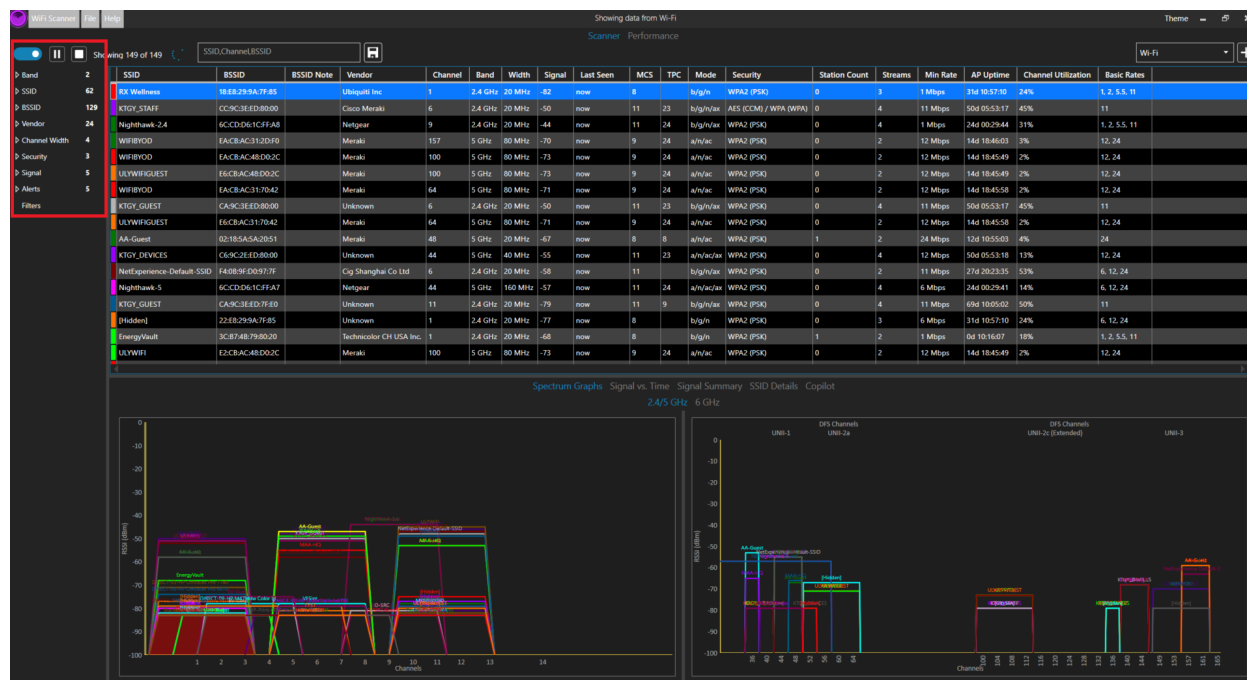
All will contain a summary of all the results from the scan. *Displayed* will contain all the results displayed on the results table, which can be customized through filtering, explained in the following sections. *Selected Rows* will contain all highlighted rows from the Results Table. You can highlight rows by clicking and dragging the mouse on the selected range of results, or by holding down the Ctrl key and clicking individually on the desired results.

SSID	BSSID	Vendor	Channel	Band	Width	Signal	Recent DL	Recent UL	Max DL	Sp	Max UL	Sp	Avg DL	Sp	Avg UL	Sp	Min DL	Sp	Min UL	Sp	Last Seen	Beacon Int	MCS	Amendm	TPC	Mode	Security	Station CC	Country	BQ	IIR	Ad-Hoc	Streams	Min Rate
KTGY_DEV	C6-9C-2E1E	N/A	Unknown	44.5 GHz	40 MHz	-69 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.6 Mbps	N/A
[Hidden]	F2-9C-2E1E	N/A	Unknown	44.5 GHz	40 MHz	-69 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.6 Mbps	N/A
AA-Guest	02-18-5A-51	N/A	Meraki	40.5 GHz	20 MHz	-79 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1 minute	N/A	N/A	N/A	N/A	a/n/ac	WPA2 (PS)	0	N/A	N/A	N/A	N/A	2.04 Mbps	N/A
[Hidden]	F2-9C-1EE1	N/A	Unknown	100.5 GHz	80 MHz	-79 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1 minute	N/A	N/A	N/A	N/A	a/n/ac/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.6 Mbps	N/A
Porsche_1	DA-08-08	N/A	Unknown	6.24 GHz	20 MHz	-82 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9 minutes	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	1.1 Mbps	N/A
MAA-HQ	02-18-5A-51	N/A	Meraki	40.5 GHz	20 MHz	-79 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac	WPA2 (PS)	0	N/A	N/A	N/A	N/A	2.04 Mbps	N/A
TV-Corp	2C-18-ED	N/A	Smartwall	3.24 GHz	20 MHz	-72 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	2.1 Mbps	N/A
KTGY_GUE	6-9C-3E1E	N/A	Unknown	6.24 GHz	20 MHz	-70 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.11 Mbps	N/A
AA-Guest	02-18-5A-51	N/A	Meraki	153.5 GHz	20 MHz	-79 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac	WPA2 (PS)	0	N/A	N/A	N/A	N/A	2.04 Mbps	N/A
O-SRC-Gu	02-9E-43	N/A	Unknown	9.24 GHz	20 MHz	-76 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.1 Mbps	N/A
DIRECT	13-8A-90-24	N/A	Unknown	1.24 GHz	20 MHz	-72 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	1.6 Mbps	N/A
KTGY_DEV	C6-9C-3E1E	N/A	Unknown	6.24 GHz	20 MHz	-70 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.11 Mbps	N/A
RX-Guest	1E-EE-29	N/A	Unknown	1.24 GHz	20 MHz	-76 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	3.1 Mbps	N/A
TS1	00-12-13	N/A	WishQue Inc.	6.24 GHz	20 MHz	-83 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	2.1	N/A
SSID-2.4	6A-1A-8B	N/A	Unknown	5.24 GHz	20 MHz	-83 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1 minute	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	3.1 Mbps	N/A
UWIFI6E	6E-C8-AC	N/A	Meraki	157.5 GHz	80 MHz	-88 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac	WPA2 (PS)	0	N/A	N/A	N/A	N/A	2.12 Mbps	N/A
[Hidden]	F2-9C-2E1E	N/A	Unknown	36.5 GHz	40 MHz	-79 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac/ax	WPA2 (PS)	0	N/A	N/A	N/A	N/A	4.6 Mbps	N/A
KTGY_STA	C6-9C-3E1E	N/A	Unknown	36.5 GHz	40 MHz	-79 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	a/n/ac/ax	AES (CCM)	0	N/A	N/A	N/A	N/A	4.12 Mbps	N/A
RX-Wifi	1E-EE-29	N/A	Ubiquiti I	1.24 GHz	20 MHz	-77 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	now	N/A	N/A	N/A	N/A	b/g/n	WPA2 (PS)	0	N/A	N/A	N/A	N/A	3.1 Mbps	N/A

CSV File Export Sample

Filter Tree

The Filter Tree is a list of common categories used to refine the table. You can filter by band, SSID, BSSID, vendor, channel width, security, and signal. These filters will help narrow scanning results to your choosing. To hide/bring up the filter tree, simply click the blue oval next to the pause button.



Freeform Filtering

The Freeform Filter text box may better serve than the Filter Tree due to its refined functionality. In the text box, you can enter in exact searches for what you would like to see in the table. For example, you can enter a specific SSID to filter results for only that SSID.

The format of the search follows that of the columns.

Examples:

Column	Sample Entry
SSID	AA-Guest
BSSID	02:18:5A:5A:20:51
Vendor	Meraki
Channel	100

Band	5GHz
Width	40MHz

You can also combine different categories or filters to narrow results for even more precision.

Use bangs or exclamation points (!) to hide results with the specified keyword.

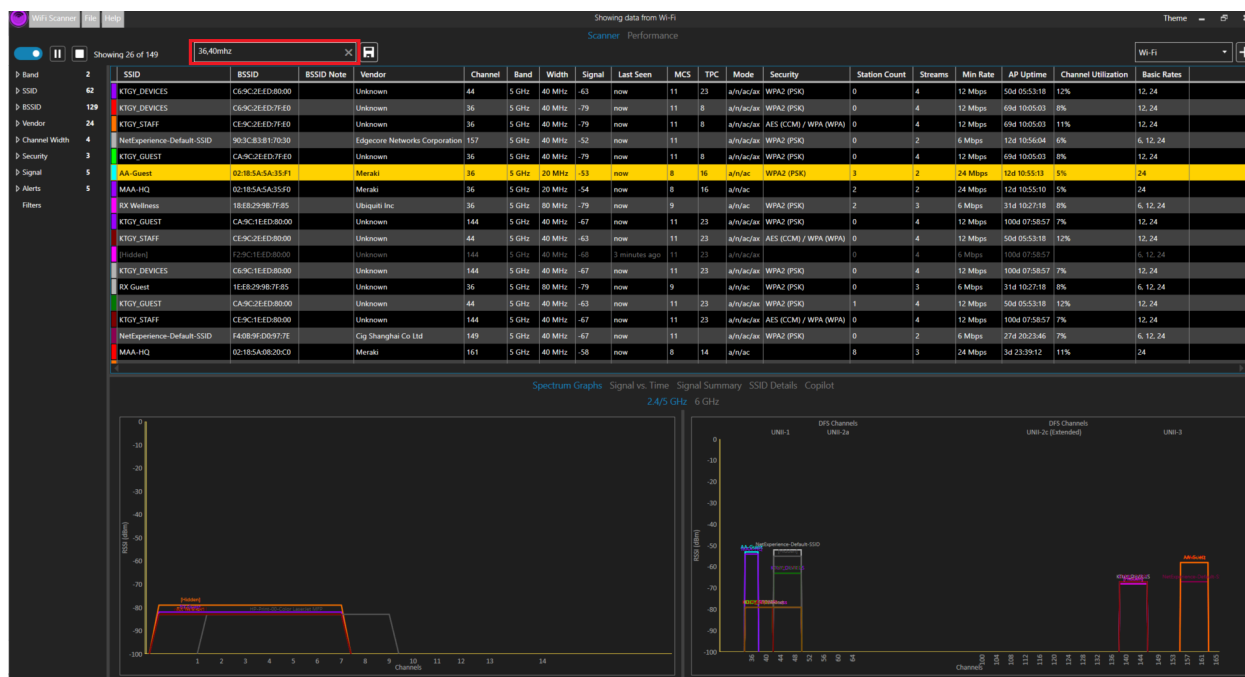
Use commas (,) to separate different filters to display multiple categories.

Use ampersands (&) to combine filters to further narrow results.

Alternatively, use carets (^) as a logical “or” syntax, to expand a filter search.

Example 1: '36,40MHz' – this will show all wireless networks that are on channel 36 OR have a channel width of 40MHz.

Example 2: '36&40MHz' – this will show all wireless networks that are on channel 36 AND have a channel width of 40MHz.

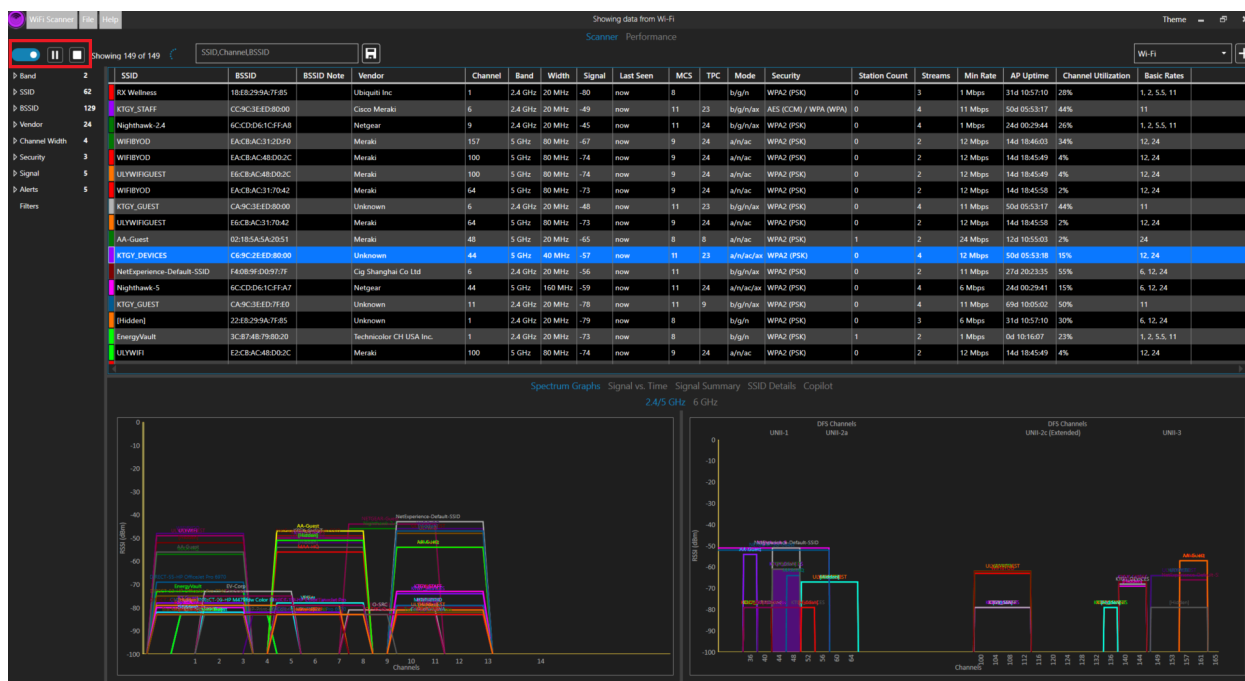


Play, Pause, Stop

Pause: This button will pause your current scanning session.

Stop: This button will stop your current scanning session and **you will not be able to resume**. You must save or discard the session after. Please keep in mind that WiFi scanner will continuously scan until stopped. We recommend allowing the software to scan for longer than a couple of minutes, as a shorter scan may miss important information.

Play: This will either resume a paused session or begin a new session after stopping a scan.

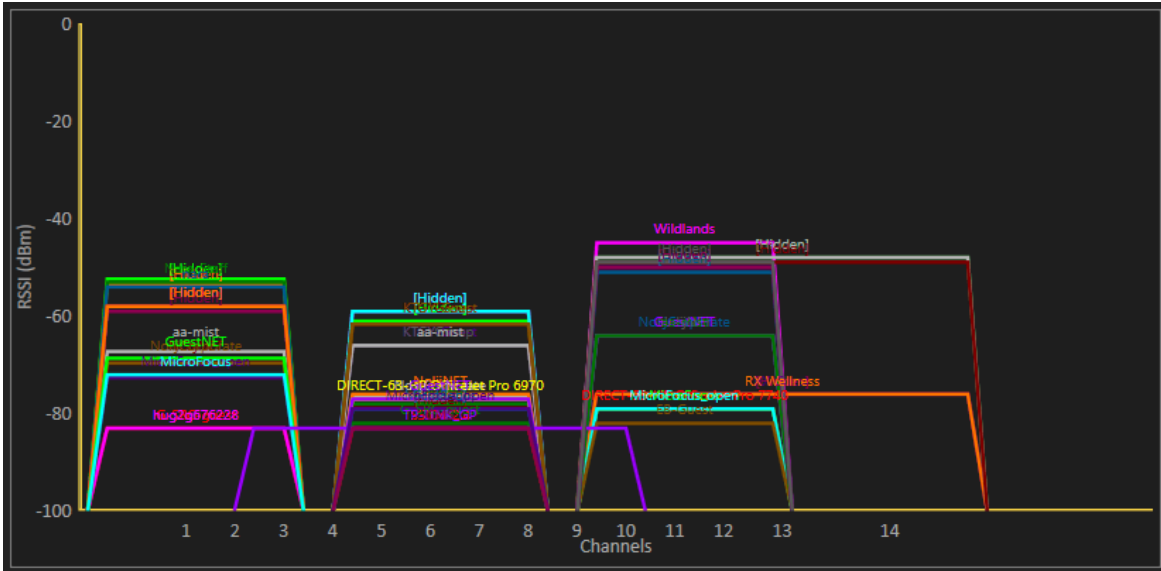


Sub Tabs

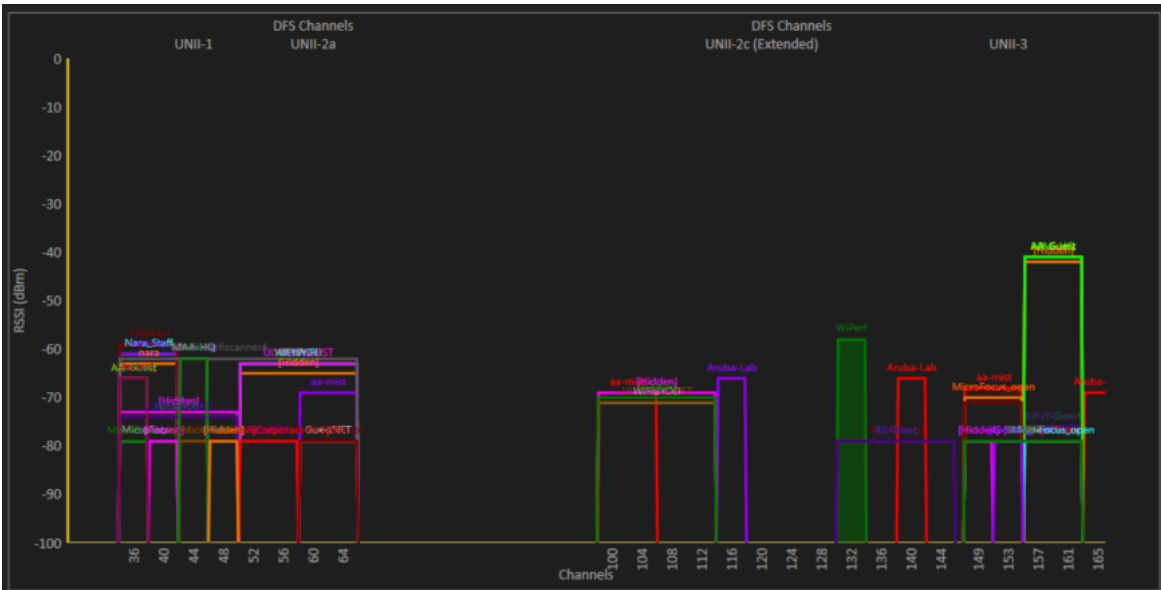
Spectrum Graphs

The Spectrum tab in WiFi Scanner displays two graphs. They serve as visual representations for the 2.4 GHz, 5 GHz, and 6 GHz wireless bands. Each graph shows the channel numbers that occupy each band on the x-axis, and RSSI (or signal strength) on the y-axis. These graphs provide a clear picture of the surrounding wireless environment: all networks within the distance that your computer can detect, their associated signal strengths, and what channels they are using.

Understanding the wireless environment around you is crucial to effective channel planning and making informed decisions for improving your network configuration.



2.4 GHz Spectrum Graph



5 GHz Spectrum Graph

In both the 2.4 GHz and 5 GHz spectrum graphs, the Primary Channel is identified by the number within quotations, as illustrated below. In the 5 GHz spectrum graph, the Secondary Channel is always the second number that is not the Primary Channel.



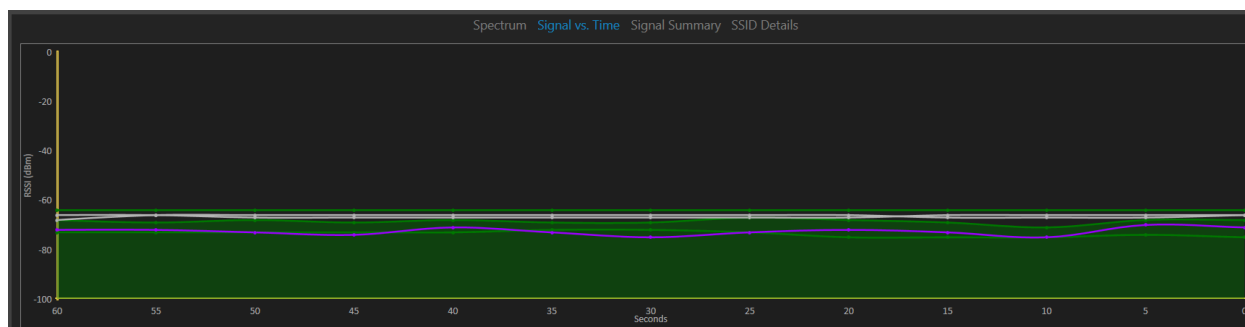
2.4 GHz Spectrum Graph



5 GHz Spectrum Graph

Signal vs. Time

The *Signal vs. Time* tab is a visual representation of the strength of the signal your device is receiving from a given access point over time. The chart displays time in seconds on the x-axis and RSSI (signal strength) on the y-axis.



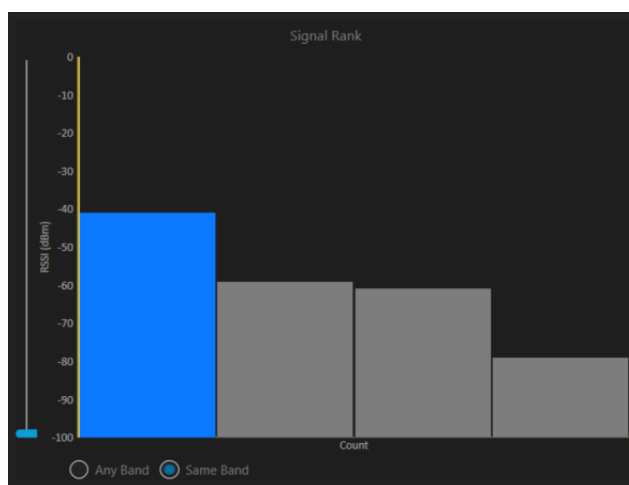
Signal Summary

Three charts are shown under the *Signal Summary* tab.

Signal Rank

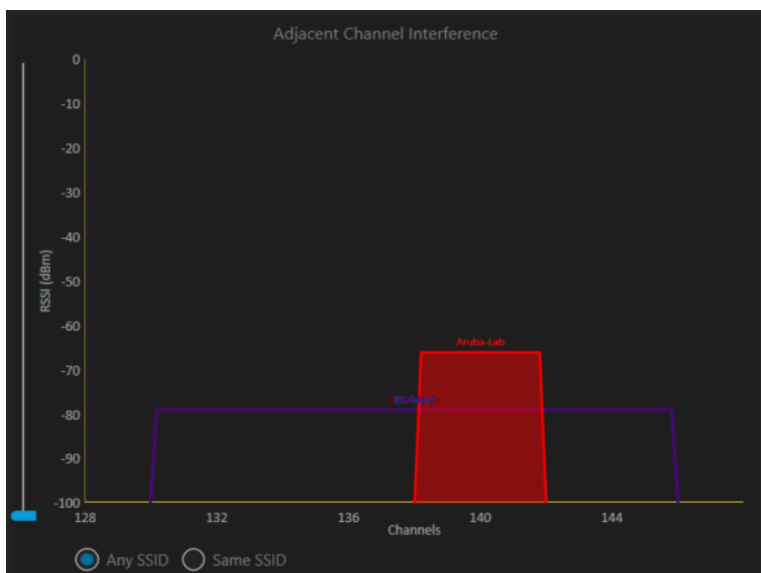
Signal Rank is a bar graph of all the access points surrounding the device, as filtered by the user in the table view. The blue bar represents the access point that you have currently selected. Each access point is ranked according to its signal strength relative to your device (the closer to 0 the better).

The slider on the left allows you to set a minimum signal threshold. This will only display access points with signal strength equal to or stronger than the set threshold. Lastly, below the x-axis are two radio buttons that you choose whether you want to show access points on any band, or only those on the same band as your computer.



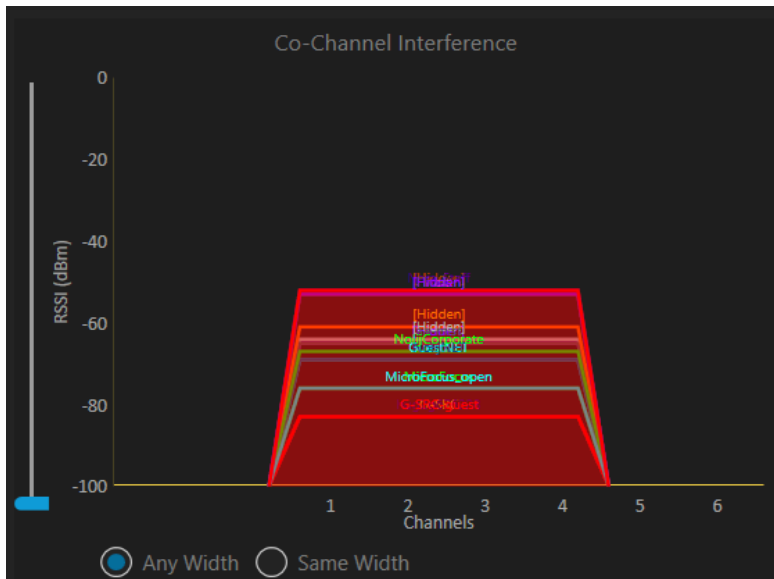
Adjacent Channel Interference

The *Adjacent Channel Interference* chart displays the channel of the currently selected network, any wireless networks currently overlapping on the same channel, and any networks on directly adjacent channels. This chart is like the spectrum graph, but the only data displayed here is relative to the currently selected network. This chart is useful for looking for interference issues.



