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Datasheet: AirCheck™ G2 Wireless Tester

Wi-Fi is a complex technology, but testing it doesn't have to be. AirCheck™ G2 Wireless tester is purpose built for the front-line IT responders dispatched to the complaints of: The Wi-Fi is not working or the Internet is down. The AirCheck G2 Wireless Tester provides fast, simple, and accurate isolation and troubleshooting, thereby reducing the time to resolution of wireless issues.

There are many variables that lead to Wi-Fi complaints, ranging from network-based problems and configuration issues to environmental or client device misconfigurations. Collecting all the key pieces of information the very first time is key to every front-line IT responder to resolve any complaint. AirCheck G2 simplifies wireless troubleshooting by providing:

- A rugged, purpose-built wireless tester supporting the latest Wi-Fi technologies (802.11a/b/g/n/ac) that's easy to use and easy to carry
- A one-button AutoTest, which quickly provides a pass/fail indication of the wireless environment and identifies common problems - for any level of Wi-Fi expertise
- An instant view of test results including network availability, connectivity, utilization, rogue devices, and interference detection
- A centralized test results management platform, Link-Live, that facilitates greater job visibility, project control and fleet management for larger distributed environments.

The intuitive user interface and management platform provides actionable intelligence to not only remove the complexity of wireless troubleshooting but also helps speed up closure of the trouble ticket. The cost of not getting the job done right the first time, leading to an escalation team visit, leads to ineffective usage of the escalation team efforts & end-user dissatisfaction due to slow problem-solving response time. AirCheck G2 provides front-line IT with complete & accurate wireless information to solve problems right the first time, instead of blindly escalating them.

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Overview

AirCheck G2 integrates all Wi-Fi technologies plus interference detection, channel scanning, and connectivity tests. The one-button AutoTest and instant access to detailed information provides fast troubleshooting for the most common Wi-Fi pain points, including:

- Coverage problems
- Overloaded networks or channels
- Channel interference
- Connectivity problems
- Failed access points
- Rogue access points
- Client problems
- Unauthorized Clients

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AirCheck G2 Features

Supports 802.11a/b/g/n/ac — All-in-one handheld tool for all Wi-Fi technologies including true 802.11ac 3x3 support.

Instant-on operation — Powers up fast and automatically starts discovering networks, access points (APs), and channel activity.

Touchscreen Display — 5" Touchscreen display allows for better visibility and easier access to all the available operations/inputs.

Get answers fast — The one-button AutoTest quickly provides a pass/fail indication of the wireless environment and identifies common problems-for any level of Wi-Fi expertise.

Link-Live Cloud Service — Cloud-based results management dashboard provides test results, project control, and reporting capabilities for your network connectivity tests.

Identifies security settings for each Network and Access Point: Open, WEP, WPA, WPA2, and/or 802.1x.

Pinpoints Wi-Fi traffic and interference — Shows how much of each channel's bandwidth is consumed by 802.11 traffic and interference, and the APs using each channel.

Finds rogue APs and misbehaving clients — Flags unauthorized APs and clients. Hunt them down with the LOCATE function or find them even faster with the optional directional antenna. Supports use of a USB headset for audio feedback.

Connection tests — Connects to networks or specific APs using WEP, WPA, WPA2, and/or 802.1x. Acquires an IP address and pings the router, gateway, and user-defined addresses to verify connectivity and network access inside and outside the firewall. Verifies connection quality.

Wired Ethernet Tests — Allows for quick AP backhaul and wiring verification.

Designed for the field — Multi-hour battery life. One-handed operation. Rugged design.

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AirCheck G2

AutoTest — Performs the following five essential Wi-Fi tests and a pass/fail indication of the wireless environment as well as identifies common problems — for any level of expertise.
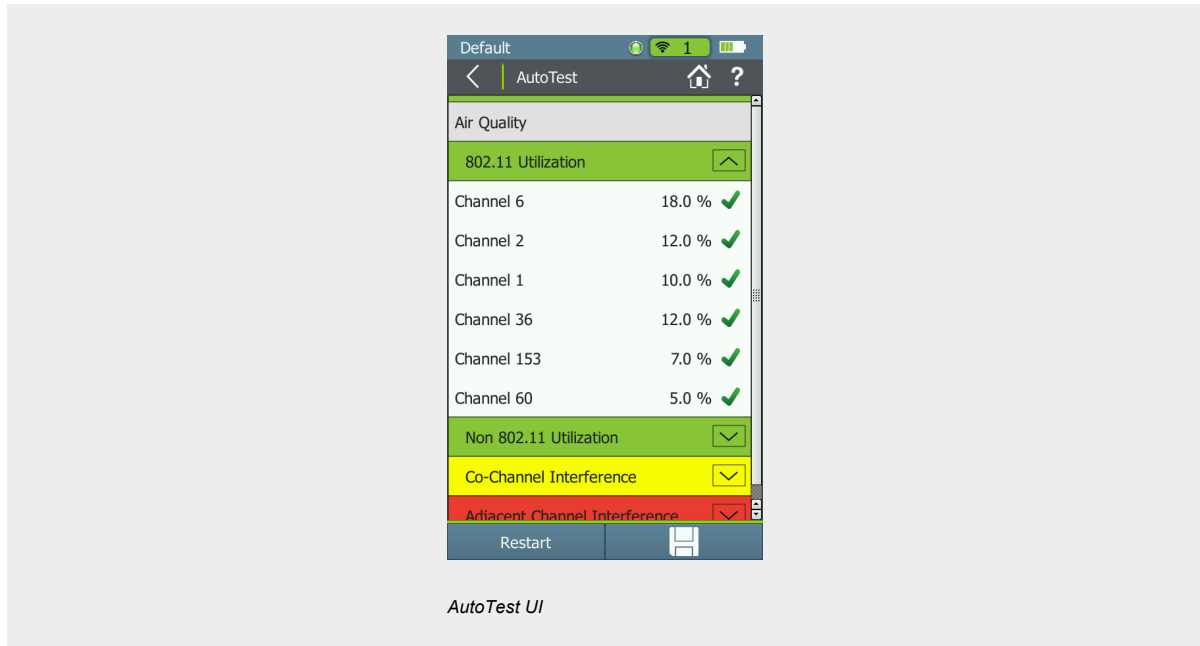
AutoTest UI

802.11 Utilization — Reports the top three channels in each band (2.4 GHz and 5 GHz) with the highest 802.11 Wi-Fi traffic airtime utilization.

