

Datasheet: AirCheck Wi-Fi Tester

Wi-Fi is a complex technology, but testing it doesn't have to be. The AirCheck™ Wi-Fi tester allows network professionals to quickly verify and troubleshoot 802.11 a/b/g/n/ac* networks. Designed specifically for dispatched troubleshooting, AirCheck simplifies wireless testing by providing:

- 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 to required test results including network availability, connectivity, utilization, security settings, rogue hunting, and interference detection
- A rugged, purpose-built Wi-Fi tester that's easy to use and easy to carry

Its intuitive design and standardized AutoTest makes it simple for anyone to quickly master AirCheck. Instant power-up, automated testing, and quick access to more detailed information, so you can close trouble tickets faster – making technicians and users alike more productive. Easily manage test results and documentation using AirCheck Manager software. From start to finish, AirCheck helps take the guesswork out of everyday wireless troubleshooting.



Overview

AirCheck 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
- Interference
- Connectivity problems
- Failed access points
- Rogue access points
- Security settings
- Client problems

In addition to generating instant reports and documentation, AirCheck Manager software allows you to set up multiple profiles and manage network and security settings for a single unit, or an entire fleet of AirCheck testers.

AirCheck Features

Supports 802.11a/b/g/n/ac* – All in one handheld tool.

Instant-on operation – Powers up in less than three seconds and automatically starts discovering networks, access points (APs), and channel activity.

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.

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.

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.

Designed for the field – Five-hour battery life. One-handed operation. Rugged design.

Documents results – Saves complete results of the current troubleshooting session for download to your PC.

Easy upgrades – The mini-USB port allows software upgrades in the field in just minutes using your laptop computer and the AirCheck Manager Software. And with Gold support, you'll automatically receive upgrades at no additional charge.

AirCheck Functions

AutoTest

Performs four essential Wi-Fi tests and a pass/fail indication of the wireless environment and identifies common problems - for any level of expertise.

Air Quality - Checks for Wi-Fi and non Wi-Fi utilization by channel, plus co-channel interference.

Ad Hoc Networks - Identify AP's that are configured in Ad Hoc mode since they could be a security risk.

Network Quality - Verify coverage, interference, security and ability to connect to specified networks.

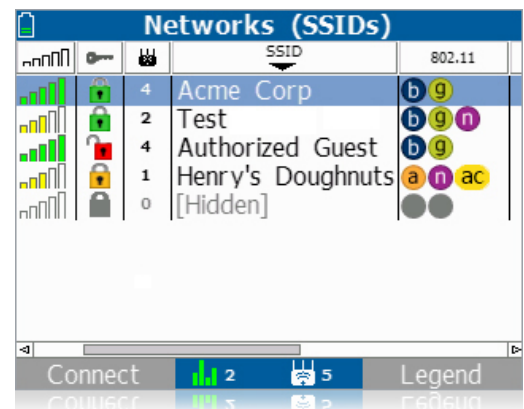
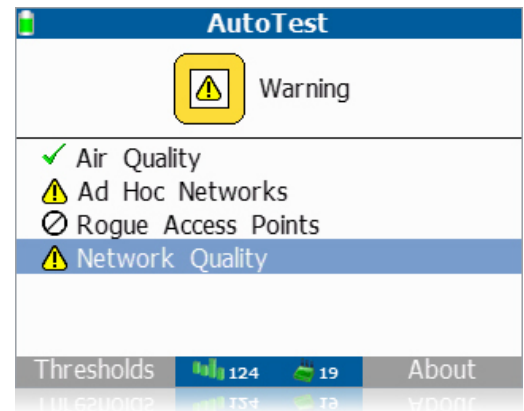
Rogue Access Points - Identify AP's not listed in the profile

AutoTests are user configurable and based on the multiple profiles which can be stored in AirCheck and selected for different sites or requirements. Results may also be stored for export to AirCheck Manager.

List Networks

Find security issues, rogue APs and coverage problems and view a list of all wireless networks heard by AirCheck. Instantly see the following for each network:

- Signal level
- Security / encryption
- Number of APs in network
- SSID name
- Type of network



List Access Points

Find configuration and coverage problems as well as rogue APs. View a list of all physical APs heard by AirCheck or clients connected to a specific AP, and see the following:

- Channel
- Signal level
- AP name or MAC address
- SSID name (or count of SSIDs for virtual APs)
- Security / encryption
- Type of network

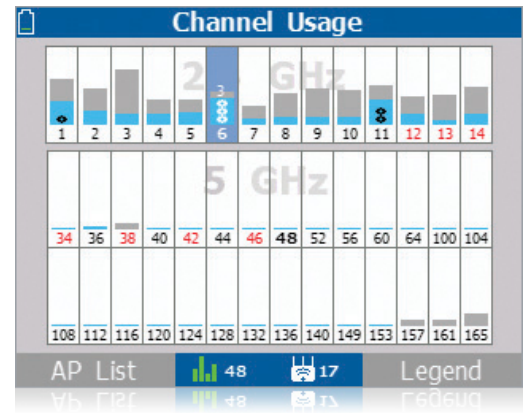
Acme Corp			
		Name/MAC	
6	-30	Acctg	[lock] [b] [g]
1	-45	Corp	[lock] [b] [g]
6	-62	Sales	[lock] [b] [g]
11	-43	Acctg	[lock] [b] [g]

Channel Usage

Quickly determine if channels are overloaded due to Wi-Fi traffic (displayed in blue) or interference (displayed in gray). Verify channel-usage pattern or overlap and flag illegal use of channels.