Co-Channel Interference

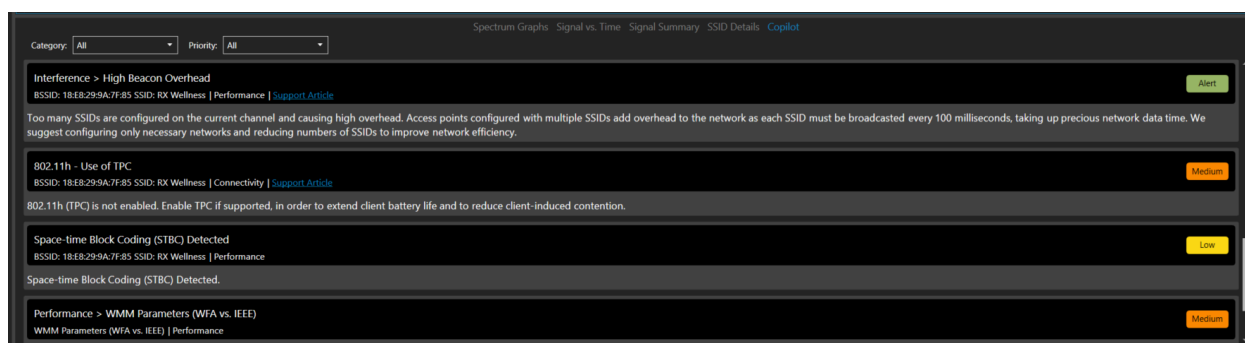
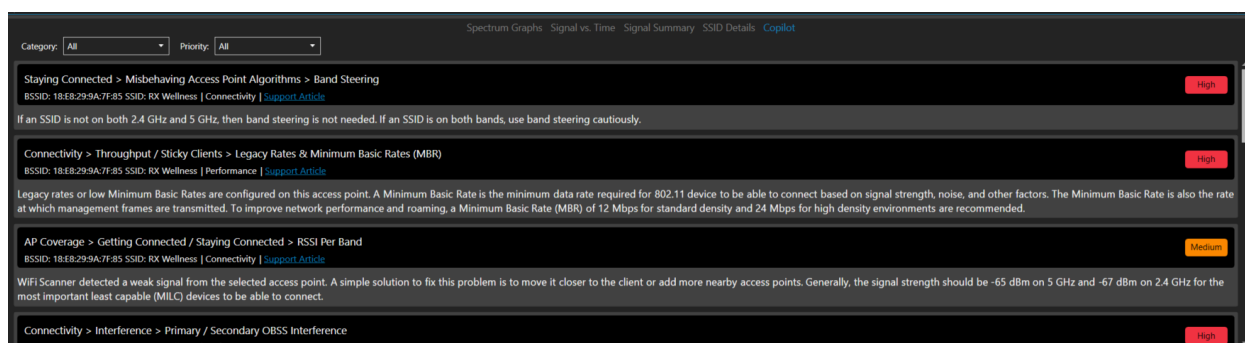
This graph is also similar to the spectrum graph, but specific to a single channel. The co-channel interference graph will show the user every network that is using the same primary channel as the one selected in the table. As seen below, the chart consists of channels on the x-axis and RSSI on the y-axis. The difference in RSSI when access points are using the same channel is valuable for troubleshooting and diagnosing issues with WiFi.



Copilot

Under the *Copilot* tab (formerly *Genius*), you can find notes, which are suggestions, tips, and general information on how to improve your wireless connection based on your device's current surroundings. *Copilot* generates these notes using the information captured by WiFi Scanner. This means that you're receiving real-time actionable information for your unique wireless environment.

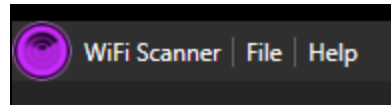
Each note is tagged with a priority level: Very high, high, medium, low, or very low. You can also find alerts. The "Alert" tag doesn't necessarily imply that there is an issue but is simply a note of useful information.



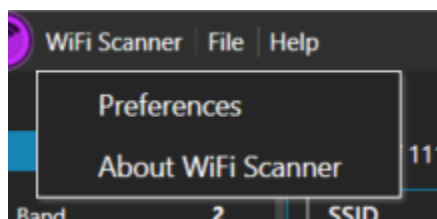
Each note displays a title, the BSSID and SSID of the selected access point, a category (Security, Connectivity, Performance, or Configuration), and a body of text with information. Most notes also link to a relevant support article, and for those that don't, we are continuously working to add more in future versions of the app. You can filter notes by category and priority. The information provided by *Copilot* is not limited to the access point your device is connected to. You can select any of the access points within range of your device for even more useful insights.

Menu Navigation

In WiFi Scanner, menu options appear as shown:



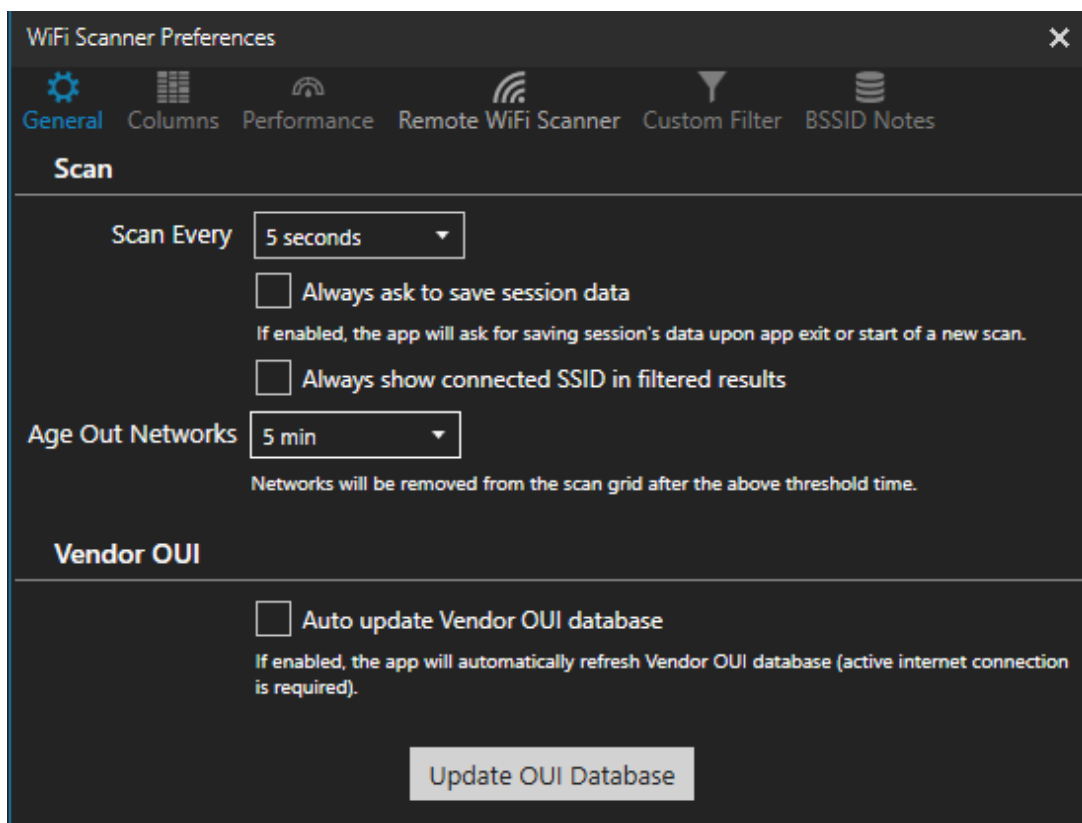
WiFi Scanner



Preferences

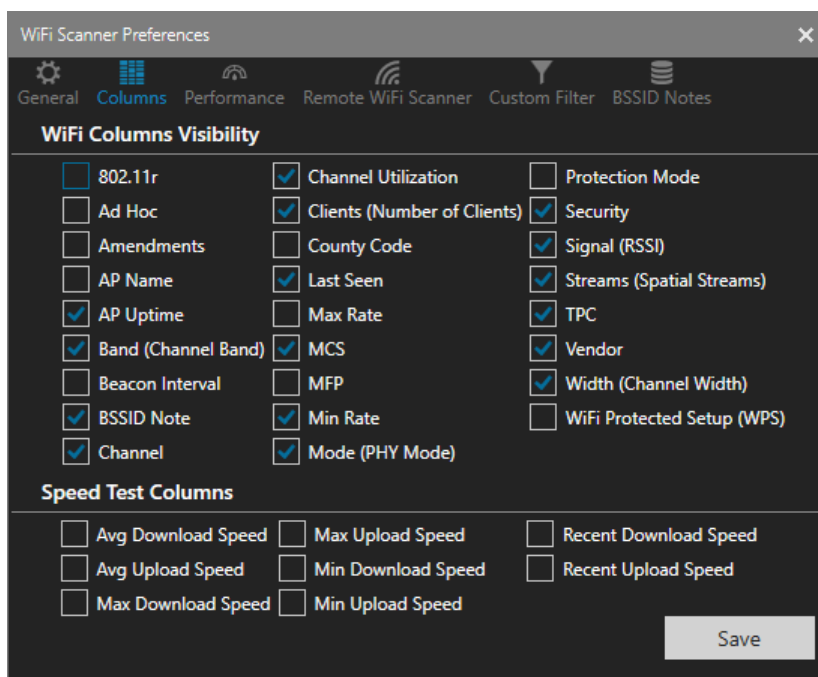
General

This tab provides some customization options within WiFi Scanner to improve user experience.



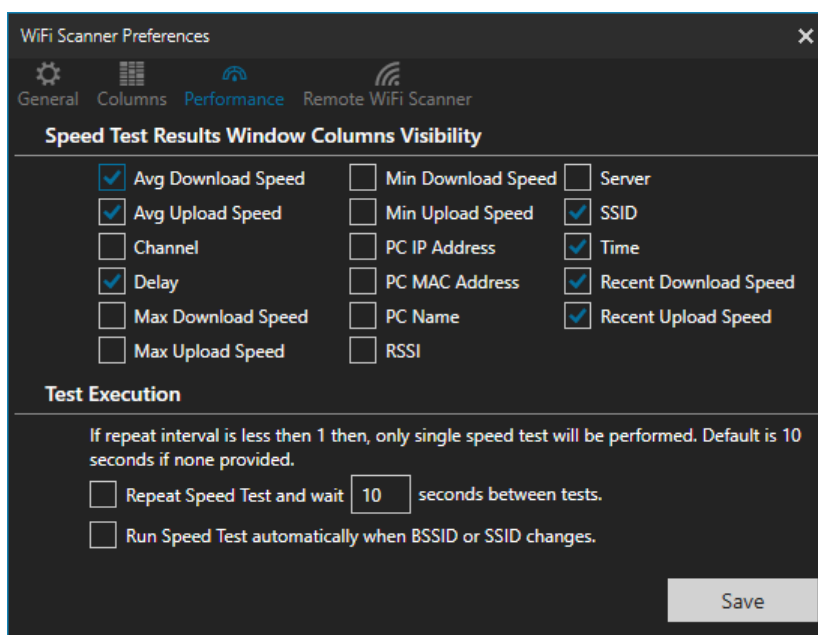
Columns

The *Columns* tab is another way to choose which columns appear in the table view of WiFi Scanner. Details about each column can be located in [Appendix A](#).



Performance

Same as above, this tab allows for customization of the table view in the Performance Tab. Also, choose if and how often a speed test will be performed in the background to measure speeds of a given network.



Remote WiFi Scanner

Under this tab, you can add any Linux-based wireless device as an external scanner. Refer to the [WLAN Pi](#) section for additional details.

WiFi Scanner Preferences

General Columns Performance **Remote WiFi Scanner** Custom Filter BSSID Notes

SSH Devices

[Dropdown] +

Configure SSH Connection

Device Name
User Friendly Name

Server Host Port Interface
Server Host or IP 22 wlan0

Username Password
SSH Username SSH Password

Use SSH Key-Based Authentication

Test Configuration Save Delete

Test configuration results

Custom Filter

With this feature, you are able to create and save custom filters using the flexibility of the Freeform Filter.

In the example, the first custom filter was created to only display networks with an SSID of AA-Guest. The second custom filter was created to only display networks using Channel 11 or 80mhz bandwidths.

WiFi Scanner Preferences

General Columns Performance Remote WiFi Scanner **Custom Filter** BSSID Notes

Add New Filter

Filter Name Filter Text
Channel 11 or 80 11,80mhz

Save

Filters

FILTERNAME	FILTERTEXT	
AA-Guest	AA-Guest	[Edit] [Delete]
Channel 11 or 80 n	11,80mhz	[Edit] [Delete]

The custom filters can be selected on the left side of the screen.

	SSID	BSSID	Vendor	Channel	Band	Width
Band	2					
SSID	65					
BSSID	140					
Vendor	24					
Channel Width	4					
Security	3					
Signal	5					
Alerts	5					
Filters	2					
AA-Guest						
Channel 11 or 8...						
	KTGY_STAFF	CC:9C:3E:ED:7F:E0	Cisco Meraki	11	2.4 GHz	20 MHz
	KTGY_DEVICES	C6:9C:1E:ED:7F:E0	Unknown	100	5 GHz	80 MHz
	WIFIBYOD	EA:CB:AC:31:2D:F0	Meraki	157	5 GHz	80 MHz
	KTGY_GUEST	CA:9C:1E:ED:7F:E0	Unknown	100	5 GHz	80 MHz
	KTGY_DEVICES	C6:9C:3E:ED:7F:E0	Unknown	11	2.4 GHz	20 MHz
	ULYWIFIGUEST	E6:CB:AC:31:70:42	Meraki	64	5 GHz	80 MHz
	ULYWIFIGUEST	E6:CB:AC:31:2D:F0	Meraki	157	5 GHz	80 MHz
	KTGY_STAFF	CE:9C:1E:ED:7F:E0	Unknown	100	5 GHz	80 MHz
	ULYWIFI	E2:CB:AC:31:70:42	Meraki	64	5 GHz	80 MHz
	ULYWIFI	E0:CB:BC:31:2D:F0	Meraki	11	2.4 GHz	20 MHz
	[Hidden]	DE:CB:AC:48:D0:2C	Unknown	100	5 GHz	80 MHz
	ULYWIFI	E2:CB:AC:31:2D:F0	Meraki	157	5 GHz	80 MHz
	RX Guest	1E:E8:29:9B:7F:85	Unknown	36	5 GHz	80 MHz
	WIFIBYOD	EA:CB:AC:48:D0:2C	Meraki	100	5 GHz	80 MHz
	WIFIBYOD	EA:CB:BC:31:2D:F0	Unknown	11	2.4 GHz	20 MHz
	NetExperience-Default-SSID	90:3C:B3:B1:70:2F	Edgecore Networks Corporation	11	2.4 GHz	20 MHz
	ULYWIFIGUEST	E6:CB:AC:48:D0:2C	Meraki	100	5 GHz	80 MHz

BSSID Notes

This tab allows you to make a note about a particular BSSID.

WiFi Scanner Preferences

General Columns Performance Remote WiFi Scanner Custom Filter **BSSID Notes**

Add New BSSID Note

BSSID: Note:

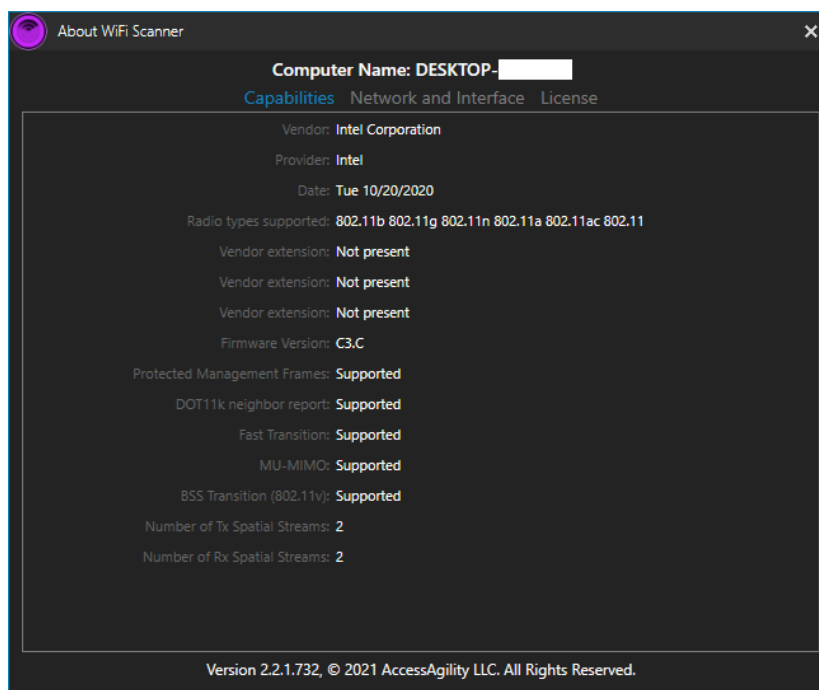
Added BSSID Notes

BSSID	NOTE	DELETE

About WiFi Scanner

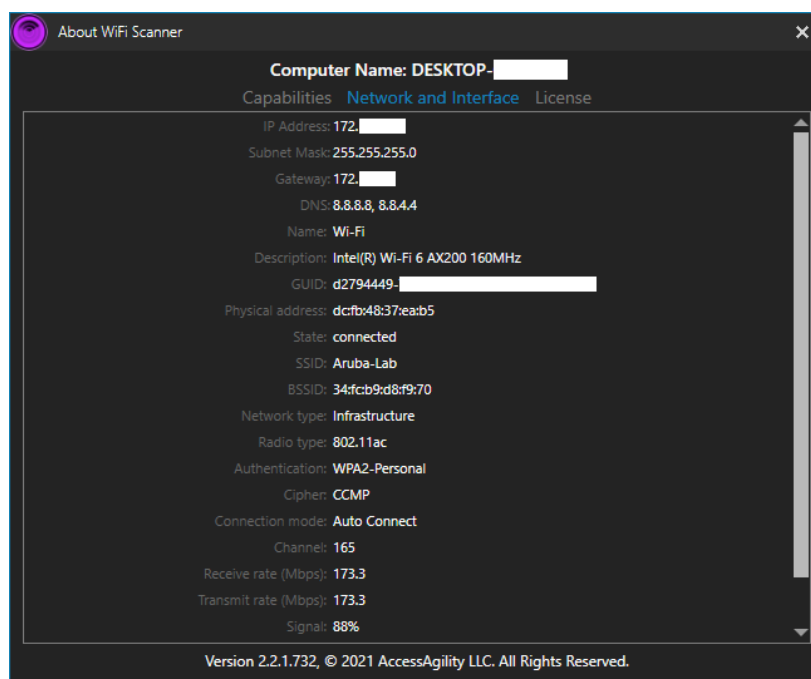
Capabilities

This tab will display information about the network interface card on the device running WiFi Scanner.



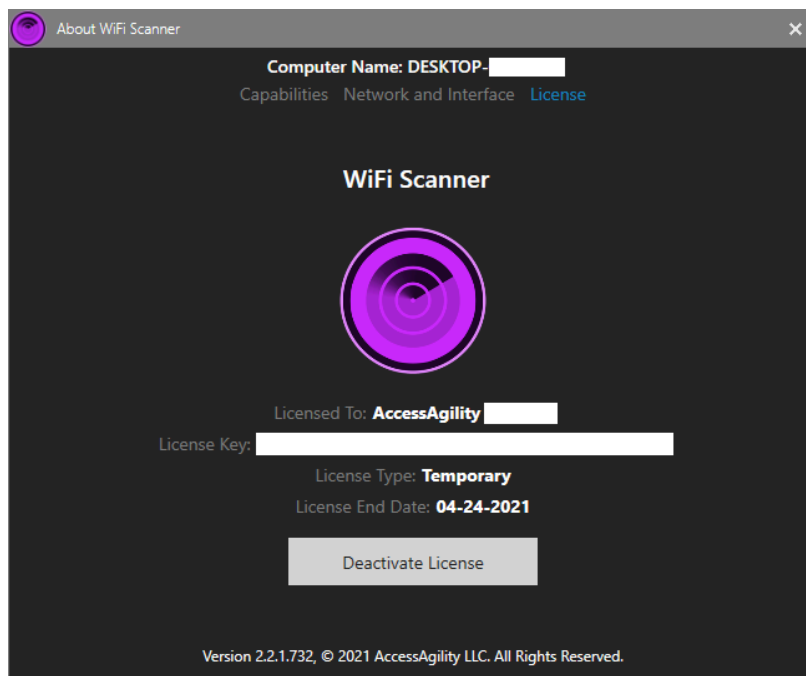
Network and Interface

Displays information about the network the device is currently connected to, as well as more information about the network interface card of your device.

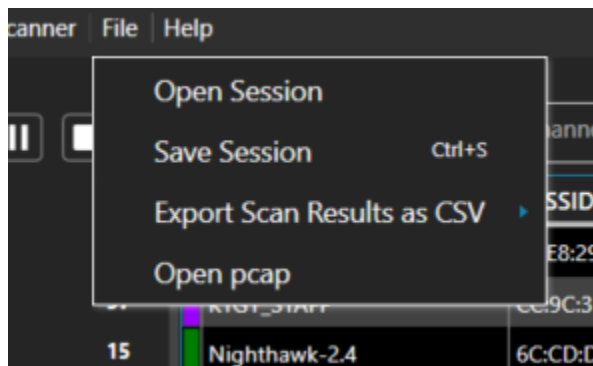


License

The license will show information about your license including: who the license is assigned to, the license key, license type, and the end date. There is also a button to deactivate the license.



File



Open Session

After saving a session, open the session to see previous data of your wireless environment. Click on 'Open Session' within the file tab and select a session file to view.

Save Session

Saving a session in WiFi Scanner saves a scan file that is viewable later. This is useful in cases to allow a support agent to analyze a network and find possible issues. It may also be helpful to be able to save a session of the network to determine fluctuations of performance at different periods in time.

Export Scan Results as CSV

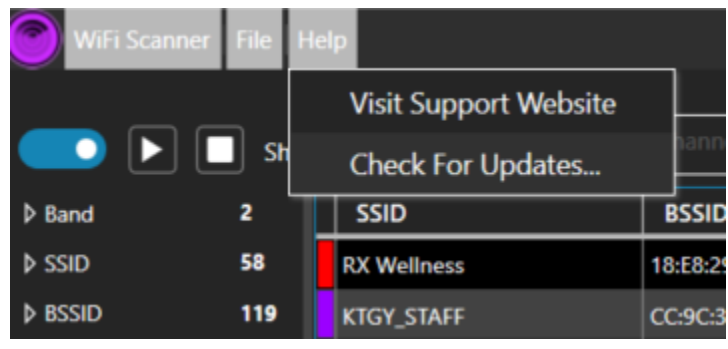
Another option to save results of a scan is to export them to a comma-separated values (CSV) file. This is helpful to view data in a file format, instead of opening the session within WiFi Scanner.

For a detailed explanation of how to do this, navigate to [Exporting Results as a CSV File](#).