Non-802.11 Utilization — Reports the top three channels in each band (2.4 GHz and 5 GHz) with the highest non-802.11 airtime utilization. This indicates the presence of interference sources and high noise levels.

Co-Channel Interference — Reports the top three channels in each band (2.4 GHz and 5 GHz) with the most APs on the same channel that exceed the minimum signal level threshold. It accounts for 40-MHz and 80-MHz channels in the 5-GHz band by counting an AP on its primary and each secondary channel. Then view a list of the APs counted for co-channel interference.

Adjacent Channel Interference — Reports the top three channels in the 2.4 GHz band in which APs may experience Adjacent Channel Interference. For each channel on which at least one AP is found, the Tester counts how many APs are operating on other channels that overlap with that channel. It accounts for 20-MHz and 40-MHz channels in the 2.4-GHz band. Then view a list of the APs counted for adjacent channel interference.

Network Quality — Verifies coverage, interference, security and ability to connect to specified networks, along with the availability of critical network services such as DHCP and connectivity to specified network targets.

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Networks

Quickly view all the networks present in the environment, and see critical parameters for each one including signal level, signal/noise ratio, security type, and number of access points. Find common issues such as mixed security types, poor signal coverage or lack of secondary AP coverage.

Networks UI
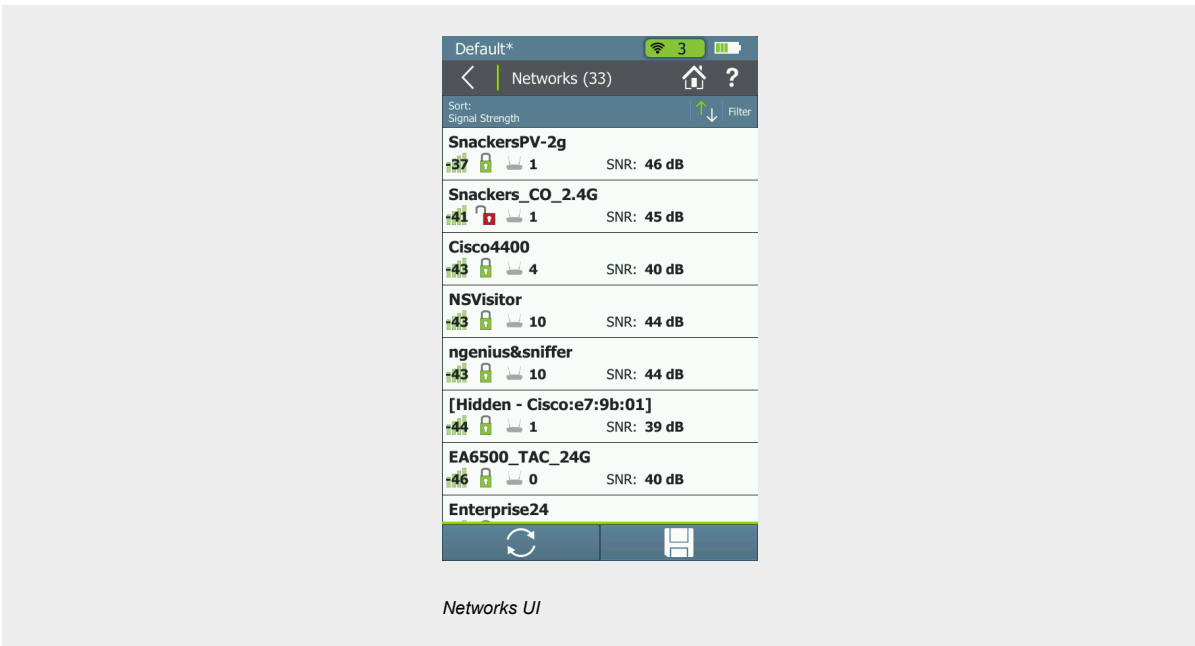
Sort or filter on any parameter. Then drill into more details for any network, including 802.11 types supported, number of connected clients, channels and more. From the network details page, drill into a list of APs or clients on the network.

Networks UI Detail
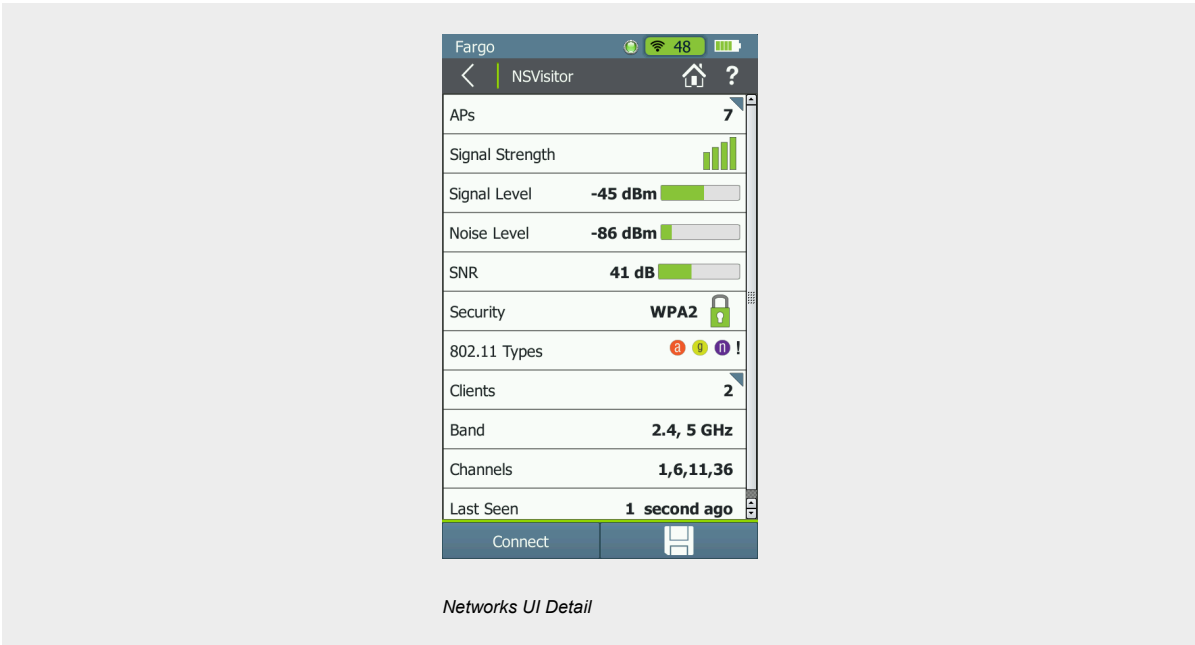
Access Points

Quickly view all the APs present in the environment, and see critical parameters for each one including signal level, signal/noise ratio, security type, and channel. Find common issues such as incorrect security type, poor signal coverage or incorrect channel.