Open pcap File

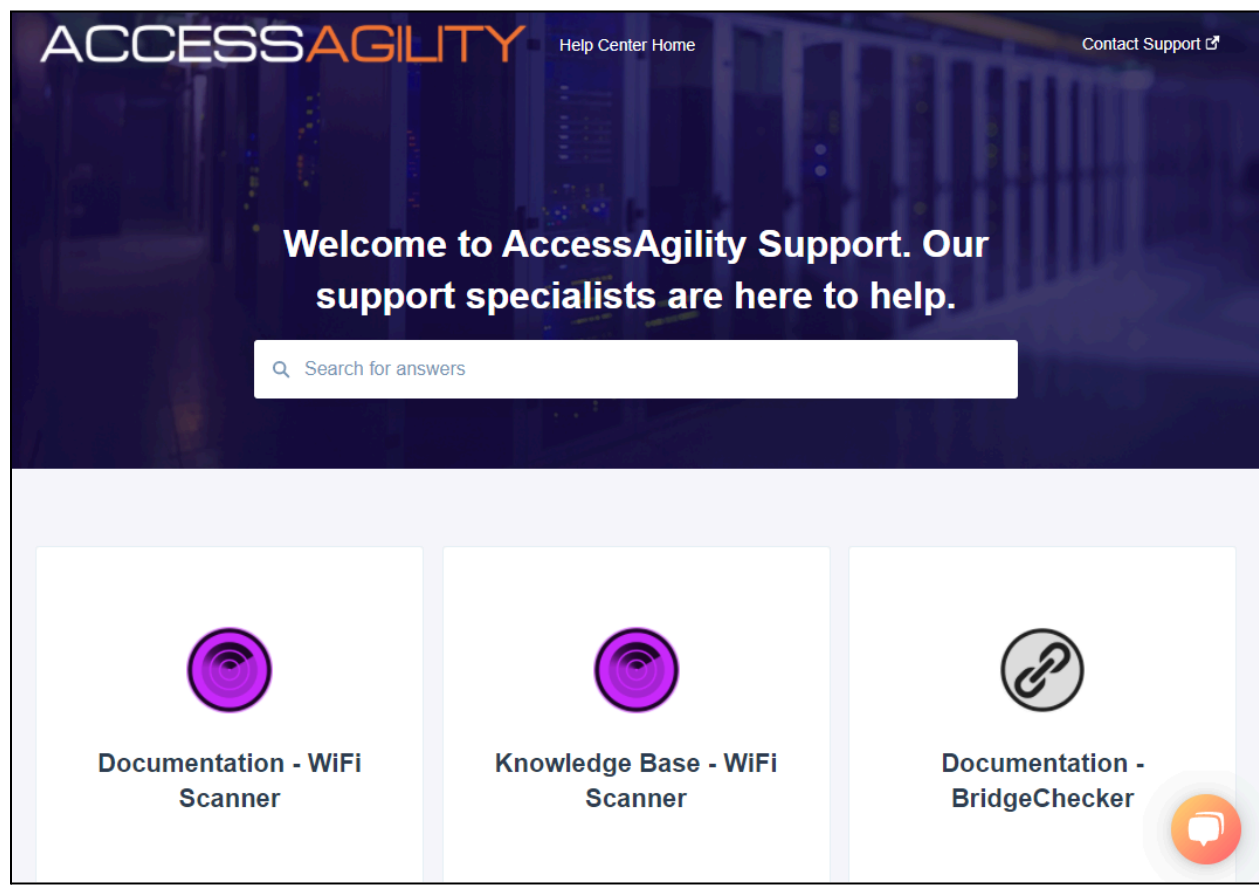
A user may also open a pcap, or packet capture, file to view data captured outside of WiFi Scanner. This may be useful for users that want to view the wireless data of someone else who may not own WiFi Scanner.

Help



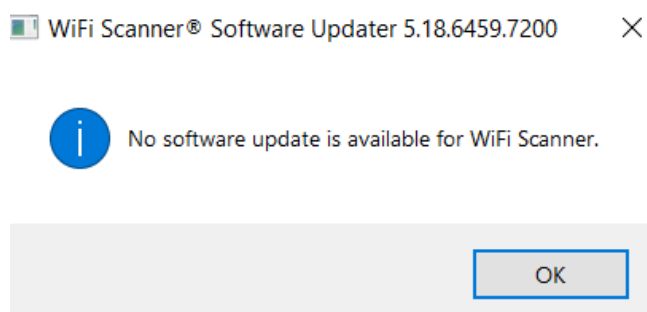
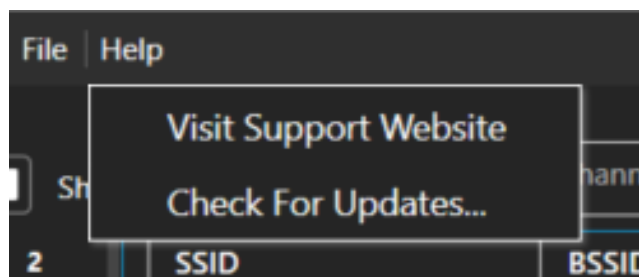
Visit Support Website

The support website is a very useful tool for anyone using WiFi Scanner. There is documentation on how to use WiFi Scanner, how each function works, what information the graphs and tables display, and even WiFi knowledge that is very useful.



Check For Updates...

After clicking here, WiFi Scanner will check for available updates. If there are none, an alert will display that reads “No software update is available for WiFi Scanner.” In the case that there is an update, you will be prompted to download and install it.



WLAN Pi

WLAN Pi is a portable device that can be used as a throughput tester, remote WiFi scanner, packet capture tool, portable WiFi signal generator and more. This article details the history of WLAN Pi: <https://www.accessagility.com/blog/wlan-pi-project>.

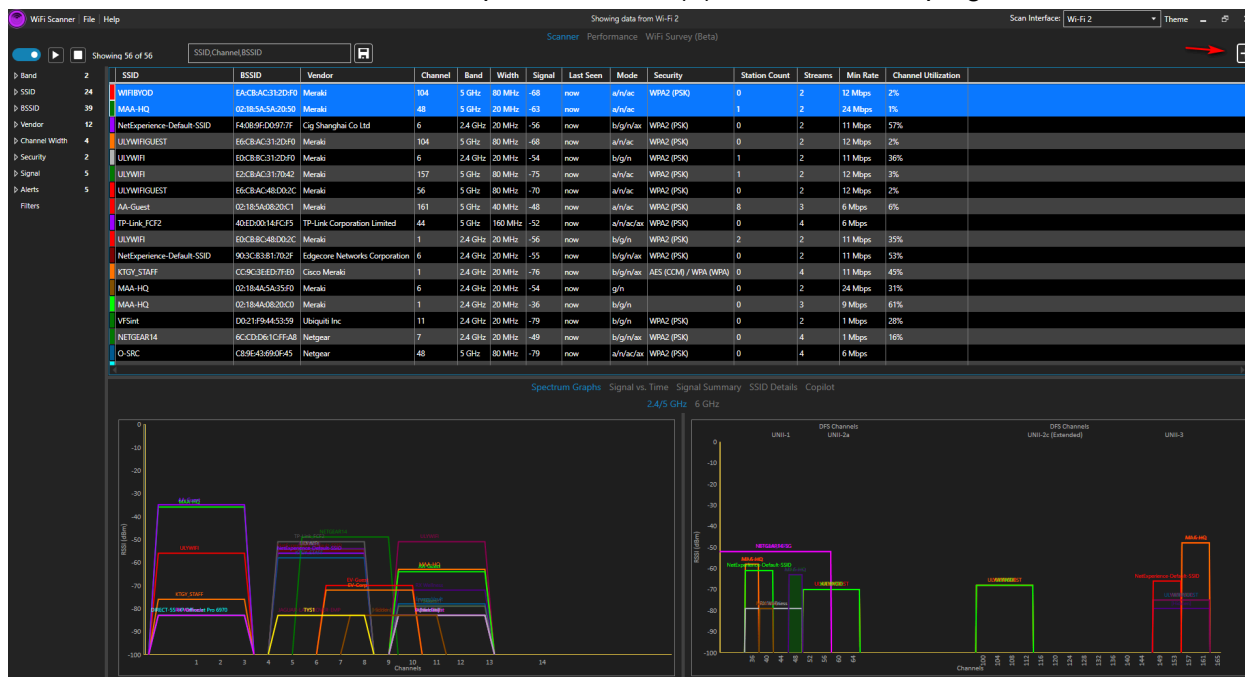
For a User Guide of WLAN Pi, visit <https://userguide.wlanpi.com/hardware/compare-wlan-pi-models>.

For a demonstration of the uses of WLAN Pi, watch WiFiNigel's video, “10 Easy Things To Do With a WLAN Pi”, at <https://youtu.be/Ua2d4ajR0pk>

Using WLAN Pi as a Remote Wireless Scanner Probe

WiFi Scanner allows you to use a WLAN Pi (or any Linux-based wireless device) as an external scanning interface via SSH. Using the picklist in the top right, you can select what device you wish to use for scanning. By default, WiFi Scanner will use the System WiFi Interface.

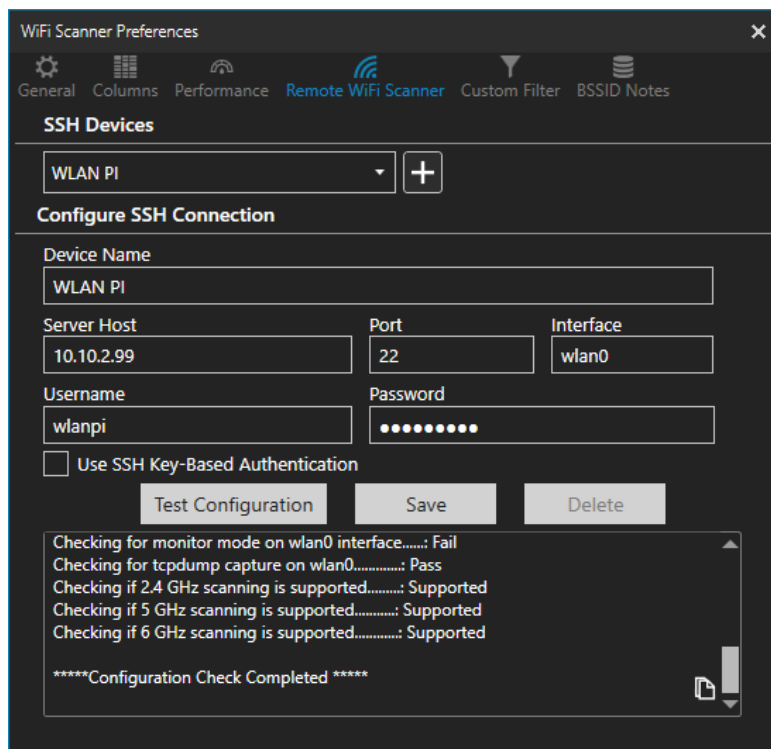
To add a new Remote WiFi scanner, press the *Plus (+)* button on the top right.



This will bring you to the *Remote WiFi Scanner* tab of the Preferences window. Here, you can add a new device under Configure SSH Connection. Enter the Device Name, the Server Host IP address, which can be found on the main screen of WLAN Pi, the Username, and Password.

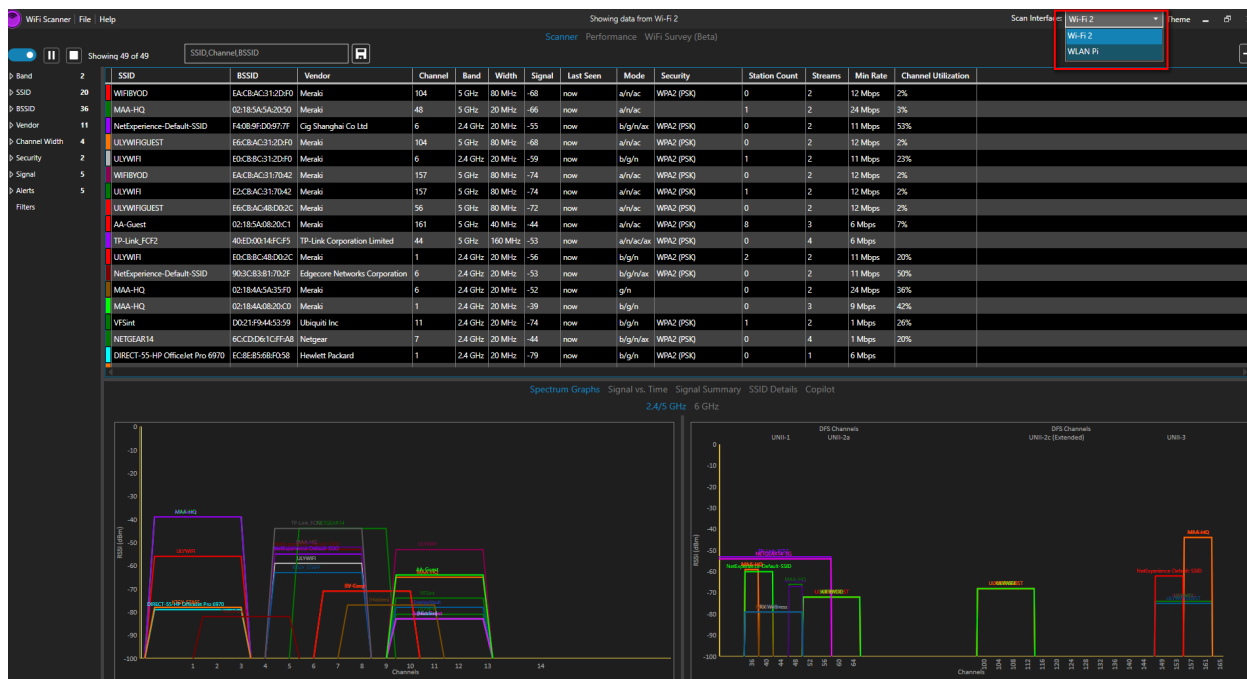


Server Address in WLAN Pi M4

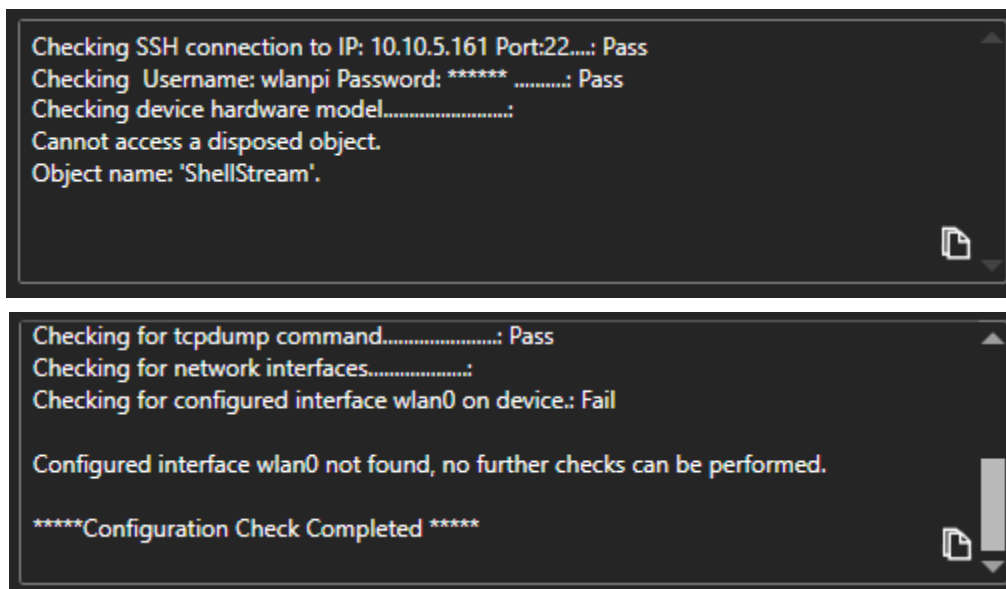


Configure SSH Connection

Once set, click on *Test Configuration*, wait for the Configuration Check to be completed, then click *Save*. You will now be able to select the WLAN Pi as a scanner device, and you will be able to use all the benefits of WiFi Scanner from the location of the WLAN Pi remotely.



NOTE: If you encounter the following messages after flashing the WLAN Pi image, change the default password of the WLAN Pi using the web console.



```

Checking SSH connection to IP: 10.10.5.161 Port:22.....: Pass
Checking Username: wlanpi Password: ***** .....: Pass
Checking device hardware model.....:
Cannot access a disposed object.
Object name: 'ShellStream'.

Checking for tcpdump command.....: Pass
Checking for network interfaces.....:
Checking for configured interface wlan0 on device.: Fail

Configured interface wlan0 not found, no further checks can be performed.

*****Configuration Check Completed *****

```

The following are the WLAN Pi image versions tested for each model at the time of writing:

NEO2	v2.1.0
M4	v3.1.2 - WLPC 2023 Phoenix v3.1.4 - WLPC 2023 Prague
R4	v3.1.2 - WLPC 2023 Phoenix v3.1.4 - WLPC 2023 Prague
Pro	V3.1.2-dev3

For more information on using WLAN Pi with WiFi Scanner, visit

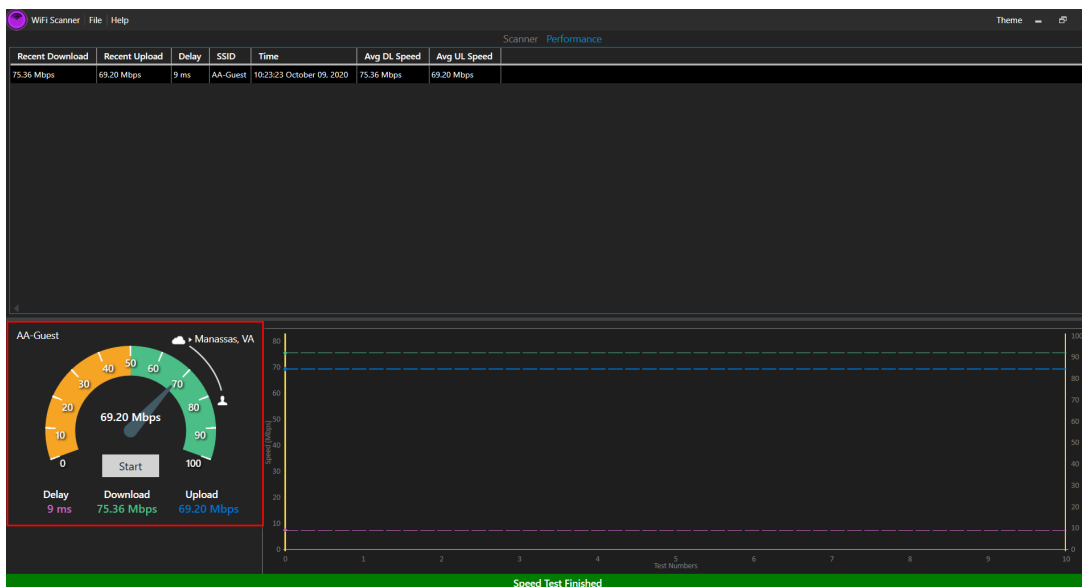
<https://www.accessagility.com/blog/using-wlan-pi-as-remote-wifi-scanner>.

Performance Tab

Speed Test

Single Test

Users can run single speed tests at any time by switching to the performance tab and navigating to the speed test in the bottom left corner.



Continuous Testing

There is an option to allow speed tests to run periodically while running the application. Go to 'WiFi Scanner' → 'Preferences' in the top left corner and go to the 'Performance' tab. Here, under 'Test Execution' set parameters to as seen fit.

The screenshot shows the 'WiFi Scanner Preferences' dialog box, specifically the 'Performance' tab. The 'Speed Test Results Window Columns Visibility' section has the following settings:

Column	Visibility
Avg Download Speed	<input checked="" type="checkbox"/>
Avg Upload Speed	<input checked="" type="checkbox"/>
Channel	<input type="checkbox"/>
Delay	<input checked="" type="checkbox"/>
Max Download Speed	<input type="checkbox"/>
Max Upload Speed	<input type="checkbox"/>
Min Download Speed	<input type="checkbox"/>
Min Upload Speed	<input type="checkbox"/>
PC IP Address	<input type="checkbox"/>
PC MAC Address	<input type="checkbox"/>
PC Name	<input type="checkbox"/>
RSSI	<input type="checkbox"/>
Server	<input type="checkbox"/>
SSID	<input checked="" type="checkbox"/>
Time	<input checked="" type="checkbox"/>
Recent Download Speed	<input checked="" type="checkbox"/>
Recent Upload Speed	<input checked="" type="checkbox"/>

The 'Test Execution' section has the following settings:

- If repeat interval is less than 1, only single speed test will be performed. Default is 10 seconds if none provided.
- Repeat Speed Test and wait seconds between tests.
- Run Speed Test automatically when BSSID or SSID changes.

A 'Save' button is located at the bottom right.

Location Selection

Within the performance tab and located to the top right of the speed test icon, there is a cloud that will allow users to change the server location that they would like to use for speed testing. Note, the test will take 10-15 seconds before finishing.

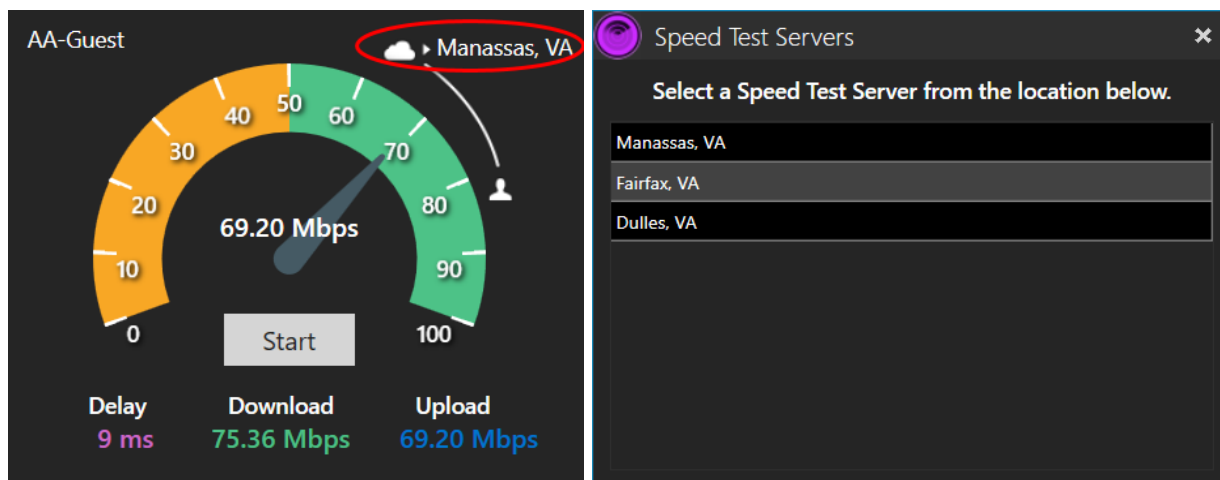
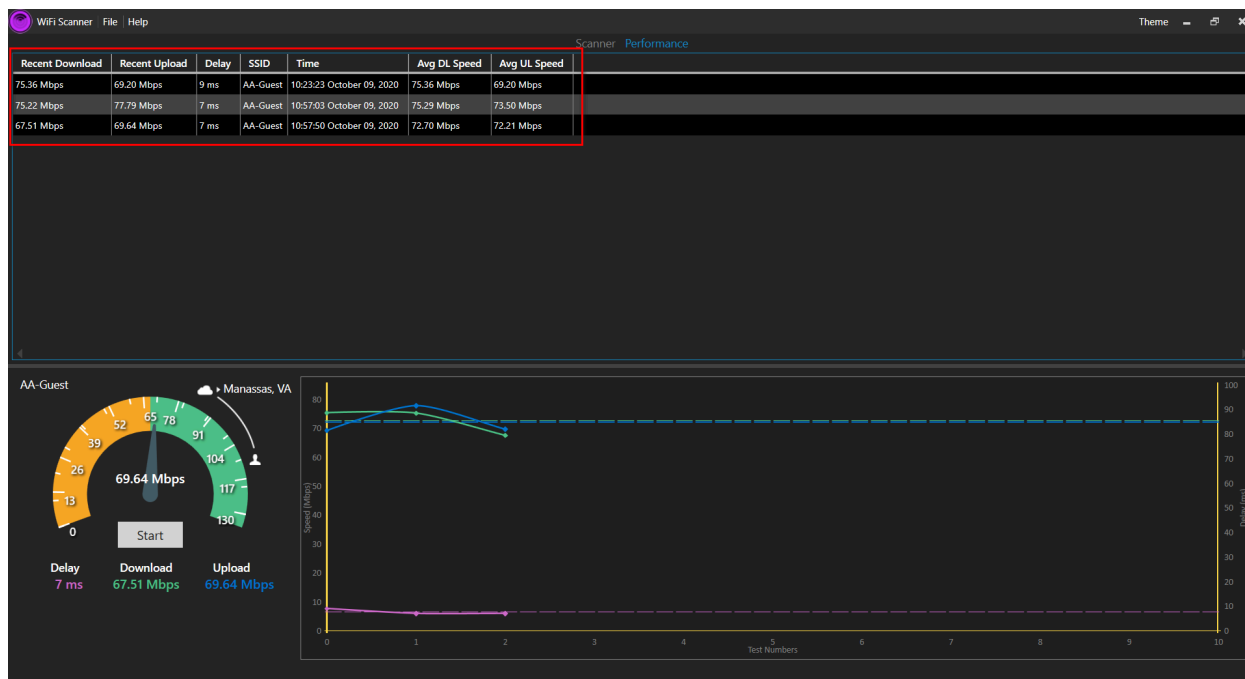


Table View

The table view in the performance tab is useful to track the speeds of a given network. This table will keep track of the details of network performance, including but not limited to: latency, recent speeds, average speeds, and the time the test took place.



WiFi Survey Tab

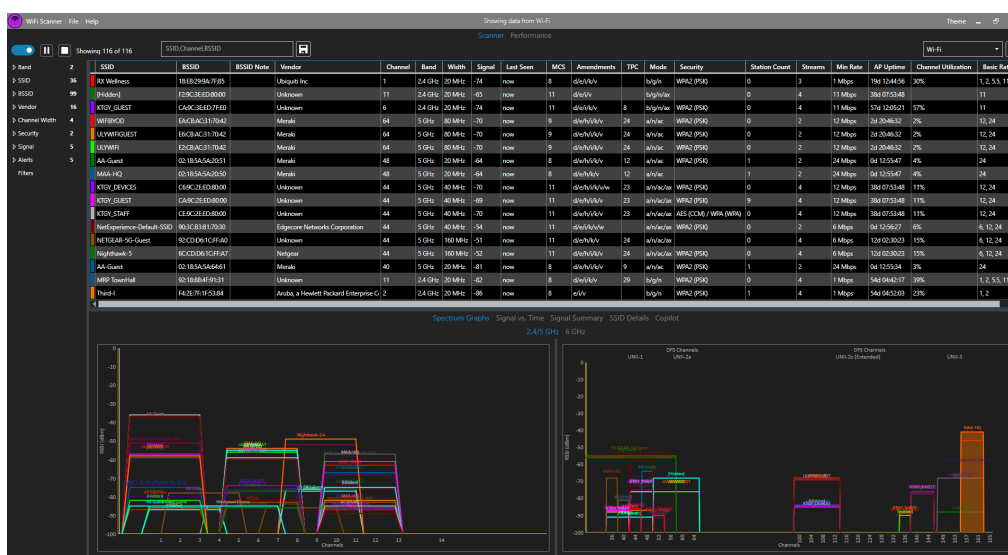
WiFi Survey is currently in the Beta stage. Contact support@accessagility.com to have the WiFi Survey feature enabled for your license key.

Activating WiFi Survey

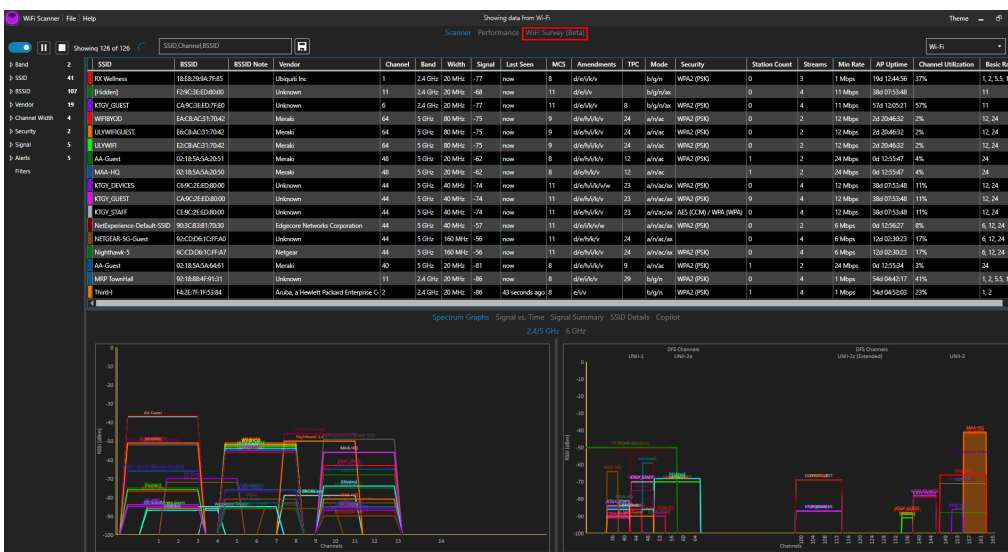
To activate the *WiFi Survey* Tab Press **Ctrl+W** after opening the WiFi Scanner Application.

NOTE: If the WiFi Survey tab does not appear after pressing **Ctrl+W**, close and relaunch the app.

Inactive:



Active:

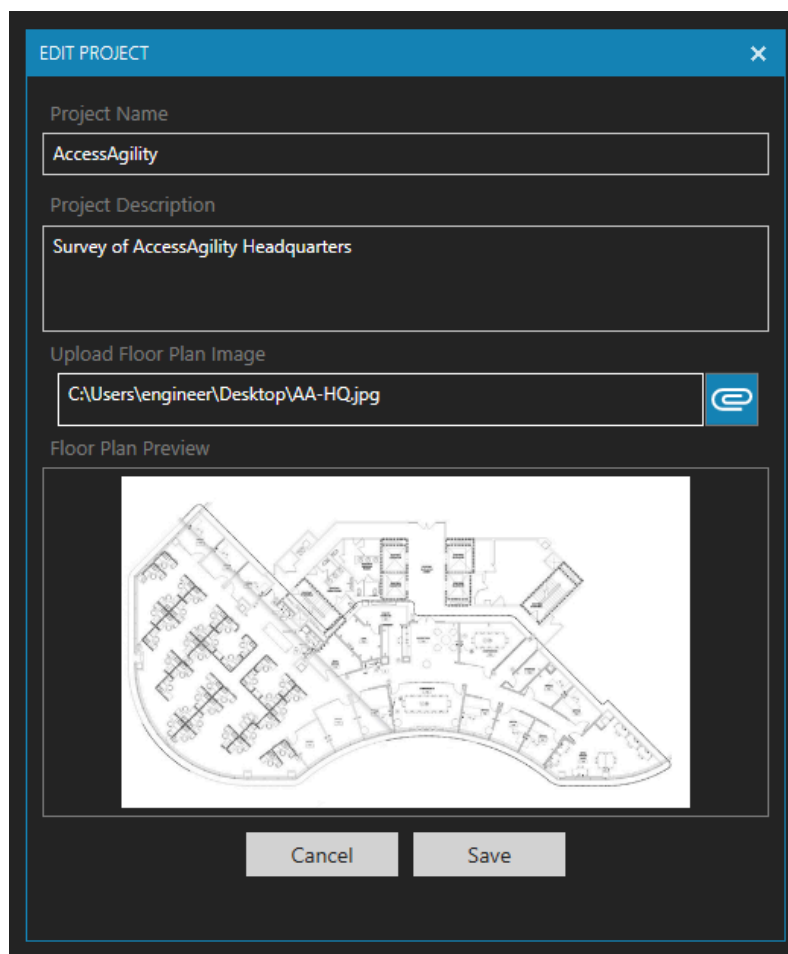


Creating a Project

Click on **Plus** Button next to *Projects* on the upper left of the screen



Once clicked, the **EDIT PROJECT** window will pop-up. Define the Project Properties: Project Name, Project Description. Click on the **Paperclip** Button to import the *Floor Plan* image. WiFi Survey supports JPEG and PNG image files.



EDIT PROJECT

Project Name
AccessAgility

Project Description
Survey of AccessAgility Headquarters

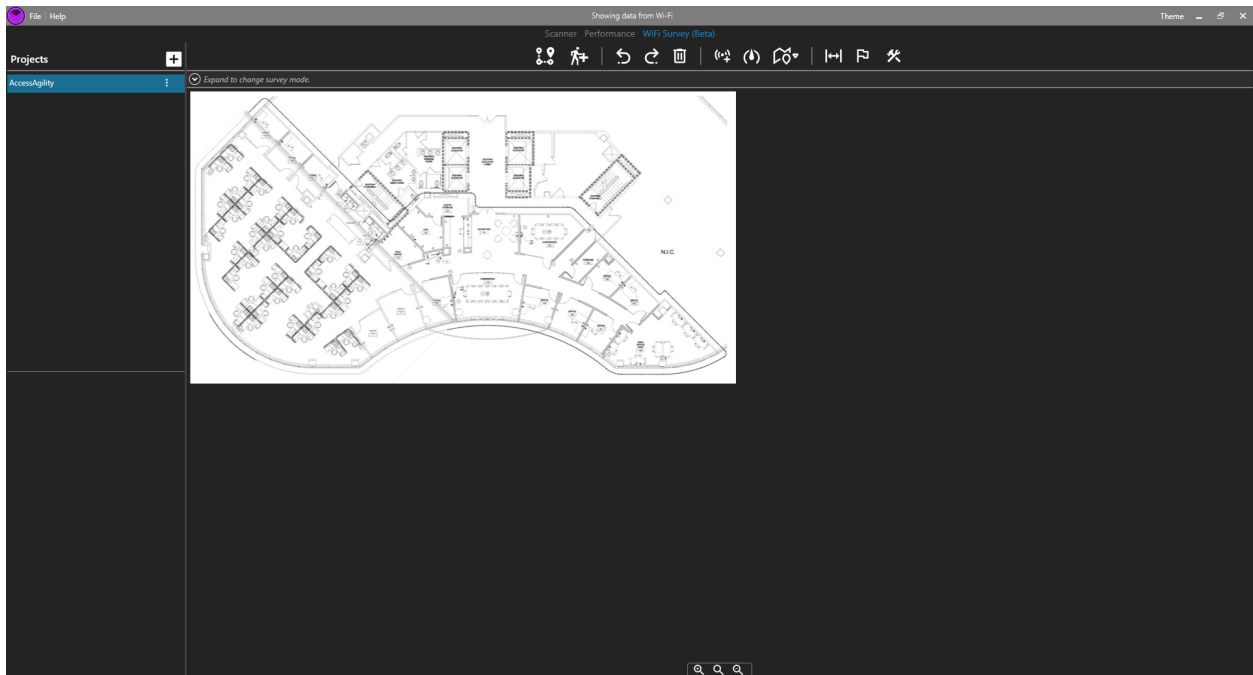
Upload Floor Plan Image
C:\Users\engineer\Desktop\AA-HQ.jpg

Floor Plan Preview

Cancel Save

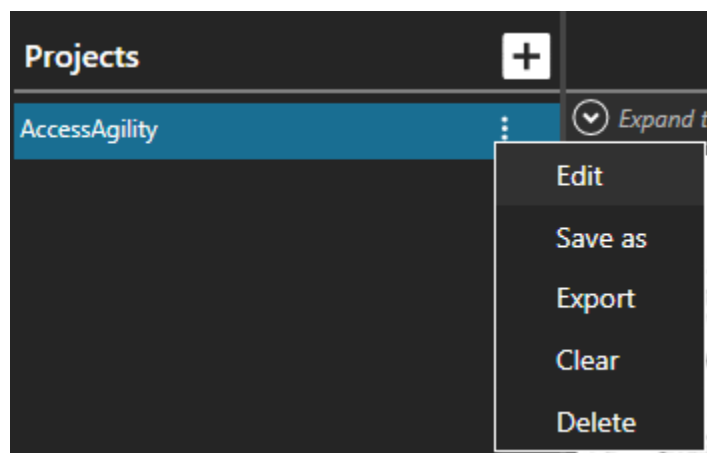
Once all the required information is filled, click Save.

To Open a Project select the desired Project from the list on the left:



Project Options

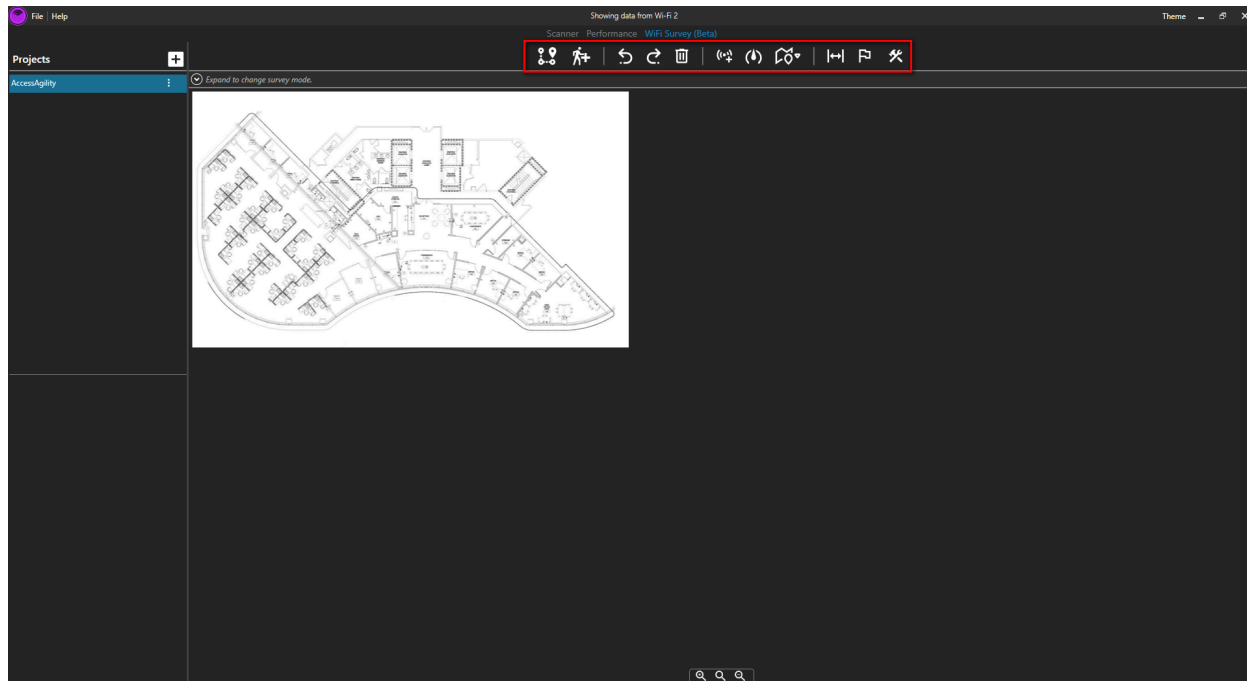
Click on the button with **Three Dots** next to the project to drop down the menu.














Edit	Opens the <i>EDIT PROJECT</i> window to edit project properties
Save As	Creates a duplicate of the project
Export	Exports the project as a .wifi-survey file
Clear	Clears all markers, survey paths, boundary, speed test, etc. placed on the floor plan
Delete	Deletes the project

Buttons Guide

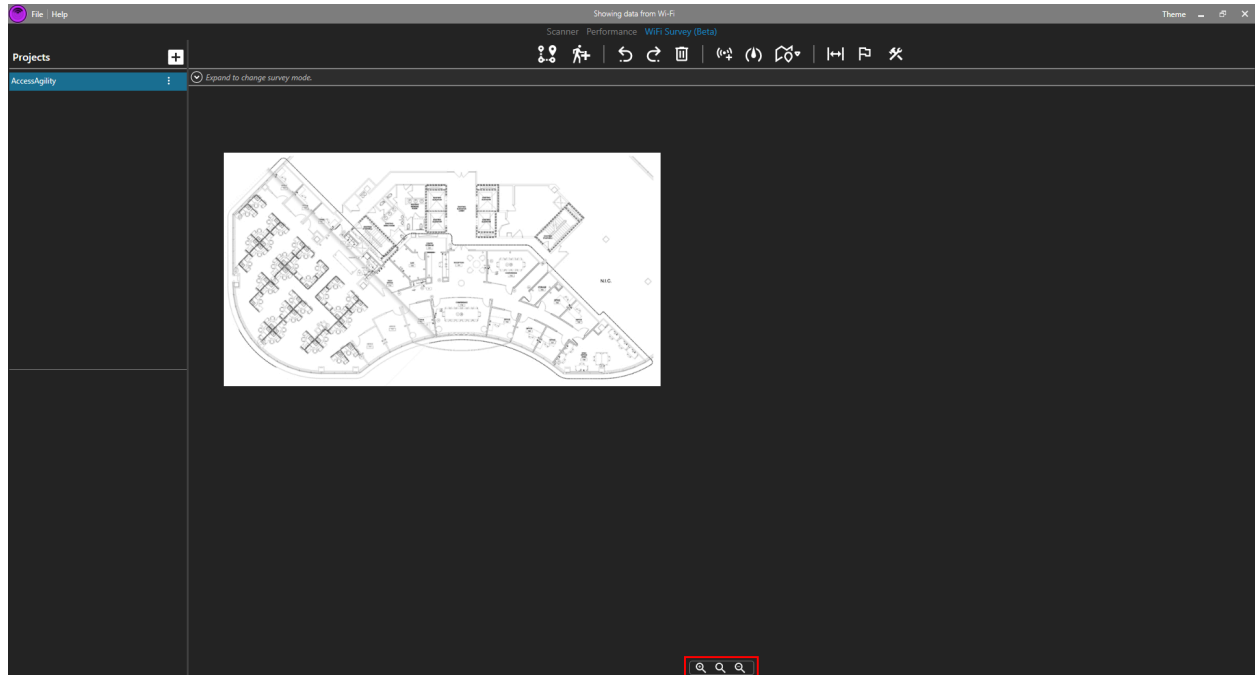
The primary buttons are located at the top of the screen.



-  *Draw WiFi Survey Path*
-  *Start New WiFi Survey Path*
-  *Undo Last Action*
-  *Redo Last Action*
-  *Delete Markers*
-  *Place Access Points*
-  *Perform Download/Upload Speed Test*
-  *Generate HeatMap*
-  *Calibration Setup*
-  *Setup Floor Plan Boundary*
-  *Speed Test Settings*

Zooming

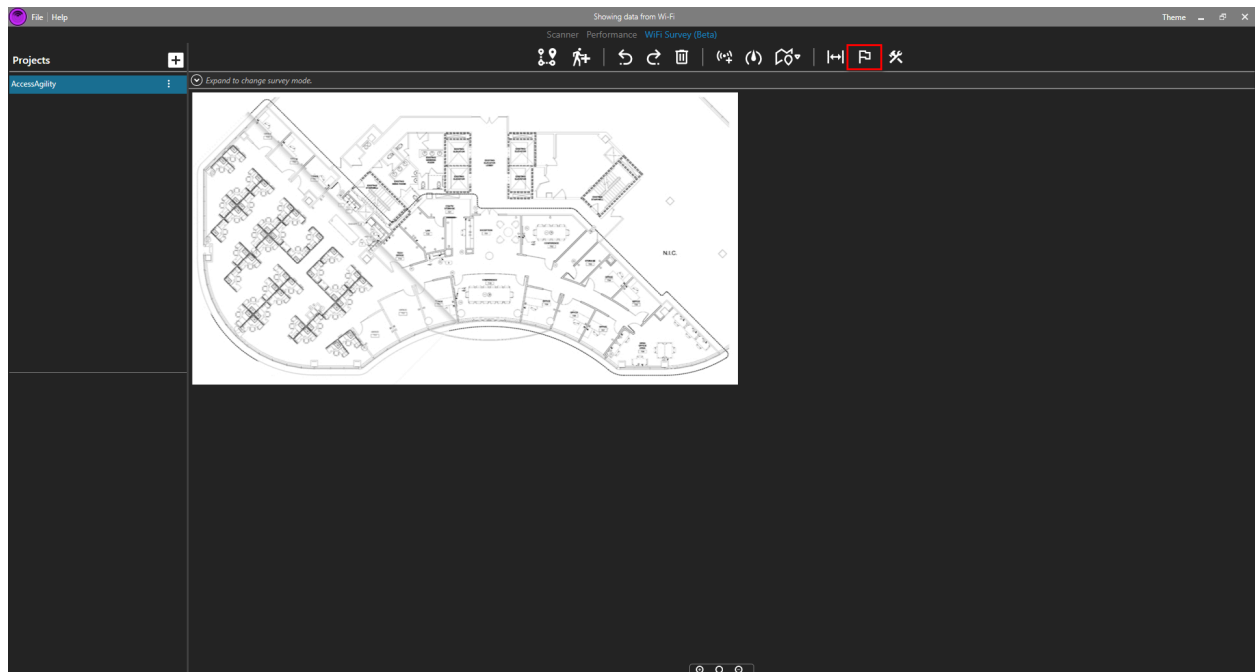
For **Zooming** use the buttons at the bottom or use *Mouse Scroll Wheel*.



Performing Surveys

Setup Floor Plan Boundary

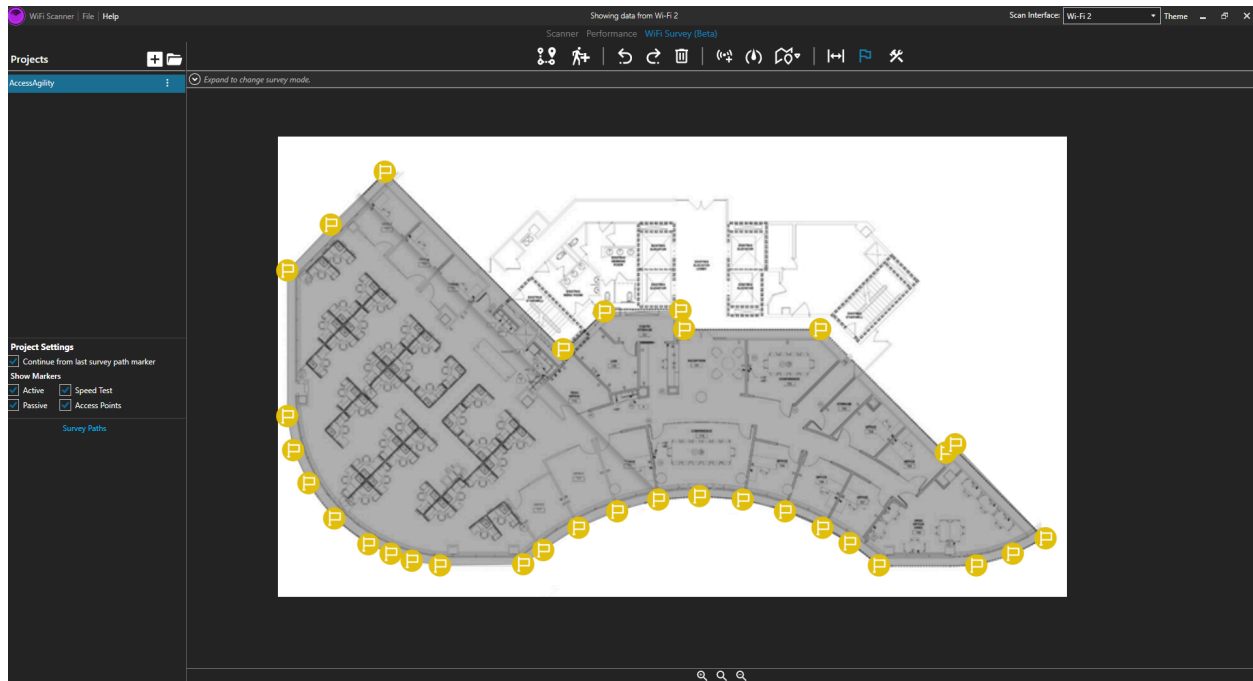
Click on the *Setup Floor Plan Boundary* button at the top of the screen.



On the imported *Floor Plan*, carefully click on the borders of the area to be surveyed. Each click will leave a marker to indicate the border.

Note: More clicks will generate a more accurate polygon.

To **Readjust Markers**, simply click and drag the marker to the desired location.

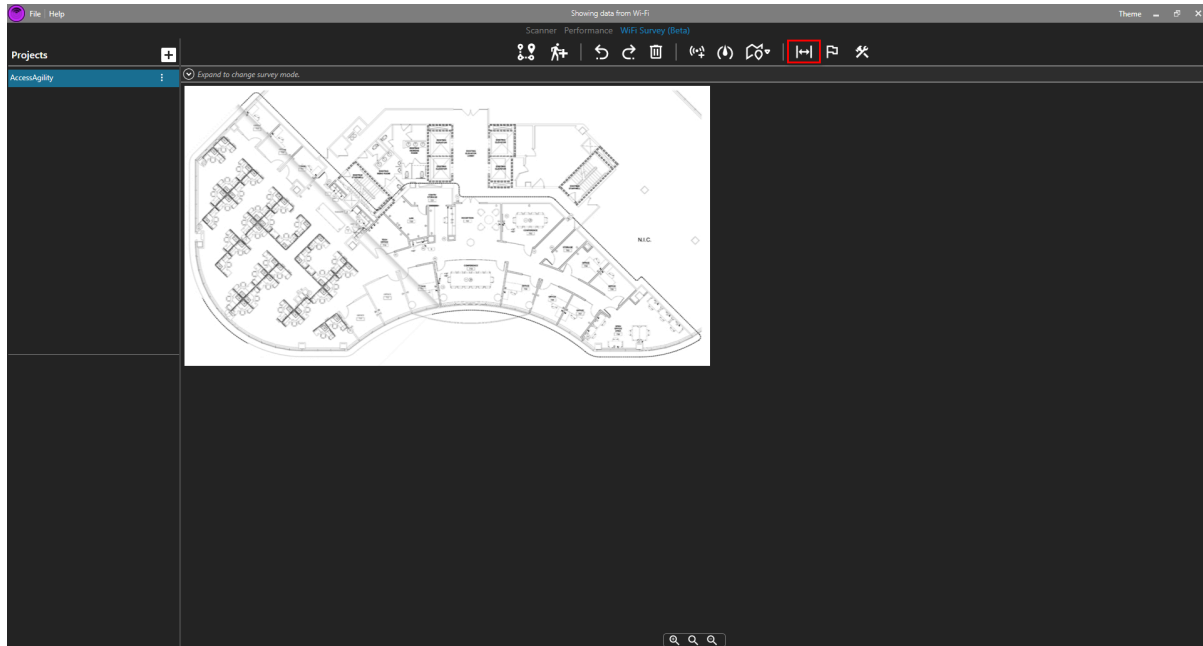


Note: WiFi Scanner will **not allow** you to create a Survey Path without setting up the boundary on the Floor Plan first.