Access Points UI
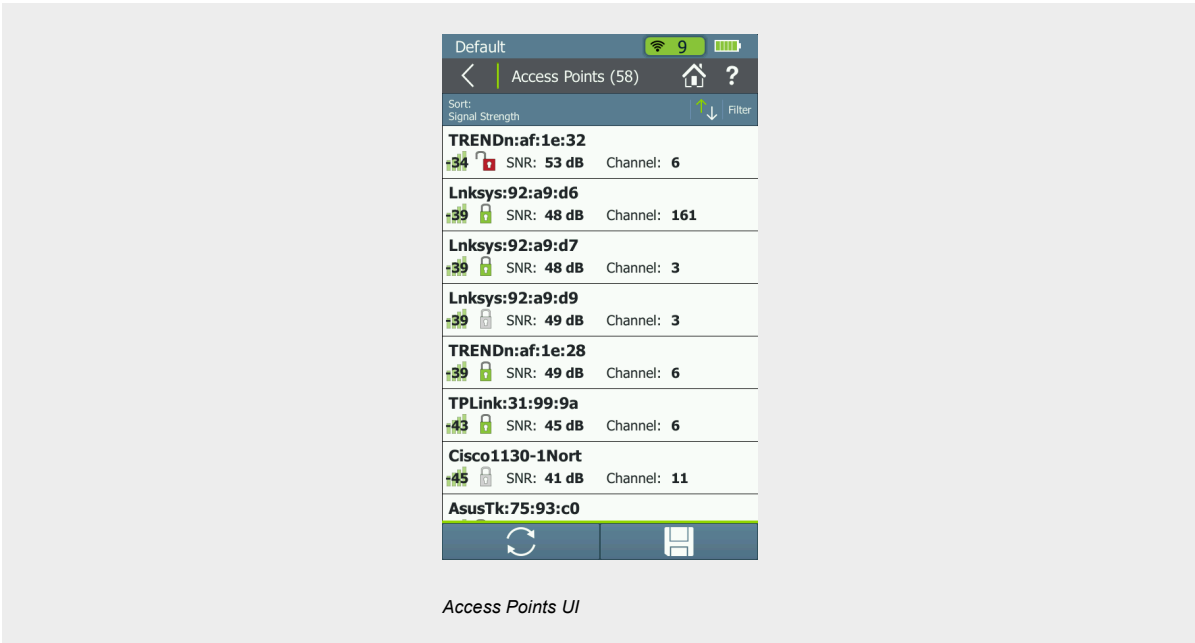
Sort or filter on any parameter. Then drill into more details for any AP, including number of connected clients, supported rates, 802.11n and 802.11ac capabilities and more. From the AP details page, drill into a list of connected clients or the channel on which the AP operates to verify any channel utilization or co-channel interference problems.

Access Points UI Detail

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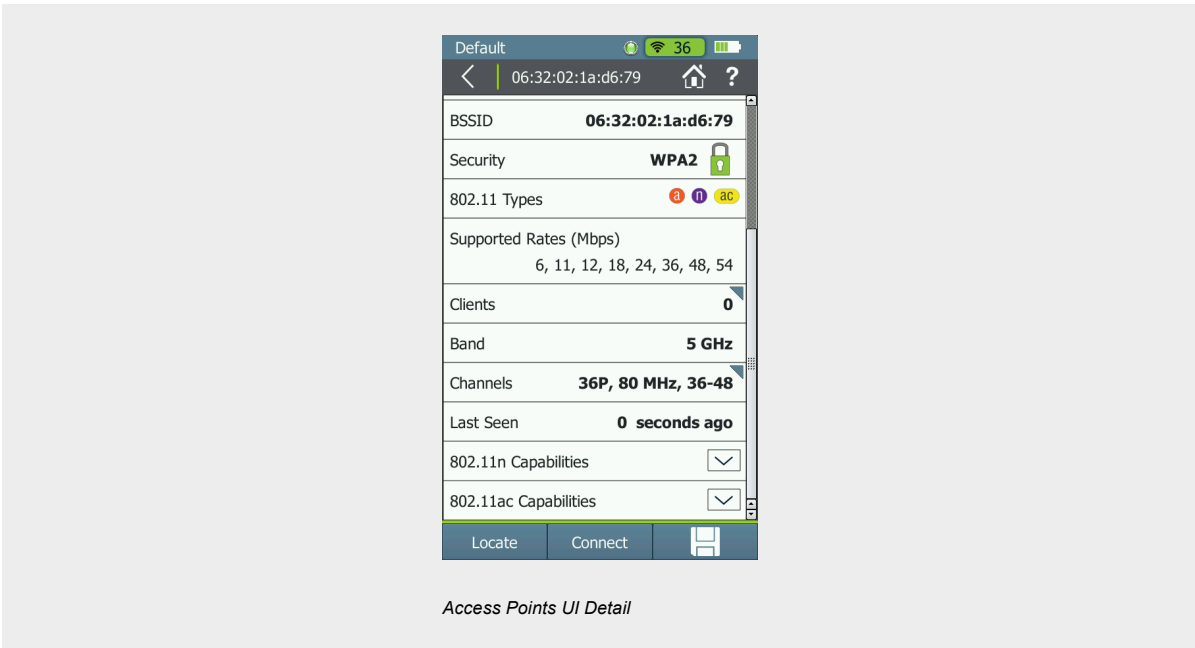
Channel Usage