Survey markers and heatmaps generated will be **limited** to the area indicated by the *Floor Plan Boundary*.

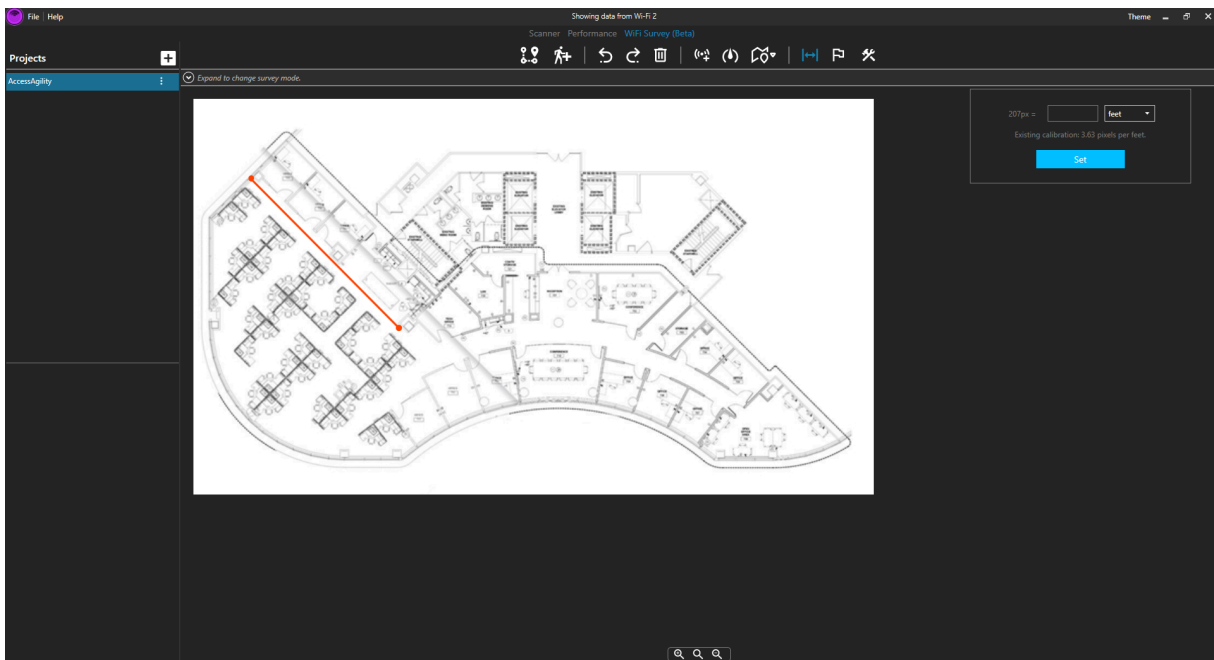
Calibration Setup

Click on the *Calibration Setup* Button at the top of the screen.



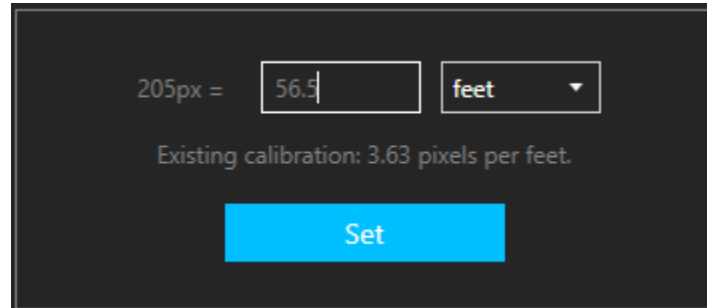
On the imported *Floor Plan*, click on Point A then on Point B to indicate what will be scaled. You can also drag the points after setting Point A and Point B to adjust their desired location.

Note: The points must be located within the Floor Plan Boundary.



Once the points are set, enter the actual distance between the two points on the calibration window at the top right of the screen.

Unit of Measurement can be in either Feet or Meters; click **Set** when finished.

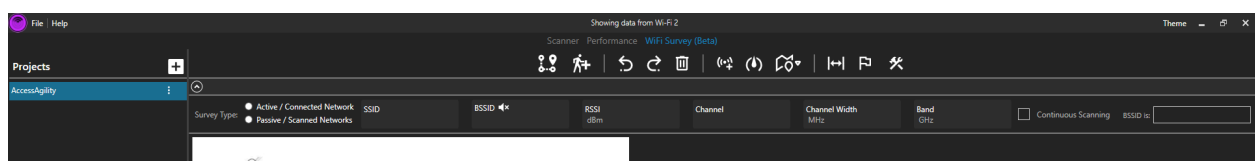
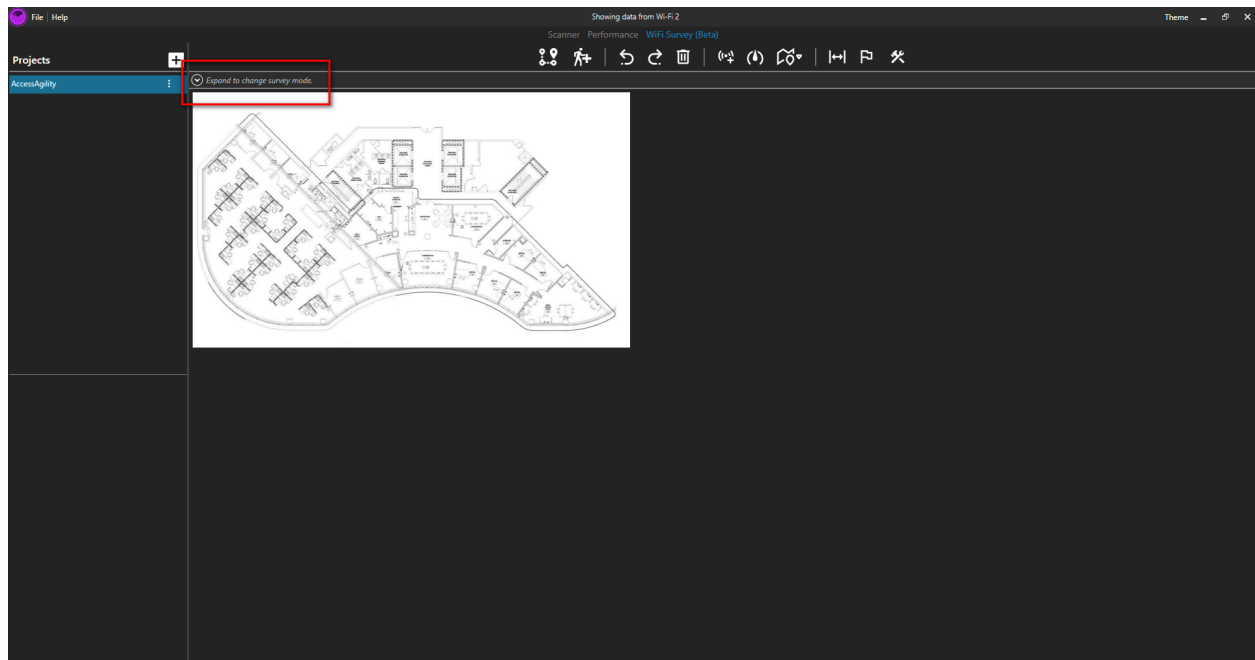


Note: Calibration is necessary to generate Heatmaps.

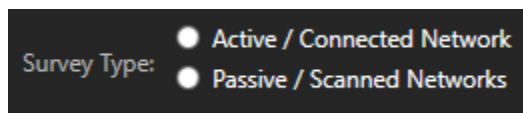
Recalibration can be performed by doing the steps listed above again.

Select Survey Mode

Click on Expand to change survey mode



At Survey Type, you will have the option of either *Active/Connected Network* for Active Survey or *Passive/Scanned Networks* for Passive Survey.





An *active Wi-Fi survey* is when a surveying device is connected to the Wi-Fi network and records signal measurements based on the performance of the connection. A *passive Wi-Fi survey* is when the surveying device is not connected to any Wi-Fi network and is only listening to the Wi-Fi environment.

For more information, read our article, “Types of WiFi Surveys: Active vs. Passive”.
<https://www.accessagility.com/blog/wifi-survey-active-vs-passive>

Active Survey

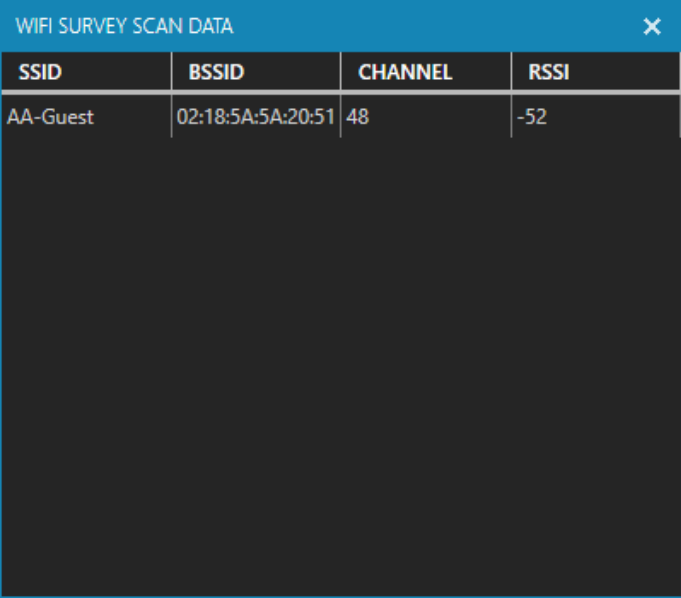
Before beginning an Active Survey, you must connect to a wireless network. Once connected, you will be able to select *Active/Connected Network* as the Survey Type.

To begin a survey, click on the *Draw WiFi Survey Path* button . Click on your location on the floor plan to collect data. Green markers will appear with each click. To begin a new path, click on the *Start New WiFi Survey Path* button .



To stop data collection, click on *Draw WiFi Survey Path* again.



Clicking on a marker will provide data for the network you are connected to from that particular location.



SSID	BSSID	CHANNEL	RSSI
AA-Guest	02:18:5A:5A:20:51	48	-52

Passive Survey

The survey process follows the same steps as Active Survey, but does not require you to be connected to a specific wireless network.

To begin a survey, click on the *Draw WiFi Survey Path* button . Click on your location on the floor plan to collect data. A passive survey is indicated with orange survey markers. To begin a new path, click on the *Start New WiFi Survey Path* button .



Click on *Draw WiFi Survey Path* again to end your survey.

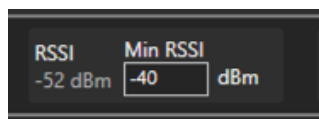
Clicking on a marker will provide the WiFi Survey Scan Data from that location.

WIFI SURVEY SCAN DATA			
SSID	BSSID	CHANNEL	RSSI
NETGEAR-5G-Gu	92:CD:D6:1C:FF:A	44	-53
[Hidden]	E2:55:7D:B8:52:3I	11	-81
NetExperience-D	90:3C:B3:B1:70:2I	1	-49
AA-Guest	02:18:5A:08:20:C	161	-48
KTGY_DEVICES	C6:9C:2E:ED:80:0	44	-63
MAA-HQ	02:18:5A:5A:20:5I	48	-59
KTGY_DEVICES	C6:9C:3E:ED:80:0	11	-55
MAA-HQ	02:18:5A:08:20:C	161	-48
[Hidden]	F2:9C:1E:ED:80:0	144	-74
O-SRC-Guest	D2:9E:43:69:0F:4	9	-79
KTGY_DEVICES	C6:9C:1E:ED:80:0	144	-74

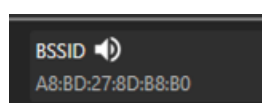
Additional Survey Features

Minimum RSSI and Sound Alert

The user can enter the minimum signal value which will be used as the threshold. The app will then start an audio alert if the signal goes below that minimum value.

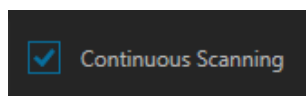


A sound alert will only be triggered if the user has enabled the sound tracking.



Continuous Scanning

Continuous Scanning is a feature used specifically for Passive Surveys. This feature allows the Windows Wi-Fi card to continuously scan Wi-Fi networks and collect data as you perform a passive survey. This reduces the time to perform the survey as you can continuously walk around without much stops. This will also increase the rate WiFi Survey records data as you click on the floor plan.

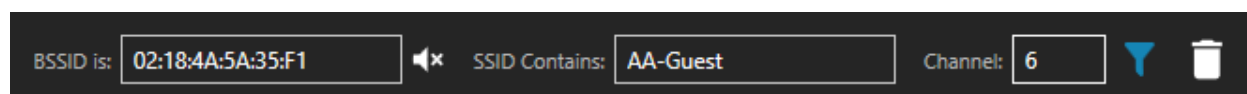


NOTE: The tradeoff of this feature is accuracy. Because the data collected changes as you move, it will not be as precise when you place a marker on the floor plan. For a more accurate survey, you can perform a Stop-and-Go Survey Method, in which you must stop at each location and wait for the scan to be completed before moving on. This method takes more time to perform. This can be done by leaving Continuous Scanning disabled.

Network Filtering

For Passive Surveys, you have the capability to filter results based on BSSID, SSID, and Channel used.

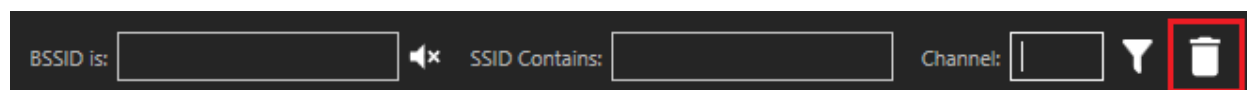
Enter the information on what you would like filtered, then click the Apply Filter button, which is represented by the funnel.



The filtered results will appear on the right side of the screen.

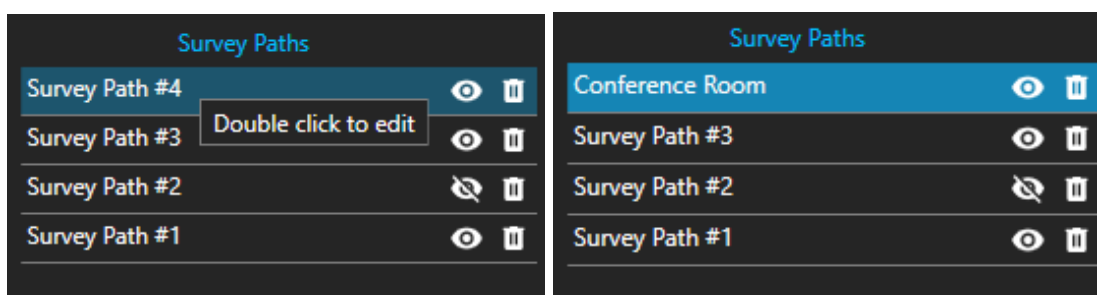
Scanned Networks				
SSID	BSSID	Channel	RSSI	Last Seen
AA-Guest	02:18:4A:5A:35:F1	6	-44	now

If you would like to clear your filter results, click on the Clear Filter button.



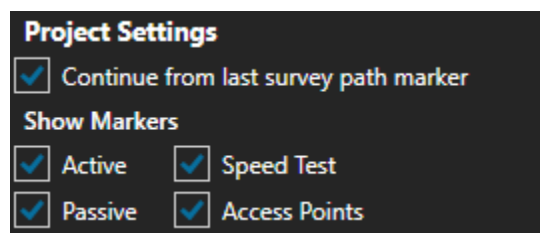
Renaming Survey Paths

Double-click on the survey path you want to rename. Enter the desired survey path name and press enter.



Continuing Last Survey Path

The option to continue the last survey path is available on the left side of the screen under *Project Settings*.




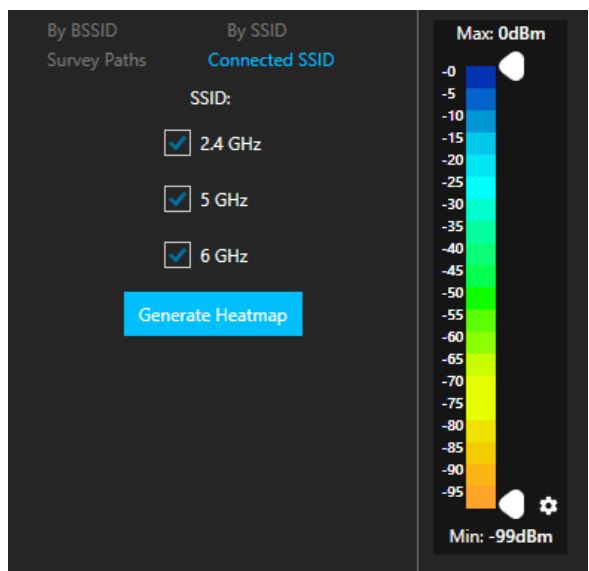
If this option is **disabled**, switching to a different tab and returning to *Draw WiFi Survey Path* will automatically begin a new survey path.

Showing/Hiding Markers

Under *Project Settings*, there is an option to show or hide markers located on the floor plan. The marker boxes are ticked by default to show the markers. Unticking the box will hide the specified marker.

Generating Heatmaps

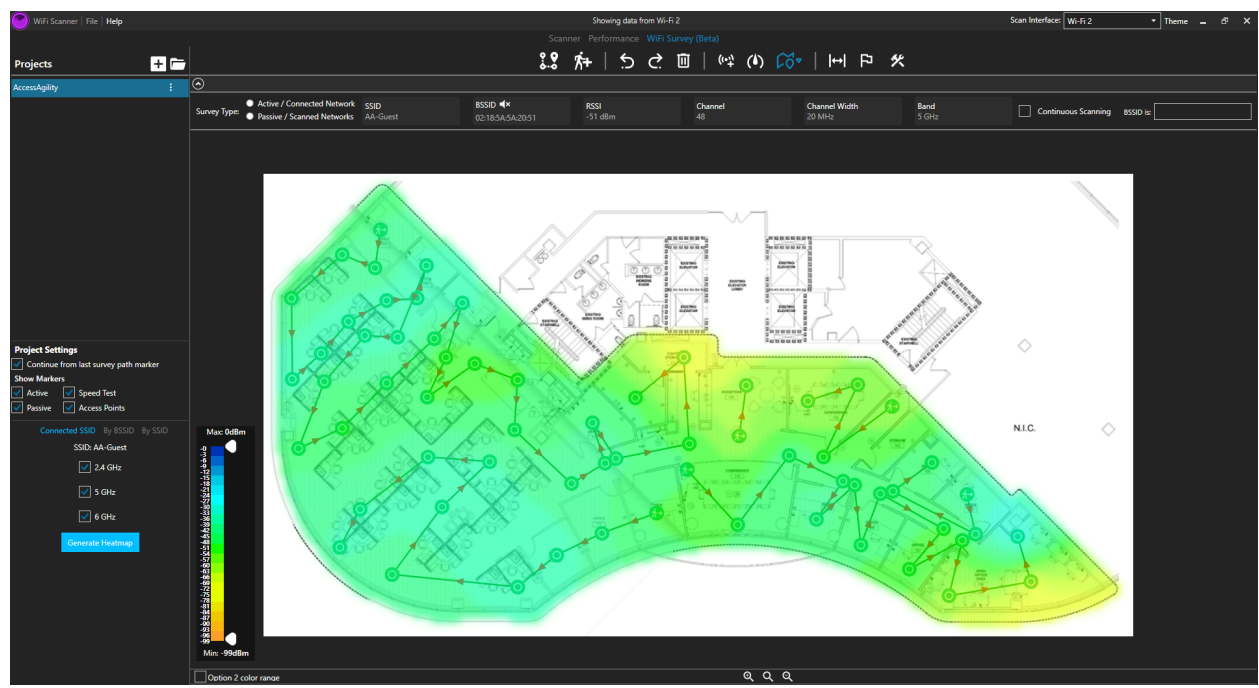
Click on the *Generate HeatMaps* button . Several options appear on the left side of the window.



Heatmaps by Connected SSID

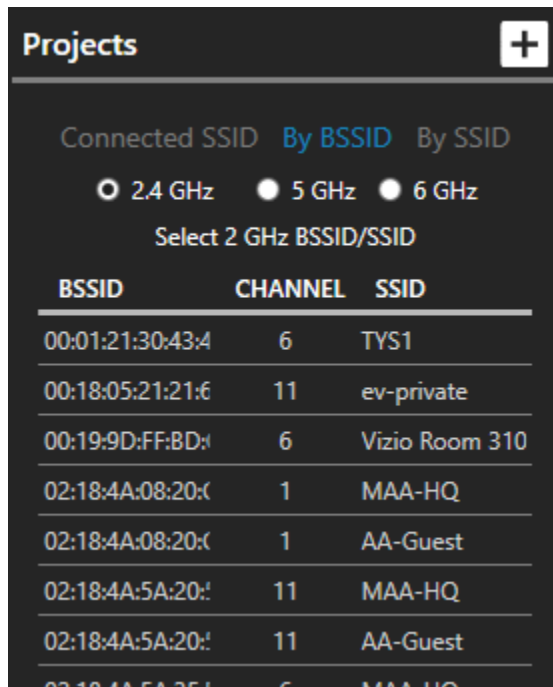
The *Connected SSID* tab is selected by default. This option is used for Active Surveys.

Tick the desired frequencies to be included and click *Generate Heatmap*.

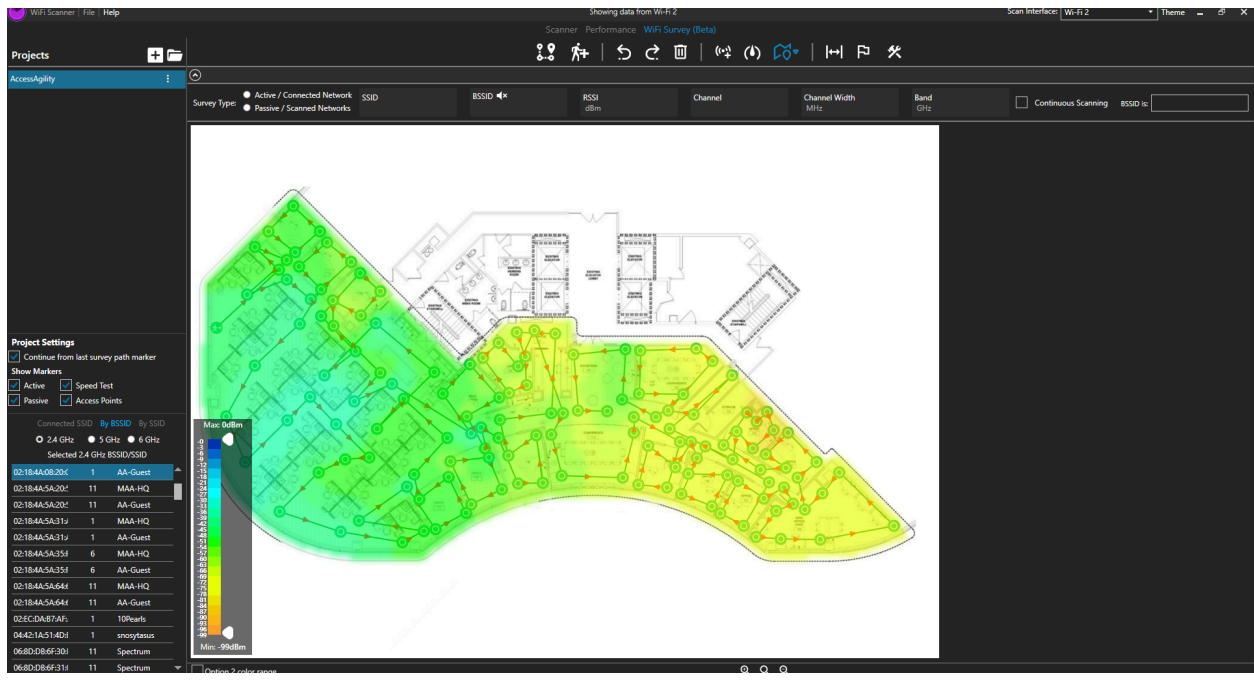


Heatmaps by BSSID

Select the *By BSSID* Tab. This option is used for passive surveys.