Quickly determine if channels are over-utilized with 802.11 Wi-Fi traffic and/or with non-Wi-Fi interference and noise. Devices that can cause interference include microwave ovens, wireless game controllers, Bluetooth® devices, Zigbee devices and wireless video cameras.
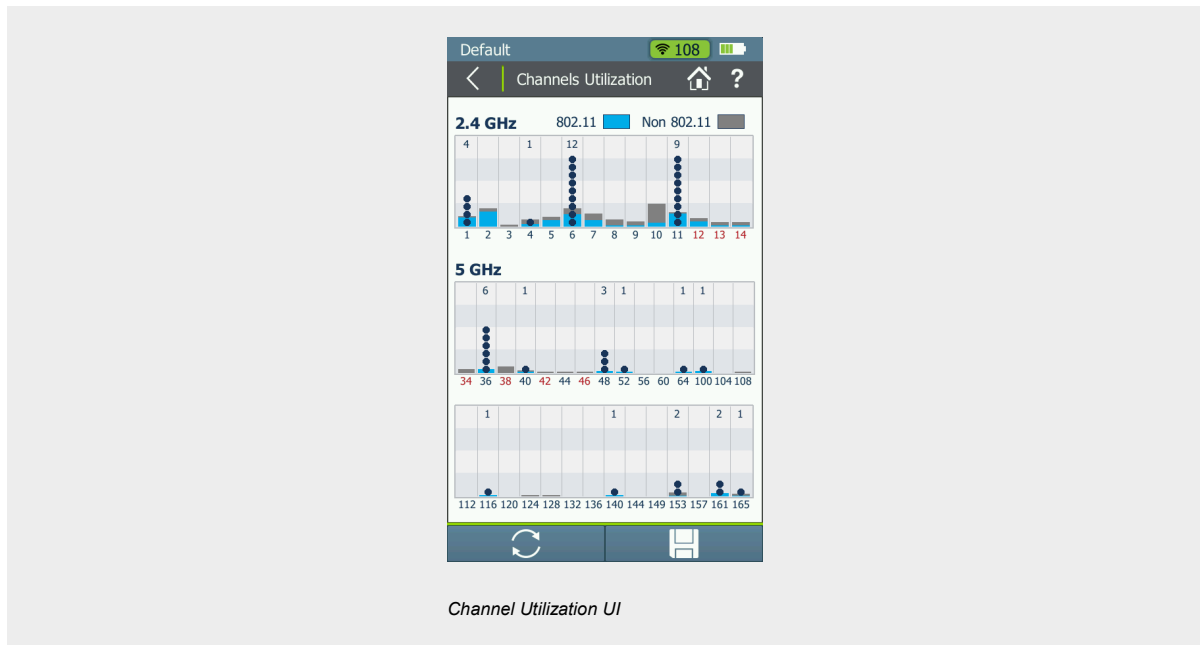
Channel Utilization UI

Drill in to see the level of Wi-Fi traffic and interference over the last 60 seconds on a selected channel, as well as the access points and clients using this channel.
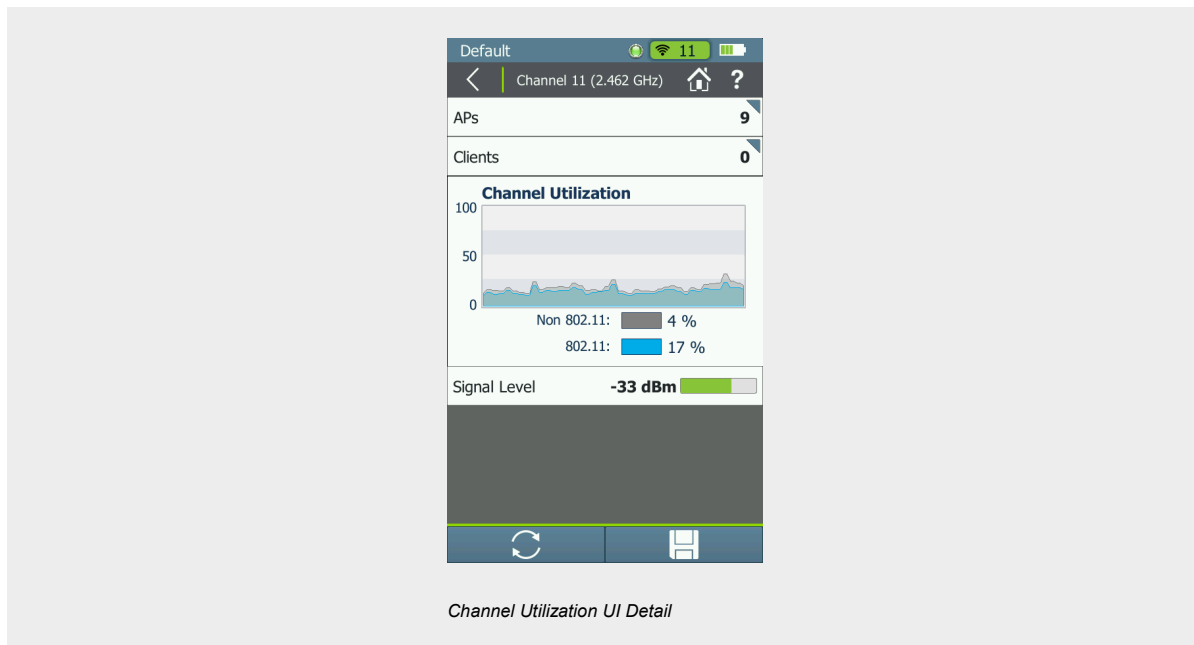
Channel Utilization UI Detail

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Clients

Quickly view all the client devices that are connected to a network or probing for one. See critical parameters for each one including signal level, channel and connected AP. Find common issues such as clients connected to the wrong AP or unrecognized client devices connected to the network.
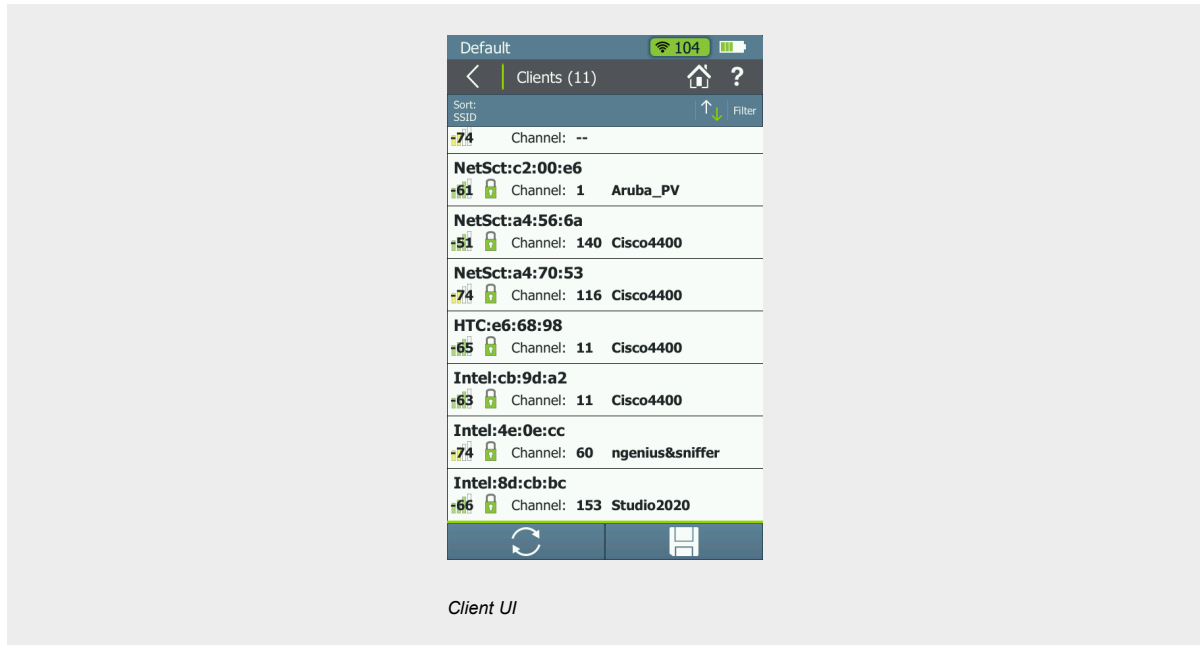
Client UI

Sort or filter on any parameter. Then drill into more details for any client, including connection rate and security type. From the Client details page, drill into the connected channel or quickly locate the client device.

Client UI Detail

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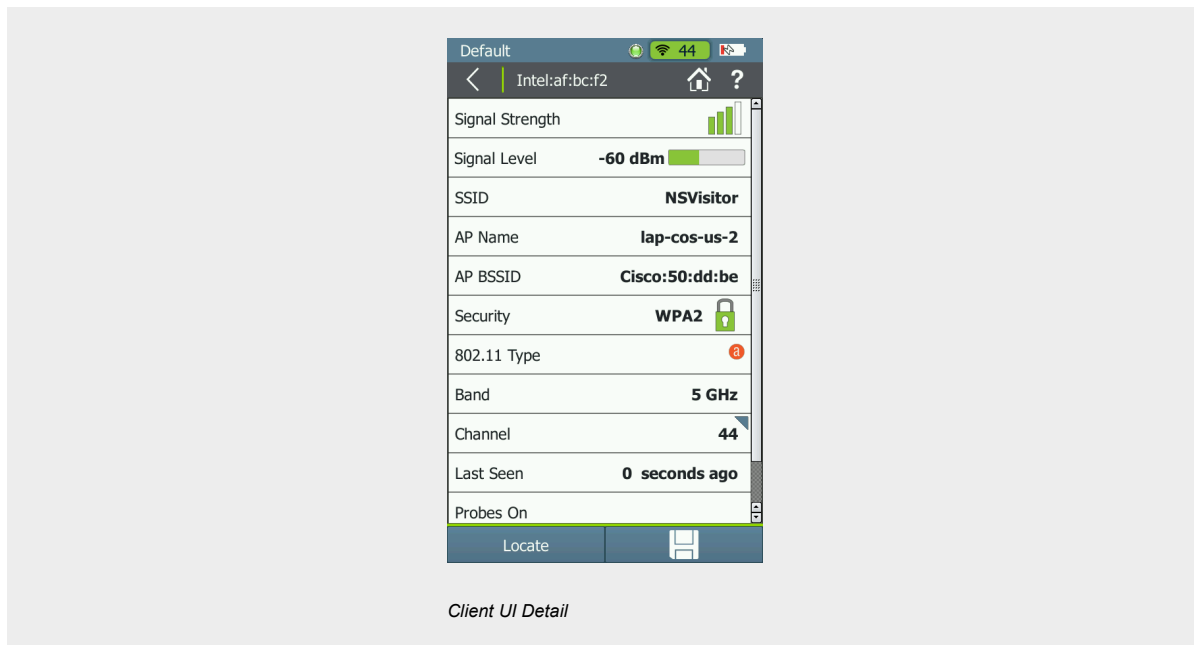
Locate Access Points and Clients

Track down rogue APs and unauthorized clients by following the real-time signal level meter and graph over time. Audible indication is provided, and the use of a USB headset for private audio is supported.

Locate UI

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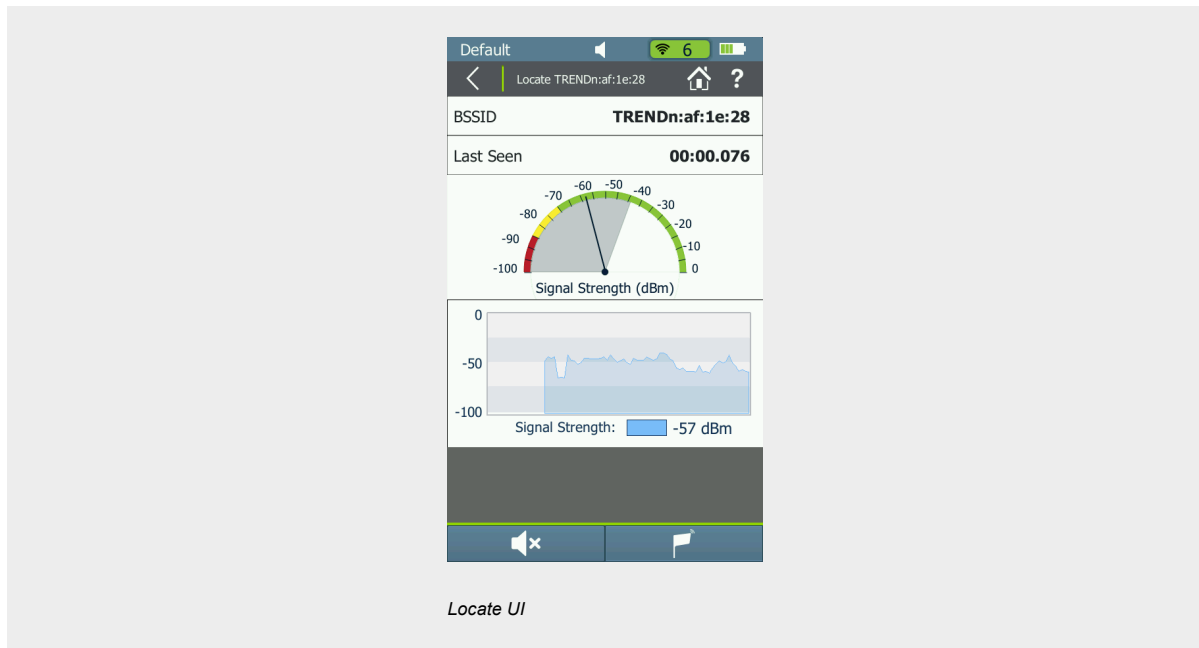
Connect