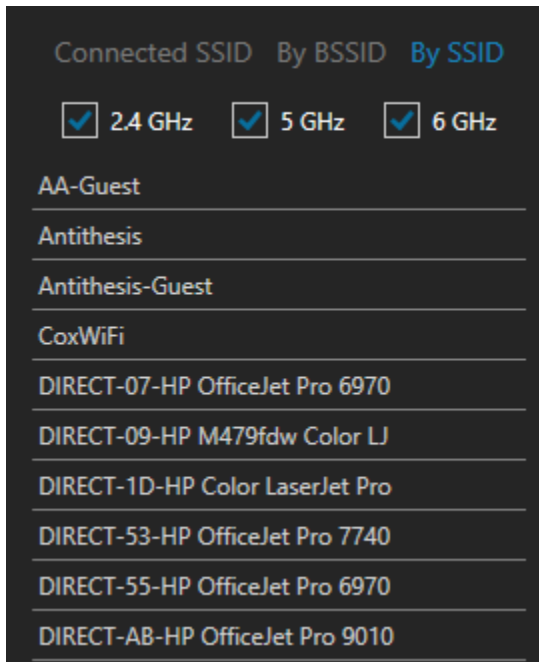


Choose between 2.4 GHz, 5 GHz, and 6 GHz to filter frequency standards
Select the BSSID you want to generate a heatmap for.

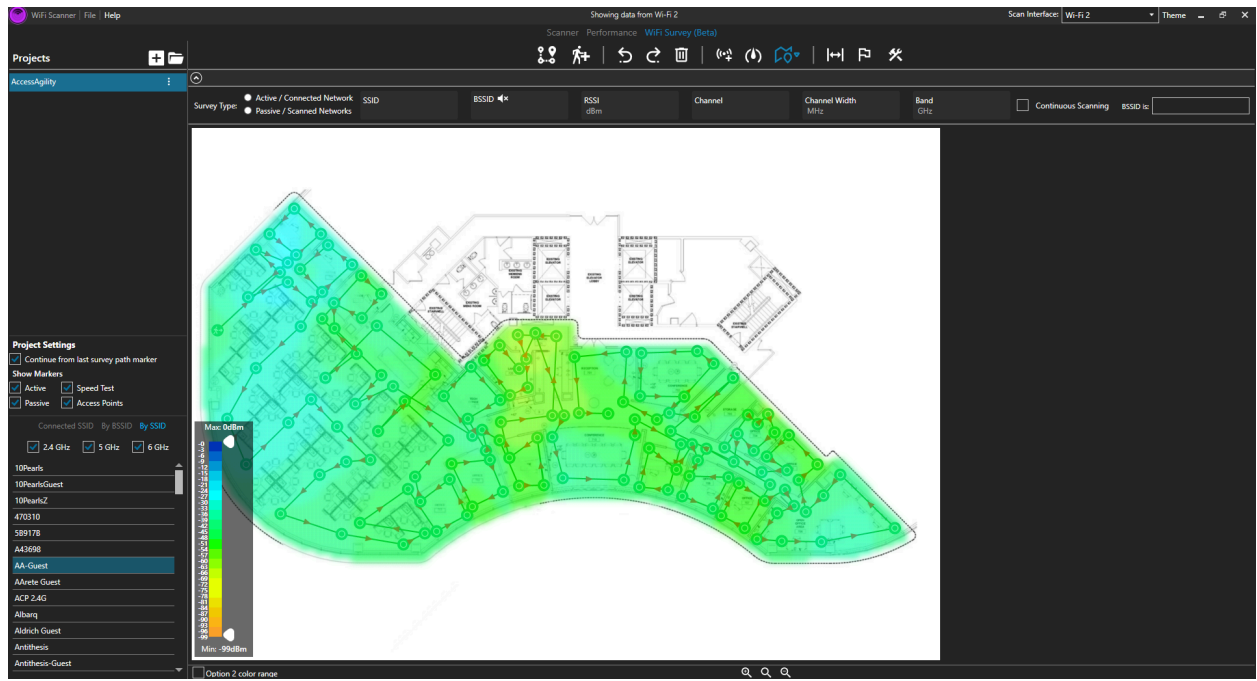


Heatmaps by SSID

Select the *By SSID* tab. This option is used for passive surveys.

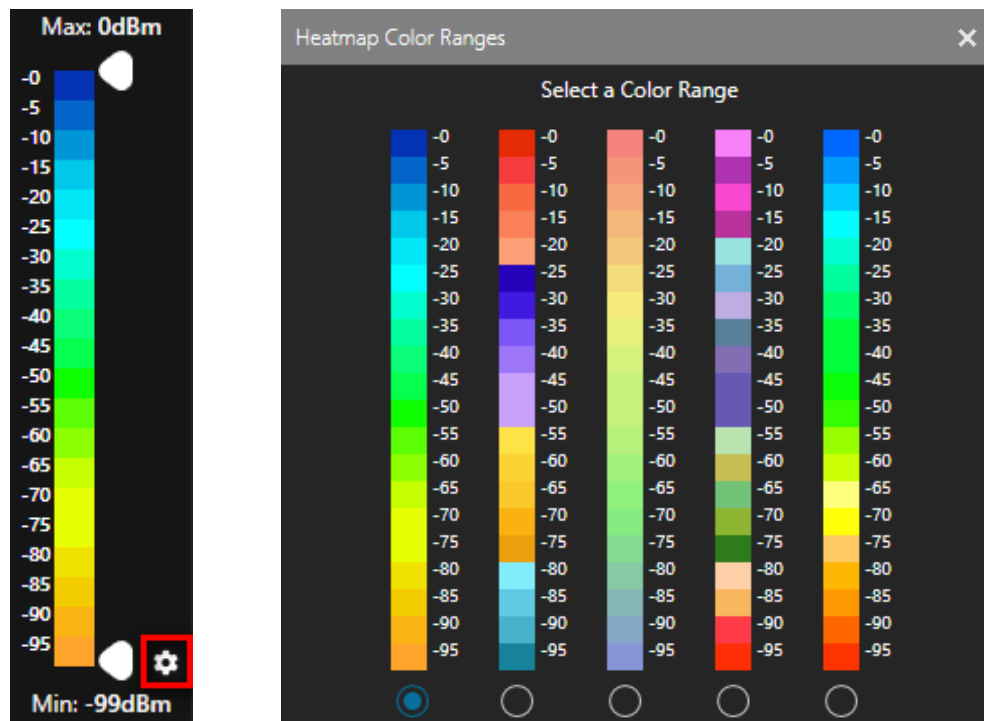


Select the frequencies that the heatmap will be derived from by checking the boxes. Click the SSID you want to generate a heatmap for.



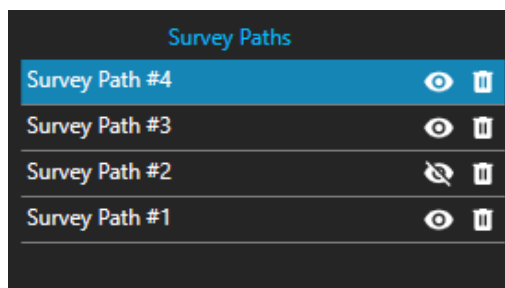
Changing Heatmap Color Ranges

To change the heatmap color range, click on the gear icon at the bottom of the displayed color range. Select the desired color range.



Show/Hide Survey Paths for Heatmap Generation

To filter survey paths from the heatmap, click on the *eye* button to toggle between showing and hiding the survey path. Hidden paths are indicated with a *slash* across the eye button. These will be ignored during heatmap generation.



Saving Heatmaps


Right click on the image of the floor plan. You will be presented with the option to *Save as Image* and *Copy to Clipboard*. *Copy to Clipboard* allows you to directly paste the image to a document or an image tool such as *Paint*.

Estimated RSSI Value




By clicking on the generated heatmap or by hovering on a specific location, you will be able to see the estimated RSSI value of the network in that location.



Performing Speed Tests

This is a feature available only for Active Surveys. Click the *Perform Download/Upload Speed Test* button .

Click on your location in the floor plan to perform a speed test. The marker will change according to its progress with the speed test


-  Download speed test started...
-  Download speed test finished, starting upload...
-  Speed test finished.

Clicking on the marker will display the results of the speed test.

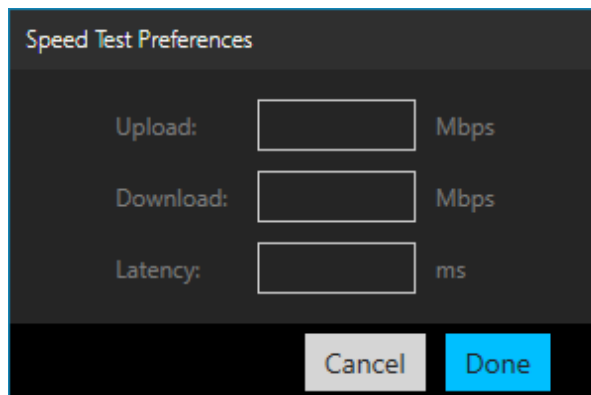
Speed Test		
SSID	BSSID	Channel
AA-Guest	02:18:5A:5A:35:F1	36
Latency	Download	Upload
2.78 ms	66.52 Mbps	83.21 Mbps

Speed Test Preferences



You can set thresholds for the speed test to indicate whether the upload and download speeds meet your requirements.








Click on the *Speed Test Preferences* button . Enter the minimum thresholds for Upload speed and Download speed and the maximum threshold for Latency. Click Done.

After setting preferences, when you perform a speed test, it will compare the results to your preferences. If any of the thresholds set are exceeded, it will be indicated with a red or yellow marker. If the results are within the thresholds, the marker will turn green.



Undo, Redo, and Delete Actions

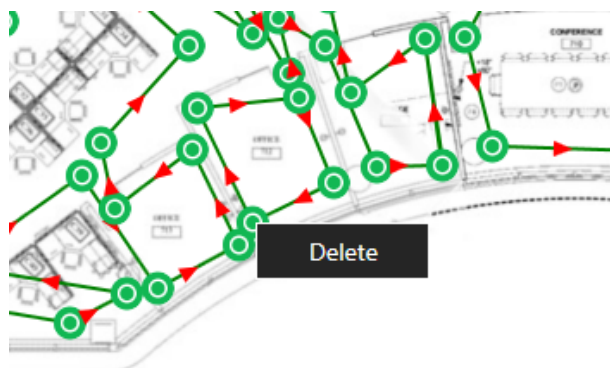
The *Undo Last Action* , *Redo Last Action* , and *Delete Marker*  buttons can be applied to the following markers:

-   Start Survey Path
-   Survey Path Marker
-  Access Point Marker
-  Speed Test Marker
-  Boundary Markers

The *Delete Marker* simply deletes the marker clicked. If the marker beginning the survey path is deleted, the next Survey Path Marker becomes the starting point.


Delete can also be performed by right clicking on a marker and clicking *Delete*.

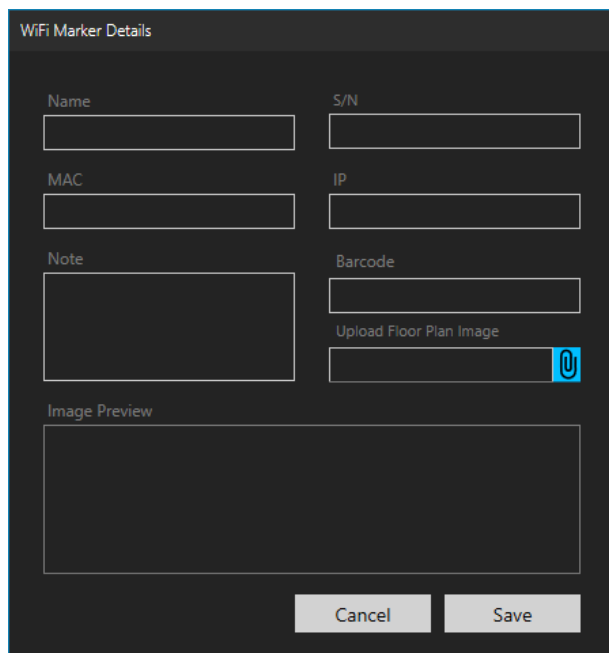
The *Undo Last Action* and *Redo Last Action* affects creating, moving, and deleting markers.



Place Access Points

WiFi Survey provides a way to document AP Locations.

Click on the *Place Access Points* button  and click on its location on the floor plan. The WiFi Marker Details window will appear. This will allow you to enter the following information regarding the access point: Name, Serial Number (S/N), MAC Address, IP Address, and Barcode. You also have the option to provide notes about the AP and upload a floor plan image with its location.



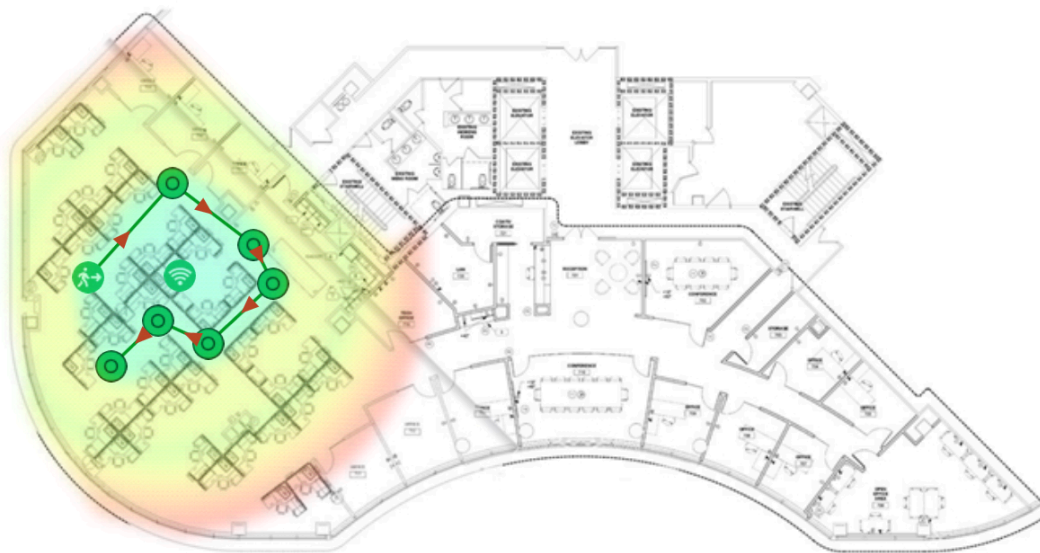
WiFi Marker Details

Name	S/N
<input type="text"/>	<input type="text"/>
MAC	IP
<input type="text"/>	<input type="text"/>
Note	Barcode
<input type="text"/>	<input type="text"/>
	Upload Floor Plan Image
	<input type="text"/>

Image Preview

Cancel Save

This feature is also useful for documenting potential locations of the APs when performing an AP-on-a-Stick (APoS) Survey.



Example for APoS

Using Optifi With WiFi Scanner

Optifi is a cloud-based management solution that uses Android, iOS, Mac, and Windows agents to collect network performance and scanning data. WiFi scanning, speed testing, network stats, and more are sent to the Optifi Manager online interface for monitoring and active troubleshooting.

For a more detailed explanation of the other functions of Optifi, visit <https://www.accessagility.com/optifi> or refer to the [Optifi User Guide](#)

For additional support, visit <https://support.accessagility.com/hc/knowledge-base-optifi>.

Performing A Scan Through the End-User

Optifi Agent Introduction

Optifi Agent is an application that allows end-users to perform Wi-Fi scans without requiring knowledge about wireless networks.

Optifi Agent is free to use and can be downloaded at <https://www.accessagility.com/optifi>.

NOTE: The steps regarding Optifi Agent demonstrated in this user guide are primarily performed with Optifi Agent for Windows.

Performing A Scan Using Optifi Agent

There are several options in performing scans using Optifi Agent. This is indicated by the Test Frequency option, which can be modified through the *Pencil* button to the right of Test Frequency.

The screenshot displays the Optifi Agent interface for a specific scan. At the top, a status bar shows: -56 dBm | AA-Guest | 5 GHz | Channel: 36 | 20MHz Wide | Meraki 802.11ac | 10.10.8.142 | Tx / Rx: 173.3/173.3 Mbps | Streams: 2/2 | MCS: 8. Below this, a card for 'AA-Guest' shows a signal strength of 85% and icons for copy and info. The main section, titled 'Last Executed: 05/02/2023', contains three performance metrics: Delay (19 ms), Download (63.96 Mbps), and Upload (89.87 Mbps). Below these metrics, the 'Test Frequency' is set to 'Manual Only', with a red box highlighting a pencil icon for editing. The 'Next Scheduled' time is 'Not Scheduled', and there is a 'Run Now' button. An 'EXPORT SESSION' button is located at the bottom of the main card. The bottom navigation bar includes icons for home, settings, a gear, a share icon, a user profile, and a time icon.

This can also be reached by directly clicking on the *Test Settings* tab.

-56 dBm | AA-Guest | 5 GHz | Channel: 36 | 20MHz Wide | Meraki
802.11ac | 10.10.8.142 | Tx / Rx: 173.3/173.3 Mbps | Streams: 2/2 | MCS: 8

AA-Guest
36/20MHz, Meraki 85%

Last Executed: 05/02/2023

Delay 19 ms Download 63.96 Mbps Upload 89.87 Mbps

Test Frequency : Manual Only

Next Scheduled : Not Scheduled [Run Now](#)

EXPORT SESSION

-58 dBm | AA-Guest | 5 GHz | Channel: 36 | 20MHz Wide | Meraki
802.11ac | 10.10.8.142 | Tx / Rx: 173.3/173.3 Mbps | Streams: 2/2 | MCS: 8

Test Frequency

Only Manual Testing

WAN Ping Host
google.com

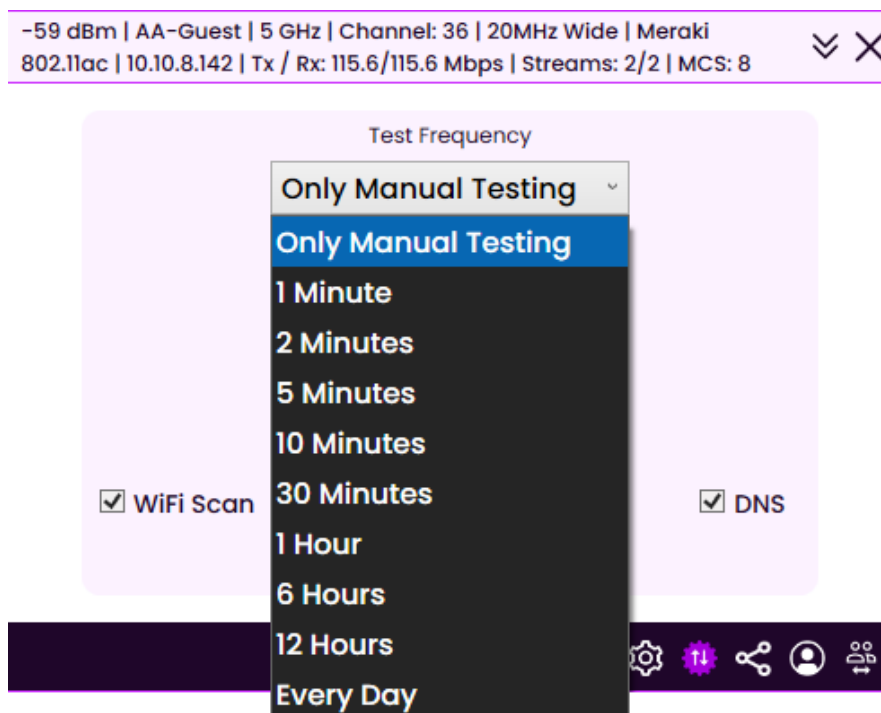
DIG Host
google.com

TESTS TO RUN

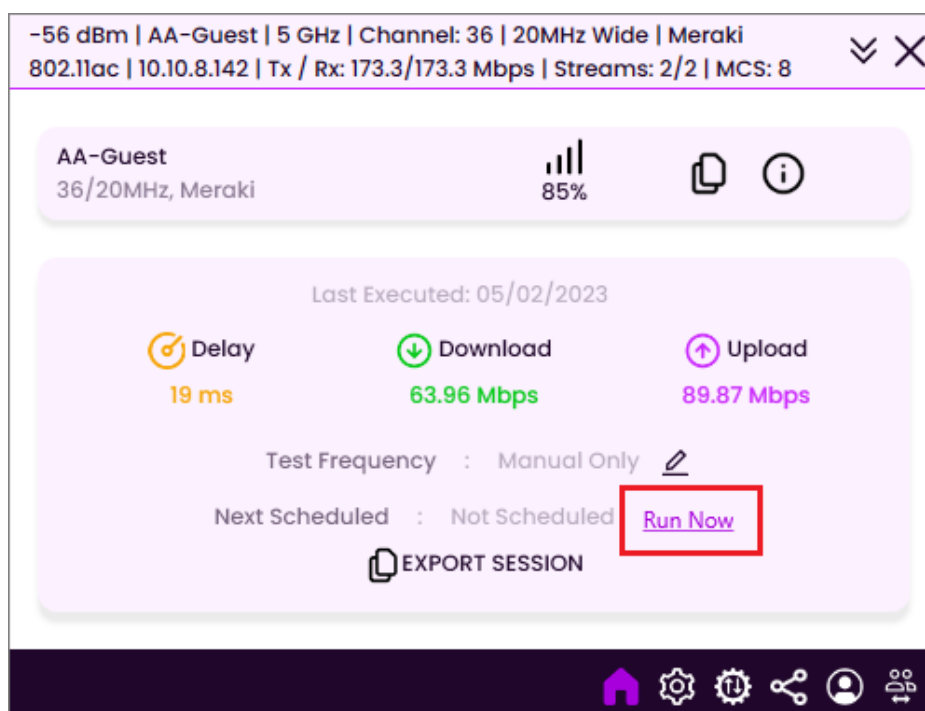
WiFi Scan Speed Ping DNS

SAVE

Automatic, recurring scans can be performed in time frames ranging from 1 Minute to Every Day.



The option for Only Manual Testing will not perform any automatic, recurring scans. To prompt a scan with Only Manual Testing, go to the *Home* tab, and click on Run Now to the right of Next Scheduled.



This will perform a scan for Delay (Latency), Download Speed, and Upload Speed of the network you are connected to, as well as a scan of all surrounding Wi-Fi networks.

During scans, you will see the following messages appear in the applet.

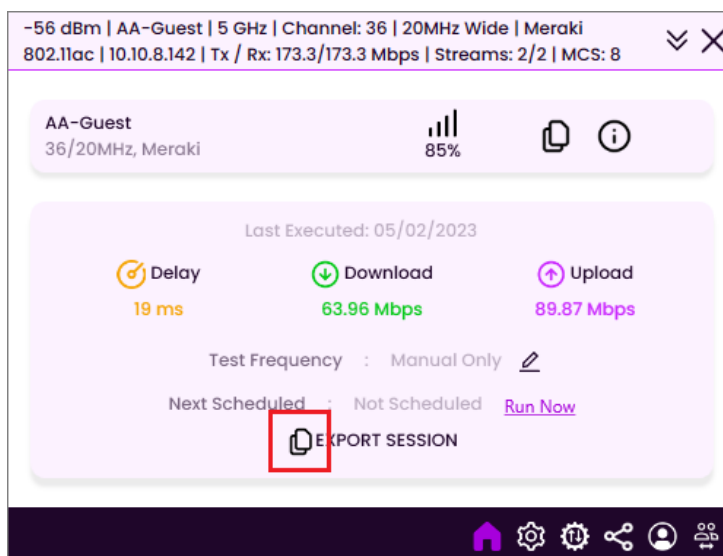
Running WiFi Scan...

Connecting to server...

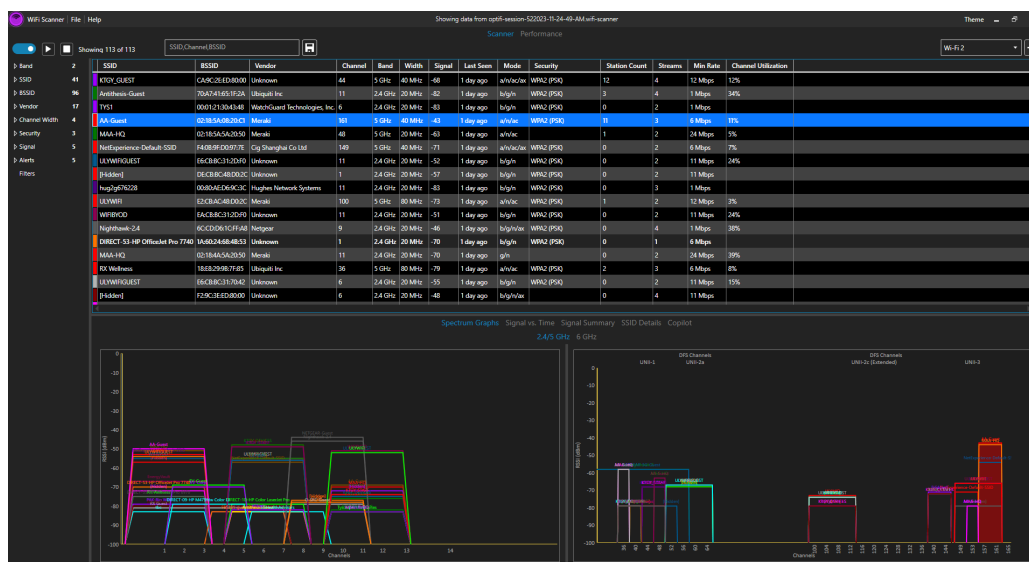
Upload Test Started...