Verify network availability and access to critical services by connecting to a network (SSID) or AP with a single touch on the Connect button. Key test steps include:

- Associate to an AP
- Request and receive an IP address from a DHCP server
- Ping the default gateway and DNS servers for availability
- Perform a ping or TCP port test to up to ten network targets
- Ongoing signal level, signal/noise ratio, and retry rate measurements

Connect to SSID UI
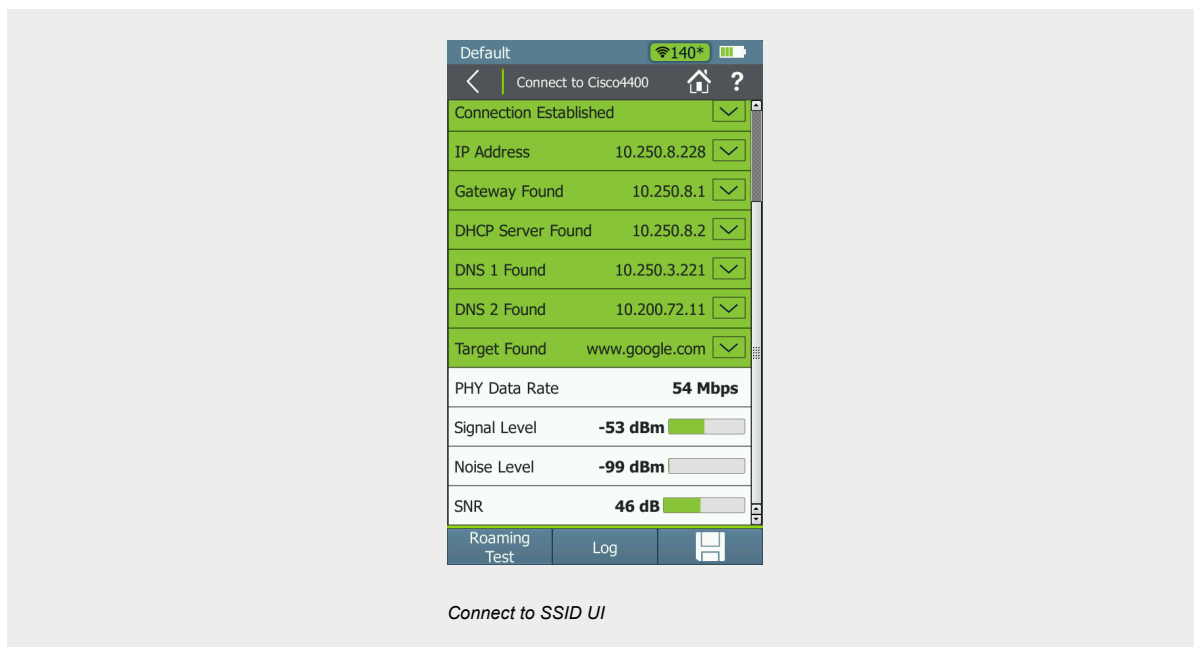
Once connected to a network, perform a roaming test to validate that roaming is enabled on the network.

Roaming UI

![NETSCOUT]
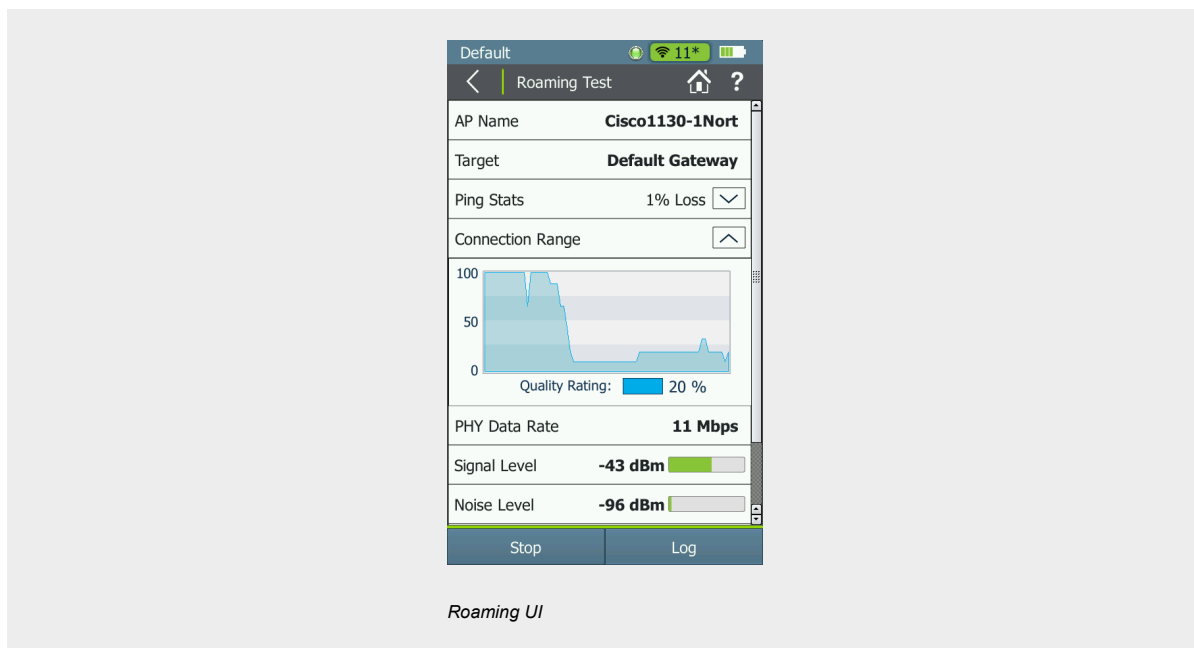
Ethernet Tests

Access points must have a working backhaul connection to the network, and the AirCheck G2's built-in Ethernet test validates that.

Diagnose and test Power over Ethernet (PoE), Link to the switch, DHCP, Gateway, and Internet connection. Get VLAN, switch name, and port information via CDP/LLDP/EDP for your managed switches. Automatically upload results to Link-Live Cloud Service, and receive test results sent directly to your email.