Tests run completed...

Once the scan is completed, click on the icon next to *Export Session*. You will be prompted to save the scan that was last performed.



This file can be opened with WiFi Scanner and will show a more detailed result of the scan for the Network Engineer or Analyst to examine.



Performing A Scan Remotely

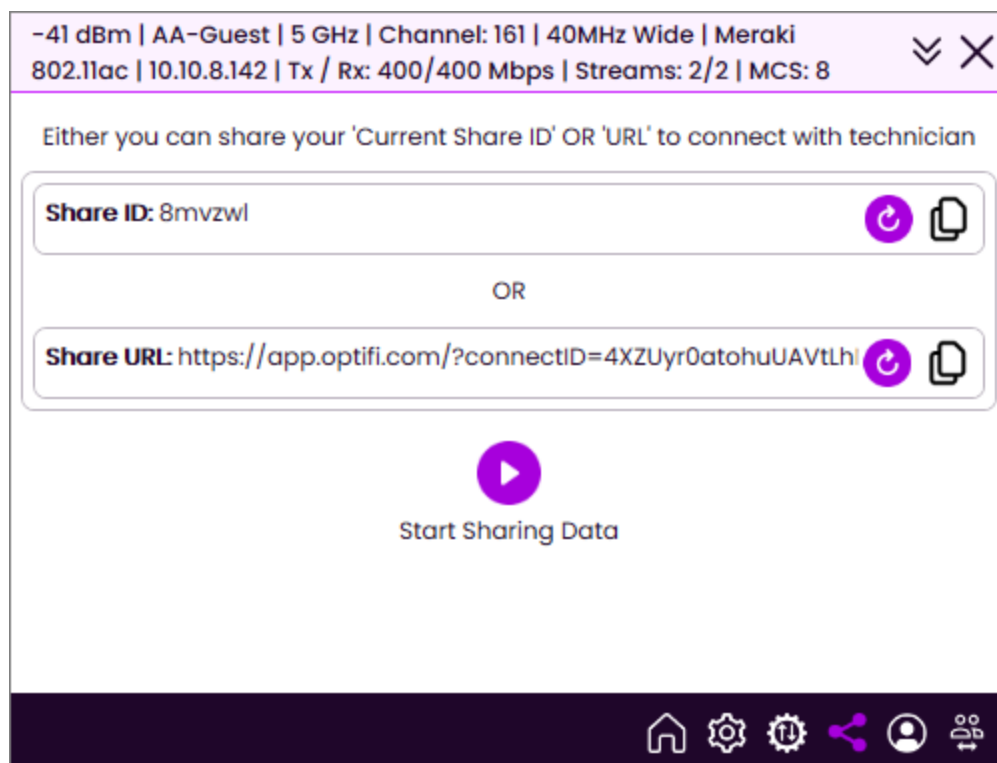
Performing a scan remotely requires the Optifi Agent, installed on the end-user's device, and the Optifi Manager - Remote Cloud Viewer App, which can be accessed at <https://app.optifi.com>.

This is an option for when a support technician does not have physical access to an end-user's device. It is also helpful for assisting non-tech-savvy users as the steps required from them are minimal.

Setting Up Optifi Agent

Click the *Share* button to access the *Share* tab.

The screenshot displays the Optifi Manager - Remote Cloud Viewer App interface. At the top, a status bar shows network details: -56 dBm | AA-Guest | 5 GHz | Channel: 36 | 20MHz Wide | Meraki 802.11ac | 10.10.8.142 | Tx / Rx: 173.3/173.3 Mbps | Streams: 2/2 | MCS: 8. Below this, a card for 'AA-Guest' shows '36/20MHz, Meraki' and a signal strength of 85%. A central section titled 'Last Executed: 05/02/2023' displays performance metrics: Delay (19 ms), Download (63.96 Mbps), and Upload (89.87 Mbps). It also indicates 'Test Frequency : Manual Only' and 'Next Scheduled : Not Scheduled' with a 'Run Now' button. An 'EXPORT SESSION' button is located at the bottom of this section. The bottom navigation bar includes icons for Home, Settings, a gear, a share icon (highlighted with a red box), a profile, and a refresh icon.

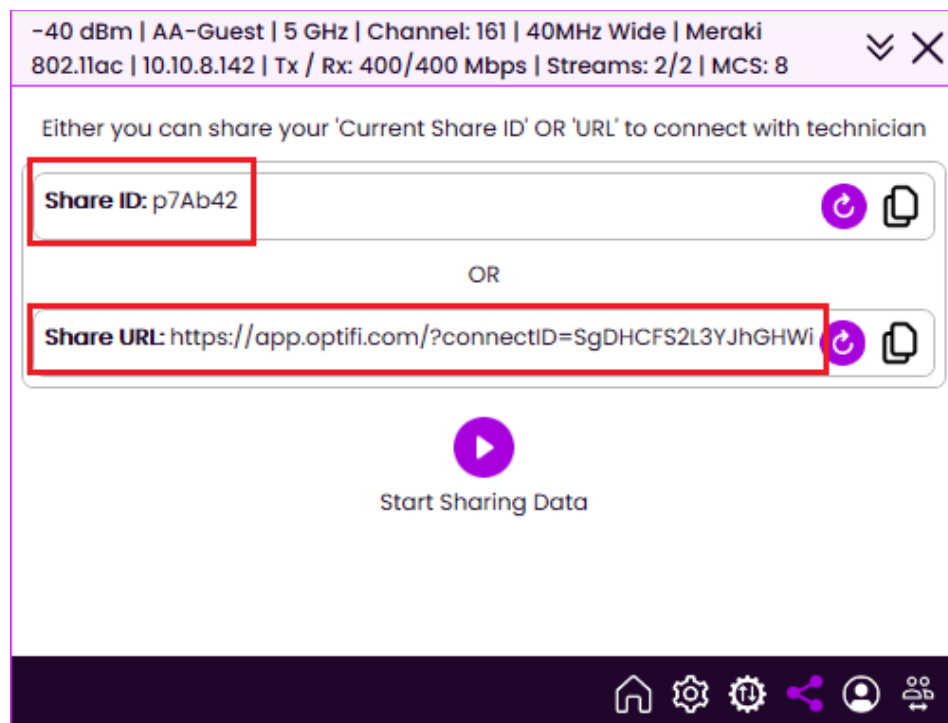
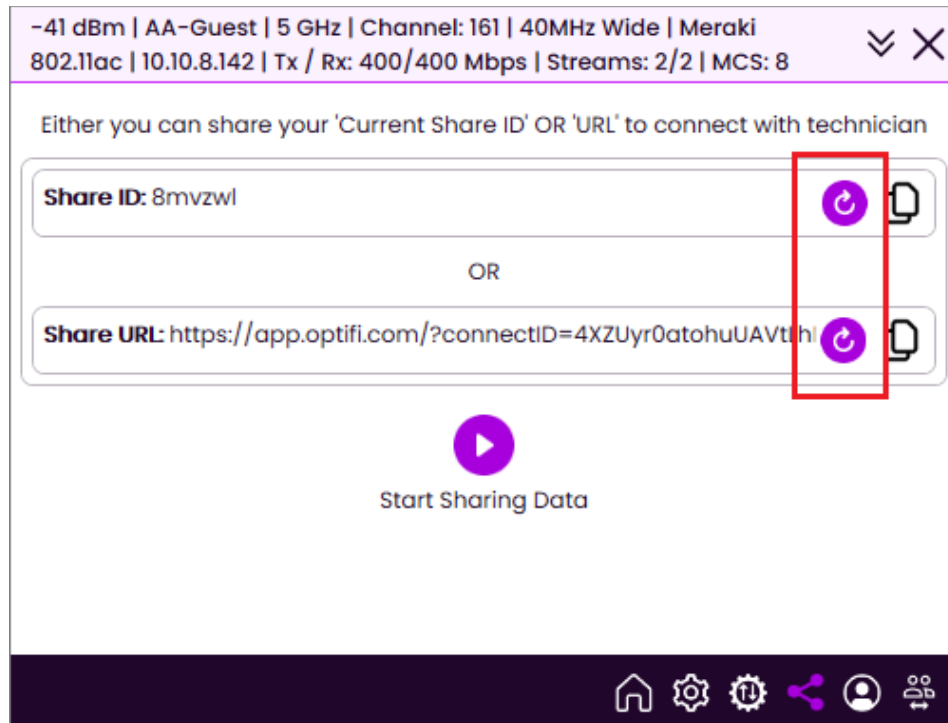


There are two ways to share data remotely. The first option is with the randomly generated Share ID, and the second option is through a randomly generated Share URL. Provide either the Share ID or the Share URL to the support technician. Click the play button to begin sharing. From this point, the end-user does not need to do anything until the scans and tests are completed.

NOTE: Data sharing must continue running in the background for the duration the support technician performs scans and tests remotely.

Refreshing Share ID and Share URL

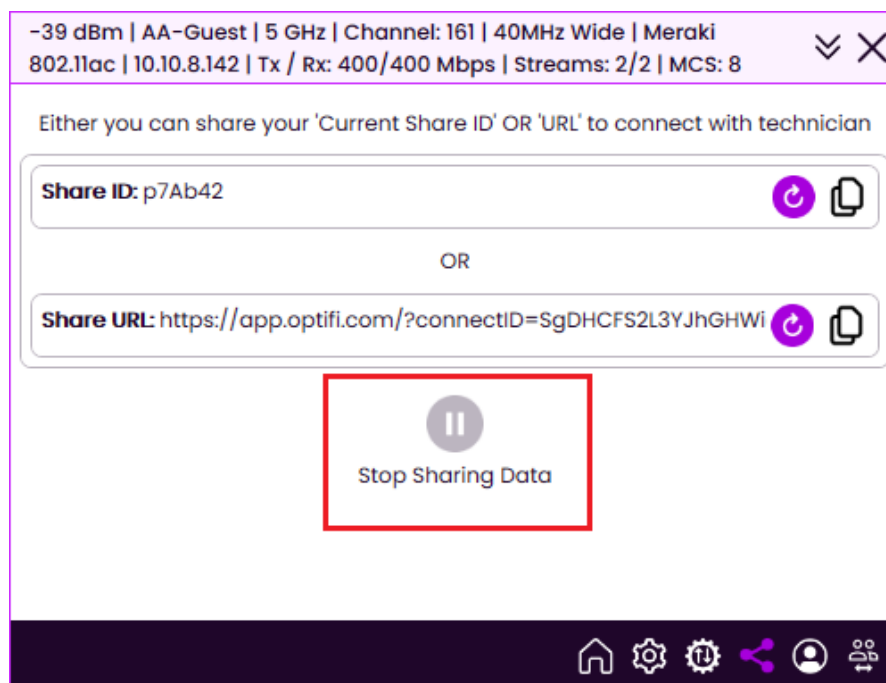
If a new Share ID or Share URL is needed, you can refresh the randomly generated ID or URL by clicking on the *Refresh* button.



Newly Generated Share ID and Share URL

Stop Sharing Data

Once the support technician is complete with scans and tests, the end user should click on *Stop Sharing Data*.



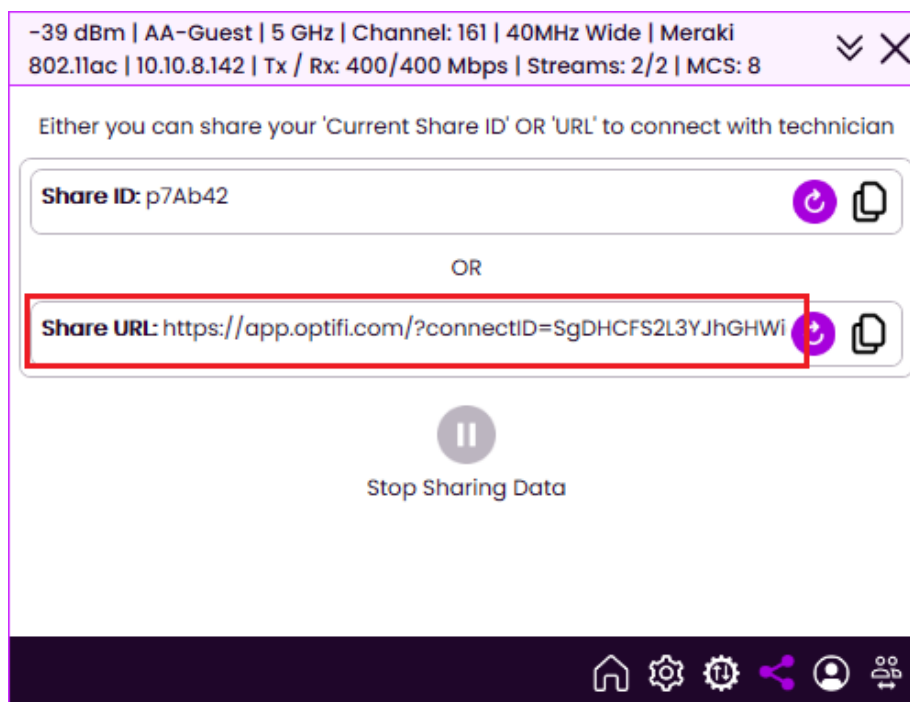
Setting Up Optifi Manager

Optifi Manager can be accessed at <https://app.optifi.com>. It is a web application, so no download is required to use it.

Optifi Manager can be used without an email address, with very limited capabilities, or with an email address and a subscription for full use.

Use Without Email Registration

If you are using Optifi Manager without registering, you can only obtain access to the end-user's data through their randomly generated Share URL.



Once you access this link, you will be directed to Optifi Manager.

The screenshot shows the Optifi Manager web interface. The browser address bar shows the URL https://app.optifi.com. The page header includes the Optifi logo and the tagline "Monitor. Troubleshoot. Optimize." along with a "Login" button. Below the header, there is a "Signal Summary" section with a table of network signals. The table has the following columns: Created, SSID, BSSID, Vendor, Channel, Band, Width, Signal (dBm), Signal (%), Download Speed, and Upload Speed. The table contains 18 rows of data, all showing "AA-Guest" as the SSID and "Meraki" as the vendor.

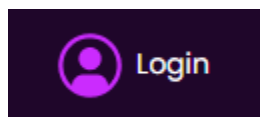
Created ↓	SSID	BSSID	Vendor	Channel	Band	Width	Signal (dBm)	Signal (%)	Download Speed	Upload Speed
02 May, 2023-15:03:57	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:52	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:47	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:42	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:37	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:32	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:27	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:22	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:17	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:12	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:07	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:03:01	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:02:56	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:02:51	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:02:46	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:02:41	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:02:36	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps
02 May, 2023-15:02:31	AA-Guest	0218:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-39 dBm	100%	400.00 Mbps	400.00 Mbps

You will only be able to view when the scan was *Created*, the *SSID* of the network, and the *BSSID* and *Vendor* of the access point.

NOTE: You will **not** be able to perform scans or tests with this option.

Use With Email Registration

To register with an email address, click on the *Login* button at the top right of the screen.



You will be prompted to enter your email address. Then *Click Send Magic Link*.

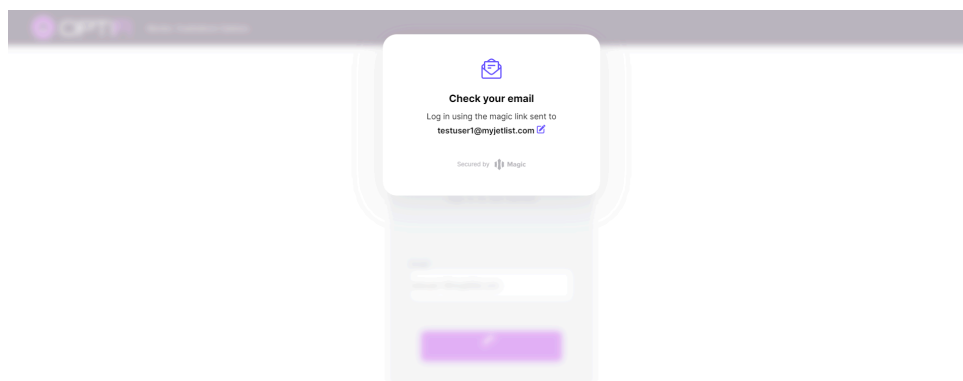


Optifi Agent Manager
Sign In to Get Started

Email

[▶ Send Magic Link](#)

You will be informed to check your email to be logged in.



Find the email with “Log in to Optifi” as the subject header. Once opened, click on *Log in to Optifi*.



Optifi

Click the button below to log in to **Optifi**.

This button will expire in 20 minutes.

[Log in to Optifi](#)

Button not showing? [Click here](#)

Confirming this request will securely log you in using

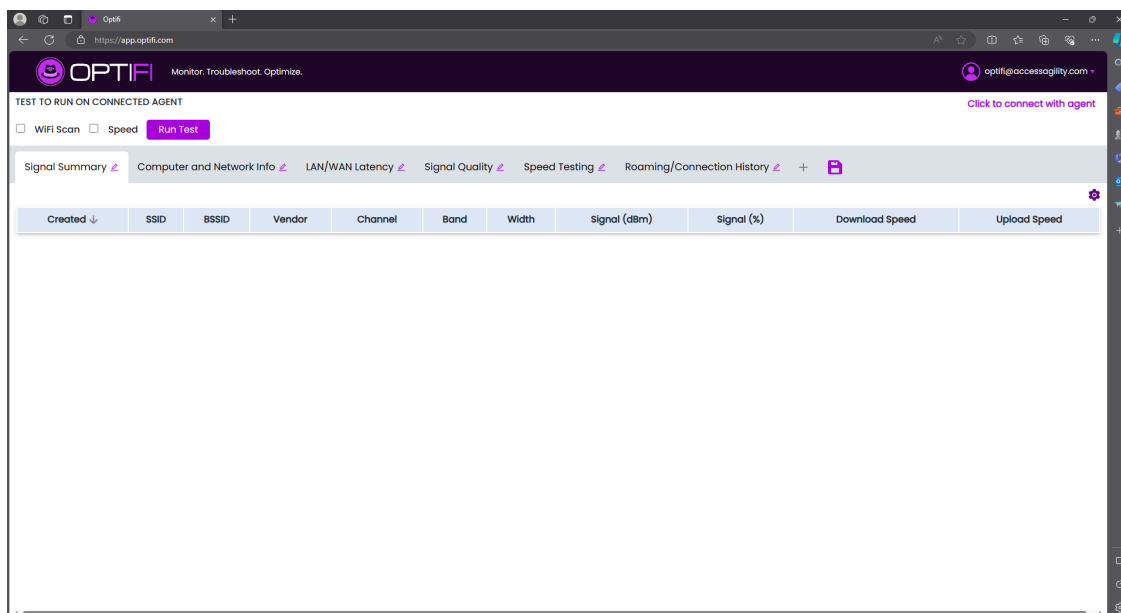
testuser1@myjetlist.com

This login was requested using **Edge, Windows** at **07:49:04**

PDT on May 03, 2023.

- Optifi Team

You will be redirected to Optifi Manager with the registered email address in place of *Login*.



From here, you can access the end-user's data through either the Share URL or the Share ID. To access with the Share URL, simply obtain the user's Share URL and enter it on your web browser.

To access through the Share ID, click on *Click to connect with agent*, enter the Share ID number generated from Optifi Agent in the end-user's device, and click submit.

Select **Device** from the list or add it's **ShareID** manually ✕

Device Name	name	Email	Select
-------------	------	-------	--------

Share ID:

Once this is completed, Optifi Manager is set up and ready to begin scanning and testing.

The screenshot shows the Optifi Manager web interface. At the top, it says "OPTIFI Monitor. Troubleshoot. Optimize." and "optifi@accessagility.com". Below that, it indicates "TEST TO RUN ON CONNECTED AGENT" and "Connected ID: **Ab42 | Device Name: DESKTOP-9L4QMSG | | Click to connect with agent". There are tabs for "WIFI Scan", "Speed", and "Run Test". A navigation bar includes "Signal Summary", "Computer and Network Info", "LAN/WAN Latency", "Signal Quality", "Speed Testing", and "Roaming/Connection History". The main content is a table with the following columns: Created, SSID, BSSID, Vendor, Channel, Band, Width, Signal (dBm), Signal (%), Download Speed, and Upload Speed. The table contains 15 rows of data, all showing a signal strength of -41 or -42 dBm and a signal percentage of 93%.

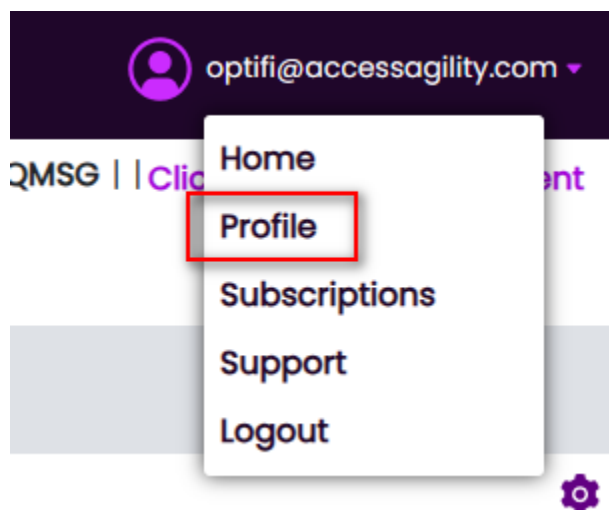
Created ↓	SSID	BSSID	Vendor	Channel	Band	Width	Signal (dBm)	Signal (%)	Download Speed	Upload Speed
22 Nov, 2023-15:59:45	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-42 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:45	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-42 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:40	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:40	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:35	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:35	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:30	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:30	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:24	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:24	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:19	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-42 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:19	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-42 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:14	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:14	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps
22 Nov, 2023-15:59:09	AA-Guest	02:18:5a:08:20:c1	Meraki	161	5 GHz	40MHz	-41 dBm	93%	63.96 Mbps	89.87 Mbps

Connecting to Optifi Manager through Optifi Agent - Manager Pairing

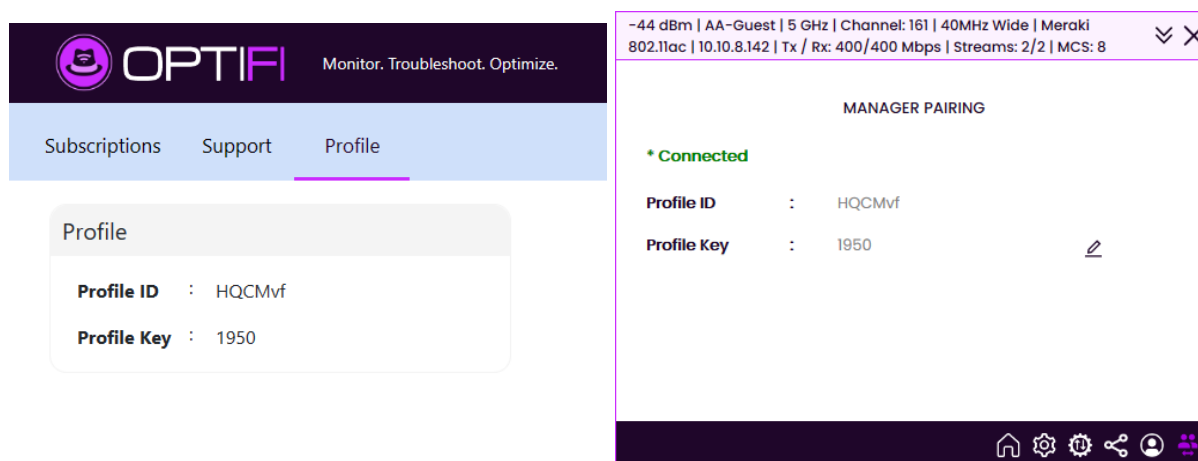
You can also link to the Optifi Manager directly through the Optifi Agent. Click on the *Manager Pairing* tab and enter your profile ID along with the given profile key.

The screenshot shows the "MANAGER PAIRING" screen in the Optifi Agent. At the top, it displays network details: "-40 dBm | AA-Guest | 5 GHz | Channel: 161 | 40MHz Wide | Meraki" and "802.11ac | 10.10.8.142 | Tx / Rx: 400/400 Mbps | Streams: 2/2 | MCS: 8". Below this, there are two input fields: "Profile ID" with a placeholder "Profile ID to connect..." and "Profile Key" with a placeholder "Profile key...". At the bottom, there are two buttons: "CONNECT" and "CANCEL". The bottom navigation bar of the app is visible, with the "Manager Pairing" icon highlighted in red.

To obtain this information, navigate to Optifi Manager. Click on the email address you have registered with Optifi, and click on *Profile*.



Here, you will find the Profile ID and the Profile Key.



Once entered and connected, you will be able to see your device listed in Optifi Manager when clicking on *Click to connect with agent*. Click on *Select* to choose the device and complete the link.

Select **Device** from the list or add it's **ShareID** manually ✕

Device Name	name	Email	Select
	engineer		Select

Share ID:


You can further customize the device details listed by navigating to the Profile Details tab of the Optifi Agent.







-60 dBm | AA-Guest | 5 GHz | Channel: 36 | 20MHz Wide | Meraki
802.11ac | 10.10.8.116 | Tx / Rx: 173.3/173.3 Mbps | Streams: 2/2 | MCS: 8 ☰ ✕

PROFILE DETAILS

Device Name :

Name :

Email : 

Clicking *Update*, restarting the Agent, and refreshing the Manager will reflect the changes on Optifi Manager.

Select **Device** from the list or add it's **ShareID** manually ✕

Device Name	name	Email	Select
Test Device	AccessAgility	optifi@accessagility.com	Select

Share ID:

NOTE: At the moment, Manager Pairing is only available on Optifi Agent for Windows.

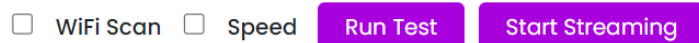
Navigate to the **agent list view** in the top-right corner.



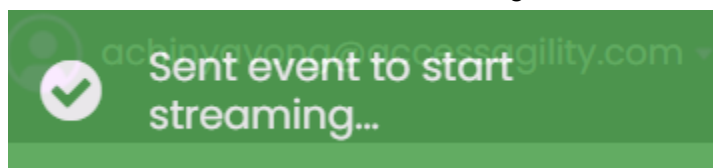
Use the “Select” link to perform operations on the connected device.

Use the “Start Streaming” button to begin streaming

TEST TO RUN ON CONNECTED AGENT



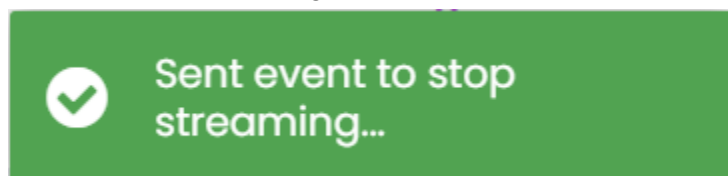
Notification will be shown that streaming is started



Observe the data reported by the agent in the list

Created ↓	SSID	BSSID	Vendor	Channel	Band	Width	Signal (dBm)	Signal (%)	Download Speed	Upload Speed
24 Apr, 2024-14:44:40					5 GHz	40MHz	-53 dBm		101.9 Mbps	41.67 Mbps
24 Apr, 2024-14:44:35					5 GHz	40MHz	-53 dBm		101.9 Mbps	41.67 Mbps

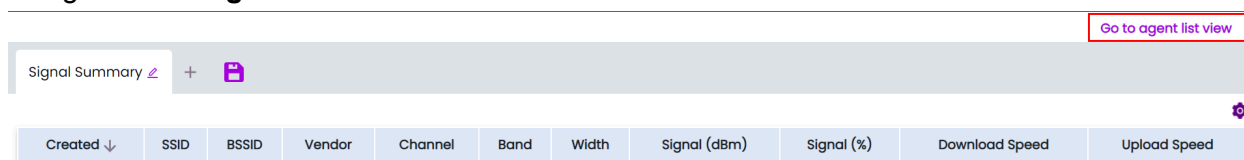
Use the “Stop Streaming” button to end the stream.



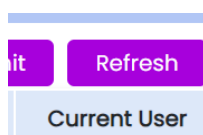
Refreshing Agent Details

Optifi Agent will refresh the system details on the server every five minutes to get the latest data.

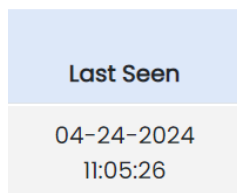
Navigate to the **agent list view**.



Click on the Refresh button.



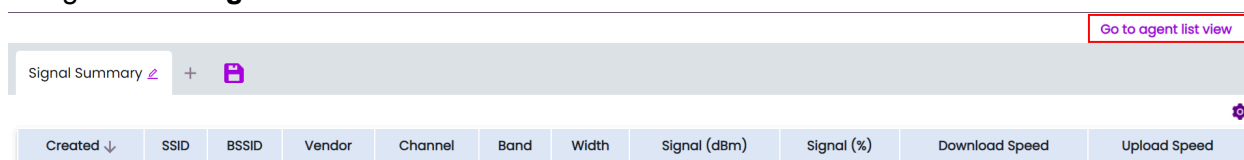
Check the “Last Seen” column. It will be updated with the latest details sent by the Optifi Agent.



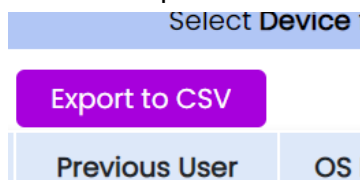
Export Optifi Agent Data to a CSV File

End-users can download the details about all agents using the “Export to CSV” feature.

Navigate to the **agent list view**.



Click on “Export to CSV” button



Save the CSV file on the local machine.

Device Serial Number

For easy tracking, the device serial number will be reported to the server and will also be available in Agent List View

OS Build	OS Type	Serial	
----------	---------	--------	--

Agent Pairing With Optifi Manager During Unattended Installation

During the setup process, an agent can be paired with a manager. This feature will help admins install agents to any number of devices virtually to set the profile ID and key. Visit <https://support.accessagility.com/hc/how-to-deploy-optifi-agent-to-multiple-machines> for instructions on how to use the command prompt to perform a silent install using OptifiAgent.exe installer file.

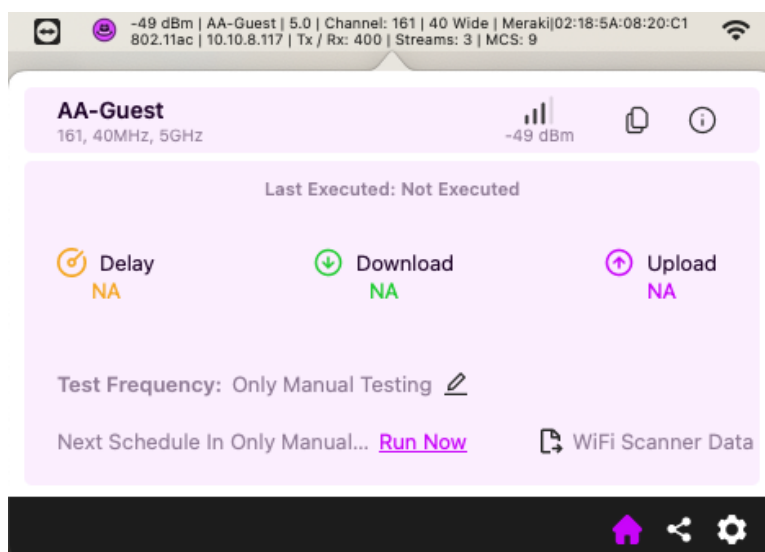
Optifi Manager Pricing

The initial email registration will provide you a 7-Day Free Trial. Visit our website to obtain more information about pricing. <https://agent.optifi.com/#pricing>

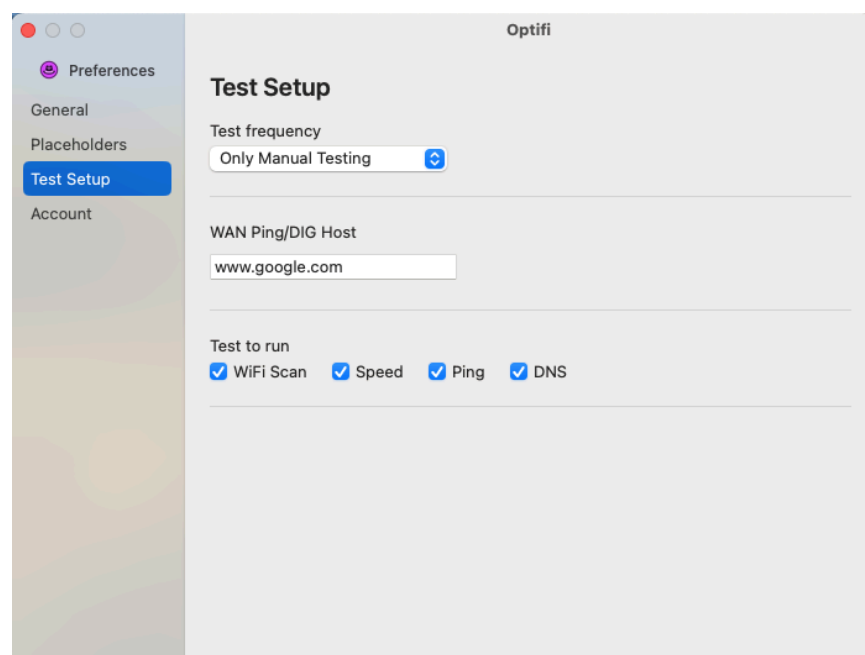
Optifi Agent for macOS

Optifi Agent for macOS functions the same way as Optifi Agent for Windows.

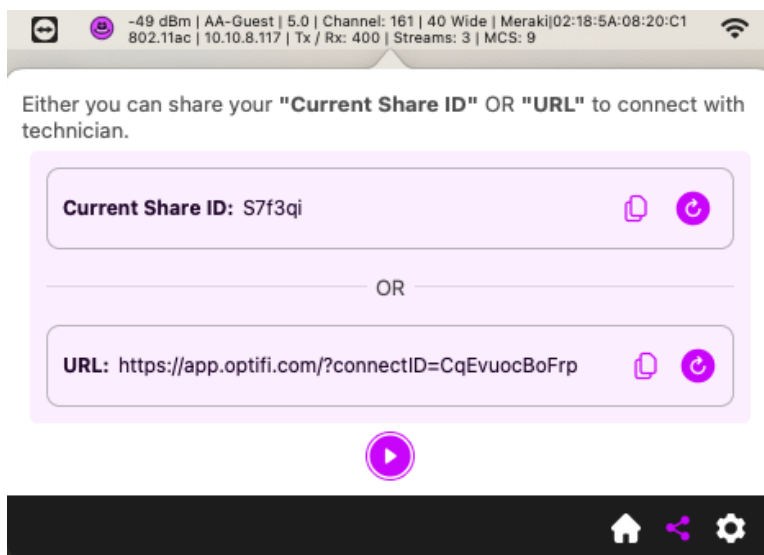
Scans can be performed by clicking *Run Now* in the Home Tab. The Test Frequency can be modified by clicking the *Pencil* button next to Test Frequency. The resulting data can be downloaded into a file by clicking *WiFi Scanner Data*.



The Test Frequency and other test settings can also be modified by clicking on the Settings Tab (gear button) of the Optifi Agent applet, which will open the Preference Window, and navigating to the Test Setup Tab.



To obtain sharing information for Optifi Manager, click on the Sharing Tab of the Optifi applet.



Optifi Agent for iOS and Android

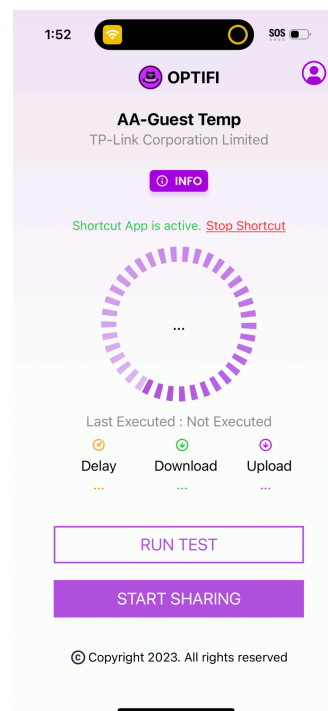
You can also download Optifi Agent for Android 13 or later versions at <https://www.accessagility.com/optifi-agent-windows-download>

Optifi Agent is available for iOS 17 or later versions.

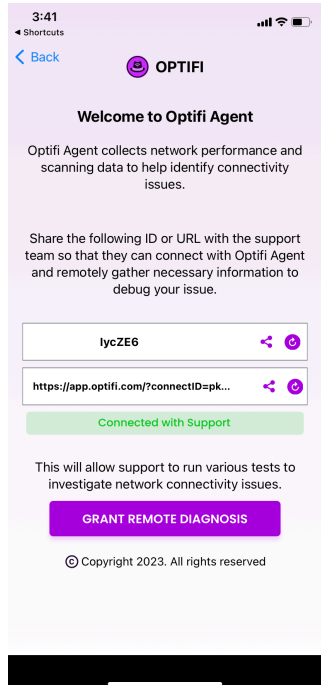
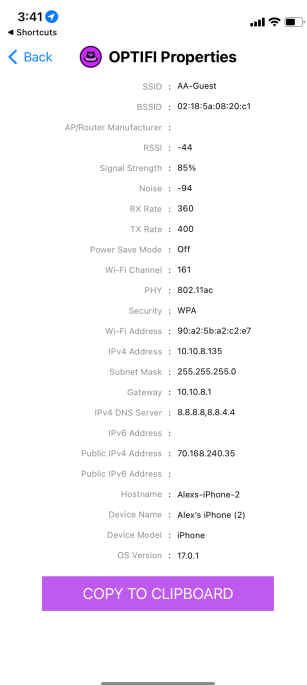
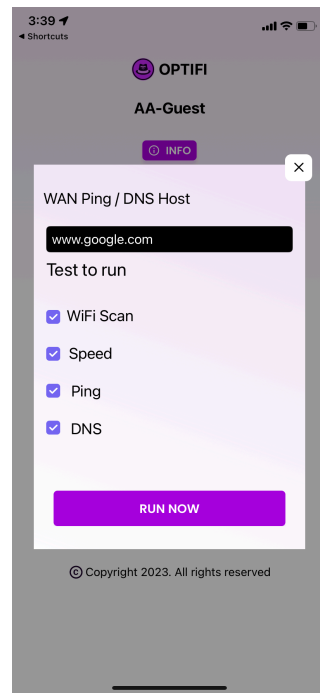
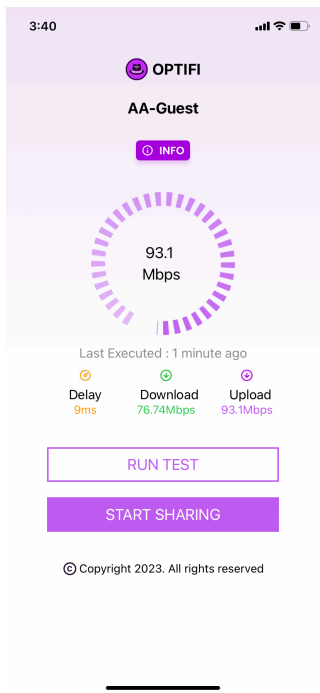
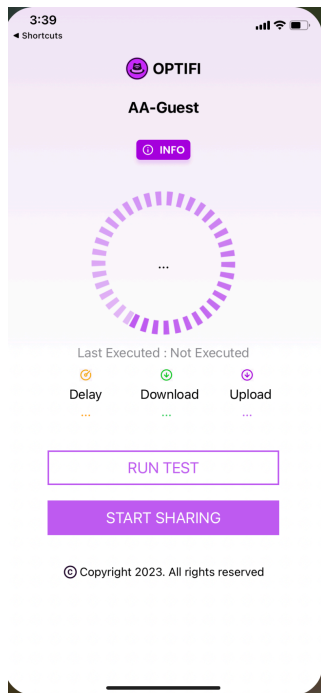
Download Optifi Agent for iOS in the App Store:

<https://apps.apple.com/us/app/optifi-agent/id826551029?platform=iphone>

For additional help with setting up Optifi Agent for mobile devices, refer to the [Optifi User Guide](#)



Optifi Agent for iOS and Android



Appendix A - Results Table Columns

WiFi Columns Visibility

802.11r Fast roaming. To check if roaming is conjured over the wire (DS) or over the air. Over the air is preferred to prevent layer 2 and 3 firewalls/blocks from preventing roaming messages reaching other access points. For more information, visit:

<https://www.cisco.com/c/en/us/td/docs/wireless/controller/technotes/80211r-ft/b-80211r-dg.html>

Ad Hoc If access point is in ad-hoc mode instead of infrastructure mode

Amendments 802.11 Amendments supported by access points. Use this to confirm which ones are enabled or missing.

Roaming related - <https://support.apple.com/en-us/HT202628>

Quality of service / QBSS - <https://support.accessagility.com/hc/802.11e-qbss-and-wmm>

AP Name Access point name configured by admin and detected from beacon. Not supported for all access points.

AP Uptime Using timestamps from beacons we can detect how long the access point has been online. This can be used to determine if the AP hasn't been updated in a while or if it is rebooting constantly due to malfunction. It can also be used for security purposes to see if there are new APs that weren't installed by an admin.

Band (Channel Band) Frequency band for access point (2.4, 5, or 6 GHz)

Basic Rates Basic rates allowed and used to manage cell size (minimum) rate.

Beacon Interval Time between beacon frames. Typical value is 102.4 ms but a few ms difference is OK. Some vendors / user change this value to higher number to reduce beacon airtime usage but this isn't recommended and can cause issues with access point discovery and roaming

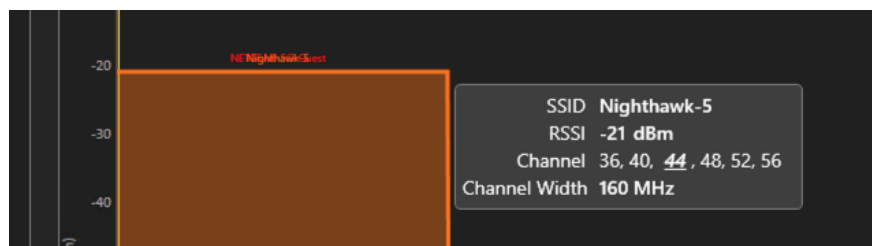
BSSID BSSID, or Basic Service Set Identifier, is the MAC address of the access point radio. This value will be unique. The format is always 6 Octets with the first three being Vendor UI, unless locally administered MAC addresses are used (Meraki, others).

Universal/Local and Individual/Group bits in MAC addresses

I/G \ U/L	Universally administered	Locally administered
Unicast (individual)	x0-xx-xx-xx-xx-xx	x2-xx-xx-xx-xx-xx
	x4-xx-xx-xx-xx-xx	x6-xx-xx-xx-xx-xx
	x8-xx-xx-xx-xx-xx	xA-xx-xx-xx-xx-xx
	xC-xx-xx-xx-xx-xx	xE-xx-xx-xx-xx-xx
Multicast (group)	x1-xx-xx-xx-xx-xx	x3-xx-xx-xx-xx-xx
	x5-xx-xx-xx-xx-xx	x7-xx-xx-xx-xx-xx
	x9-xx-xx-xx-xx-xx	xB-xx-xx-xx-xx-xx
	xD-xx-xx-xx-xx-xx	xF-xx-xx-xx-xx-xx

BSSID Note Enter a label for a BSSID. In many cases knowing where an AP / BSSID is installed is not easy to determine from scanning information. Some APs Vendors allow AP names but even then, the name may not indicate any special information about the AP. BSSID Note can be used to record AP location or any information to better document AP.

Channel This is the primary channel configured for access points. If channel width is wider than 20 MHz the access point will use other channels and have a center channel as well. Place cursor over right or left corner of spectrum graph to see all channels and the underlined channel is the primary channel



Channel Utilization From 802.11e / QBSS load. Used to determine if the channel is overloaded and to make access point channel planning or config change decisions.

Country Regulatory domain for access point. Some 6GHz client adapters will not enable 6 GHz mode if the country code detected does not allow 6 GHz frequency. Use for confirming that access point model is correct for country

Last Seen We scan every few seconds and will show the last time the access point was detected

Max Rate Maximum data rate possible with current network / signal / noise conditions. Related to MCS number / value.

MCS (Modulation Coding Scheme) The higher the number the higher the data of the access point and more stable the connection. For a detailed table, visit <https://mcsindex.com/>

MFP (Management Frame Protection) If MFP is enabled or not, and if it is required or not. 6 GHz requires MFP enabled.

Min Rate Minimum data rate for connection permitted when joining access point. Used to prevent low speed connections.

Mode (PHY Mode) Displays 802.11 standard used: 802.11a/b/g/n/ac/ax

Protection Mode Protection mode is enabled when two devices don't understand that same standard. When enabled, it typically slows down the network, so it is something to watch out for performance improvement. This article explains more on Protection Mechanisms: <https://www.cwnp.com/802-11n-protection-mechanisms-part-1/>

Security Security type configured

Signal (RSSI) RSSI, or Received Signal Strength Indicator, is a method of measurement of received signal strength defined in the 802.11 standards. Negative values closer to zero indicate a stronger signal strength.

SSID SSID, or Service Set Identifier, is the network name. This name can be repeated and by multiple access points and when grouped together is known as an ESSID

Station Count / Clients (Number of Clients) Number of stations connected to access points. Will only show if 802.11e is enabled and supported by the access point.

Streams (Spatial Streams) Number of streams in operation for access point. Newer access points support 3x3 or higher. If your access point stream is not showing with full stream count, then check if power/POE is enough to allow all streams to be enabled. Most enterprise access points disable streams when POE is not enough.

TPC (Transmission Power Control) Max power setting for access point. Defined by amendment 802.11h. For more information, visit: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/80211/200069-Overview-on-802-11h-Transmit-Power-Cont.html>

Vendor This is the equipment vendor name based on OUI from IEEE OUI database. We download the latest database regularly to keep this data updated. In some cases, you may want to override this database and can edit the file located here: "C:\ProgramData\AccessAgility\WiFi Scanner\oui.txt"

NOTE: We may overwrite this file when software or file is updated

Width (Channel Width) Displays channel width used: 20, 40, 80, or 160 MHz

WPS (WiFi Protected Setup) WPS is used for allowing easy pairing between wifi router and client. <https://www.wi-fi.org/discover-wi-fi/wi-fi-protected-setup> Enabling this is a potential security issue. For more information on this vulnerability, visit <https://www.cisa.gov/news-events/alerts/2012/01/06/wi-fi-protected-setup-wps-vulnerable-brute-force-attack>

Appendix B - SSID Details

Fixed Parameters

Capabilities Information Provides a list of the device capabilities

Timestamp Provides a time of how long the SSID has been consecutively active. See *AP Uptime* in Appendix A for more information on Timestamps.

ID	Length	Name	Expand All	Details
		Fixed Parameters		
		Timestamp		28d 04:14:54

Tagged Parameters

AP Channel Report The AP Channel Report element contains a list of channels where a STA could potentially find an AP.

BSS Load Element BSS Load (QoS Basic Service Set) comes from the 802.11e amendment

Country Information US country code or a value of indication to which country the AP belongs to.

DS Parameter Set Channel Number that is being used by AP in the given SSID

Extended Capabilities Breaks down each octet into subcategories and describes capabilities of each.

HT Capabilities List of all supported 802.11n capabilities that are supported for High Throughput (HT)

HT Information List of information regarding 802.11n capable device utilization and channel layout. i.e. channel number and secondary/ primary

Measurement Pilot Transmission Generating a radio measurement report based, at least in part, on at least one of a beacon and a probe response, and the measurement pilot frame.

Multiple BSSID Indicator of how many BSSID there are within the SSID

Power Constraint The Power Constraint information element is used to allow a network to describe the maximum transmit power to stations.

RM Enabled Capabilities 802.11k defines Radio Resource Management (RRM) mechanism that enables 802.11k capable client's radio to better understand the RF environment that they exist in which will help clients to have better roaming.

SSID Parameter Set SSID logical name of WLAN Network.

Supported Data Rates Mbit/sec that are supported by AP and SSID configuration.

Traffic Indication Map (TIM) TIM which informs the clients about the presence of buffered multicast/broadcast data on the access point. It is generated within the periodic beacon at a frequency specified by the DTIM Interval.

TPC Report Transmit power and Link Margin: TPC Report information elements are included in several types of management frames, and include two one-byte fields.

VHT Capabilities Describes network capabilities. The drop down displays more information on what is available.

VHT Operation The VHT Operation IE describes the channel information and the basic rates supported by the transmitter.

VHT Tx Power Envelope An AP can set this bit to 1 to enable power save operations during a VHT transmission burst, or 0 to disable them.