Ethernet Test UI

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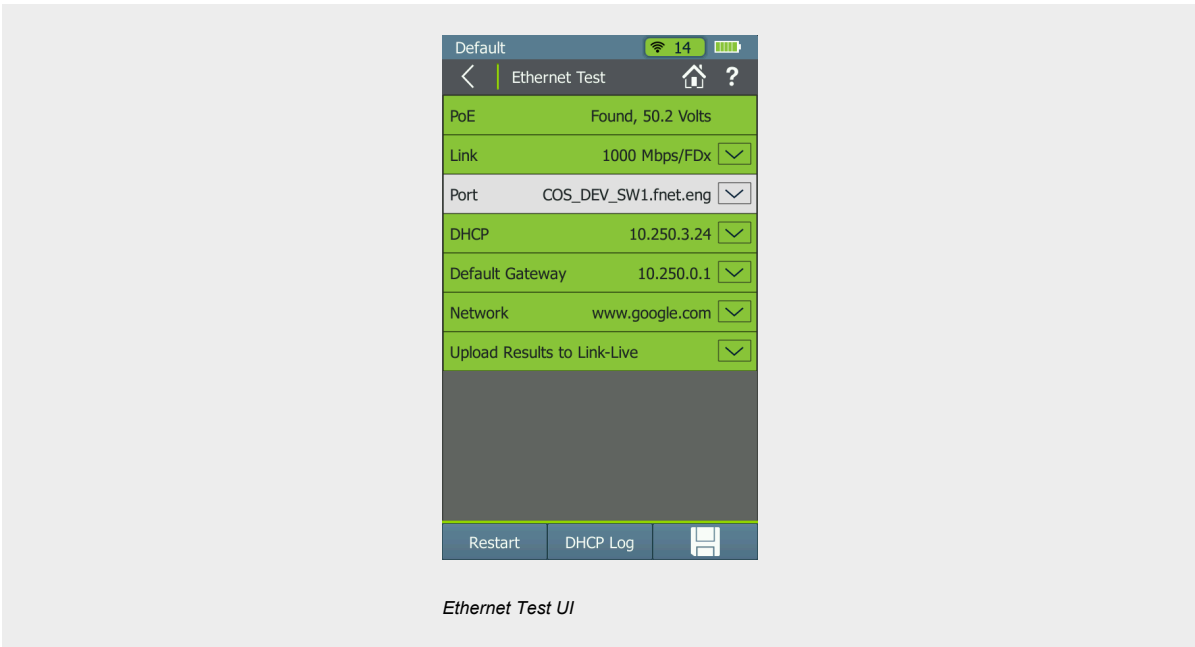
RESULT MANAGEMENT OPTIONS

Link-Live Cloud Service

Once the AirCheck G2 is connected to the Link-Live Cloud service, basic network connectivity test results are automatically uploaded to the dashboard for project management and reporting. This internet-hosted service is available from anywhere at any time using any device with a browser and internet connection. It is especially useful for managers of remote teams that need visibility to test results instantly. In addition, teams that utilize the wired only companions to the AirCheck G2 such as the LinkSprinter, or LinkRunner have a single dashboard system to manage results from network connectivity tests.

Link-Live dashboard

AirCheck G2 Manager Software

The AirCheck G2 Manager Software provides the ability to manage AirCheck G2 profiles and view detailed information on saved tests results. The AirMagnet Manager is free and available for download to any computer from the Link-Live Cloud Service.

Profiles

Easily configure, manage, and control the use of your AirCheck G2 — or an entire fleet of them — with the Profiles feature, which allows configuration of security settings, AutoTest limits, and target devices for connectivity. Name and transfer multiple profiles into AirCheck G2, as needed for different facilities. Profiles are password protected, eliminating worry about unauthorized access to your network if your AirCheck G2 is lost or stolen.

Record Sessions

You can easily view detailed information about networks, access points, channels, or clients on the AirCheck G2 Manager Software by viewing a saved session file. The session files will capture details including AirCheck G2 configuration, AutoTest results, lists of AP's / clients and channel usage.

AirCheck G2 Manager dashboards

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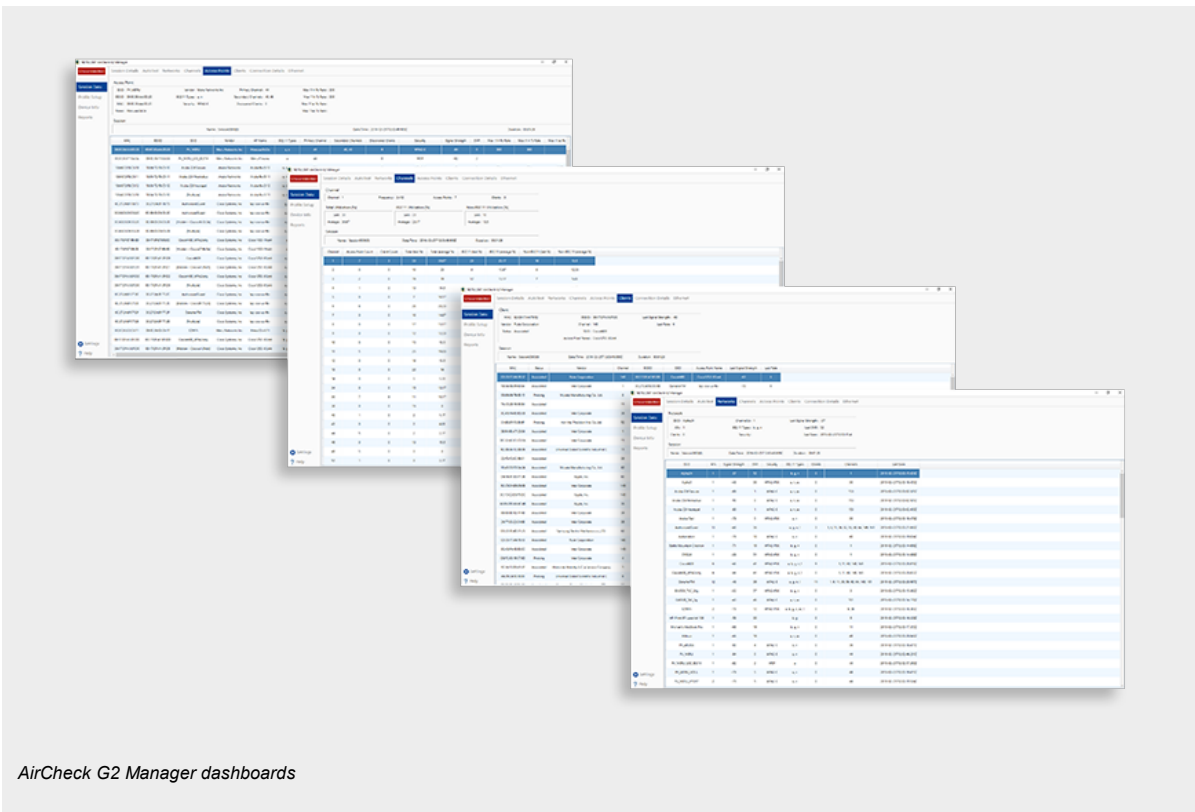
Ordering Guide

Model Number	What is Included
AIRCHECK G2	AIRCHECK G2 WIRELESS TESTER
AIRCHECK-G2-KIT	AIRCHECK G2 PLUS EXTERNAL DIRECTIONAL ANTENNA, AUTO CHARGER, HOLSTER
ACKG2-LRAT2000	NETWORK TECH TROUBLESHOOTING KIT W/ACKG2, LRAT-2000
ACKG2-HOLSTER	AIRCHECK G2 HOLSTER
ACKG2-WBP-LION	AIRCHECK G2 LITHIUM ION REPLACEMENT BATTERY
EXT-ANT-RPSMA	EXTERNAL DIRECTIONAL ANTENNA, RSMA CONNECTOR
PWR-CHARGER	AC CHARGER REPLACEMENT
SOFTCASE-G2	SOFTCASE
ACKG2-LRAT2000-1YS	1 Year Gold Tools Support for ACKG2-LRAT2000
ACKG2-LRAT2000-3YS	3 Year Gold Tools Support for ACKG2-LRAT2000
AIRCHECK-G2-KIT-1YS	1 Year Gold Tools Support for AIRCHECK-G2-KIT
AIRCHECK-G2-KIT-3YS	3 Year Gold Tools Support for AIRCHECK-G2-KIT
AIRCHECK-G2-1YS	1 Year Gold Tools Support for AIRCHECK G2
AIRCHECK-G2-3YS	3 Year Gold Tools Support for AIRCHECK G2

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Technical Specifications

General Specifications	
Dimensions	3.8 in x 7.7 in x 1.6 in (9.7 cm x 19.6 cm x 4.1 cm)
Weight	18 oz (0.51 kg)
Battery	Rechargeable lithium-ion battery pack (3.6 V, 6 Ah, 21 Wh)
Battery life	Typical operating life is 4.5 hours. Typical charge time is 7 hours
External AC adapter/charger	AC input 85-264 Vac 47-63 Hz input power DC output 15 Vdc at 2 amps
Display	5.0 inch color LCD with capacitive touch screen (480 x 800 pixels)
Keypad	1-key elastomeric (power only)
Host interface	1x micro USB Type B port
Adjunct Interface	2x USB 2.0 Type A port
Wireless antenna	3x Internal
External antenna port	Input only. Reverse-polarity SMA connector

Environmental Specifications	
Operating temperature	32ºF to 113ºF (0ºC to +45ºC) The battery will not charge if the internal temperature of the tester is above 122ºF (50ºC).
Operating relative humidity (% RH without condensation)	90% (50ºF to 95ºF; 10ºC to 35ºC) 75% (95ºF to 113ºF; 35ºC to 45ºC)
Storage temperature	-4ºF to 140ºF (-20ºC to +60ºC)
Shock and vibration	1 m drop test, Random, 3.8 grms, 5 Hz-500 Hz
Safety	IEC 61010-1: Pollution degree 2
Altitude	4,000 m; Storage: 12,000 m
EMC	IEC 61326-1: Basic Electromagnetic Environment; CISPR 11: Group 1, Class A

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Wireless Specifications	
Specification compliance	IEEE 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac
Wi-Fi Connectivity	802.11a, 802.11b, 802.11g, 802.11n, 802.11ac
Operating frequencies These are the center frequencies of the channels that the AirCheck G2 tester supports.	**Frequencies of channels received:** The tester receives on all of the frequencies in every country. **2.4 GHz band:** 2.412 – 2.484 GHz (channel 1 to channel 14) **5 GHz band:** 5.170 – 5.320 GHz, 5.500 – 5.700 GHz, 5.745 – 5.825 GHz (channels 34, 36, 38, 40, 42, 44, 46, 48, 52, 56, 60, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 157, 161, 165) **Frequencies of channels transmitted:** The tester transmits only on the frequencies allowed in the country where it is operating. **2.4 GHz band** 802.11b: 2.412 – 2.484 GHz (channel 1 to channel 14) 802.11g/n 20 MHz BW (HT20): 2.412 – 2.472 GHz (channel 1 to channel 13) 802.11n 40 MHz BW (HT40): 2.422 – 2.462 GHz (includes all combinations of legal, bonded pairs of channels)

Wi-Fi Antennas	
Internal Wi-Fi antennas	Three internal 2.4 GHz, 1.1 dBi peak, 5 GHz, 3.2 dBi peak antennas.
External directional antenna	Antenna, frequency range 2.4 - 2.5 and 4.9 - 5.9 GHz. Minimum gain 5.0 dBi peak in the 2.4 GHz band, and 7.0 dBi peak in the 5 GHz band.
External antenna connector[1]	Reverse SMA

[1] External antenna port is receive-only (no transmit).

AirCheck Manager Software	
Supported operating systems	Windows 7, Windows 8.1, Windows 10
Processor	400 MHz Pentium processor or equivalent (minimum); 1 GHz Pentium processor or equivalent (recommended) RAM 96 MB (minimum)
RAM	256 MB (minimum); 512 MB (recommended)
Hard disk	Up to 500 MB of available space may be required
Display	1280 x 1024 high color, 32-bit (recommended)
Hardware	USB Port

Certifications and Compliance	
CE	Conformite Europeene. Conforms to the requirements of the European Union and the European Free Trade Association (EFTA).
	The product complies with Australian standards.
CSA us	Listed by Canadian Standards.
FC	Complies with 47 CFR Part 15 requirements of the U.S. Federal Communications Commission.
ANATEL	Certified by the National Agency of Telecommunications (Anatel).
KC	Conforms to relevant South Korean EMC Standards.

Additional South Korean EMC Standards Information

Electromagnetic Compatibility. Applies to use in Korea only. Class A Equipment (Industrial Broadcasting & Communications Equipment)

[1] This product meets requirements for industrial (Class A) electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and is not to be used in homes.