With AirCheck, you can also detect the presence of interference. Devices that can cause interference include microwave ovens, cordless phones and headsets, BlueTooth® devices, and analog video cameras.

Drill in further 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 using this channel.



Access Control Settings

Quickly determine which access points are known and which are not by setting the authorization status for each AP seen by AirCheck. You may also define access control settings in AirCheck Manager and download them in a profile.

Authorization Status	
ap-evt-fp-2f6n	
<input type="checkbox"/>	⚠ Unauthorized device
<input checked="" type="checkbox"/>	✓ Authorized device
<input type="checkbox"/>	↗ Neighbor device
<input type="checkbox"/>	? Unknown device
<input type="checkbox"/>	🚩 Flagged device
<input checked="" type="checkbox"/>	✓ Set all APs to Authorized
<input checked="" type="checkbox"/>	✓ Set AP series to Authorized
<input checked="" type="checkbox"/>	⚠ Set AP series to Unauthorized

Locate Access Points and Clients

Track down rogue and other APs or clients by graphing the signal strength over time, or by using an audible indication which can be muted.

Access Point Details

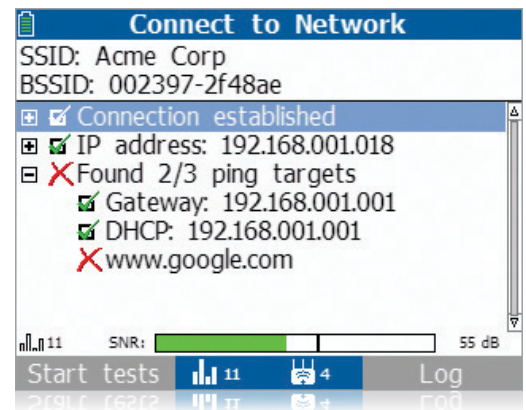
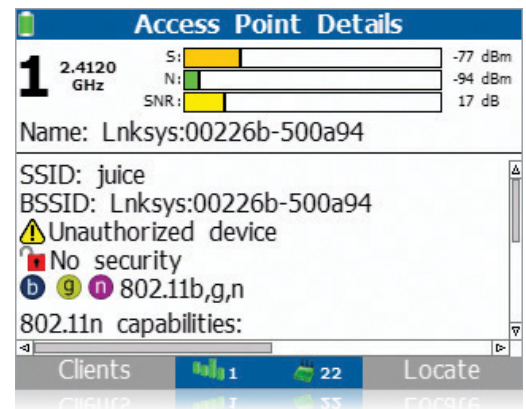
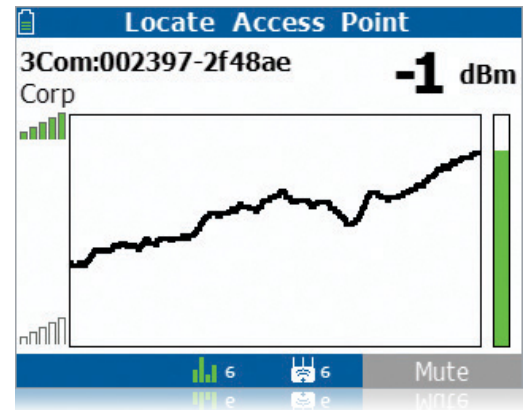
Quickly identify AP configuration problems. View the following information for each physical AP:

- Signal / noise/ signal-to-noise ratio
- SSID and BSSID
- ACL status, security and encryption
- Connected clients

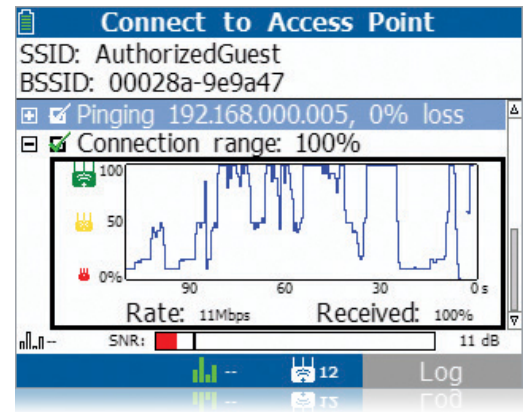
Connect

Verify network availability and access by connecting to a network (SSID) or specified AP using three simple steps:

- Associate with AP
- Request IP address from DHCP server
- PING gateway, DHCP server and user-defined addresses
- TCP port connectivity

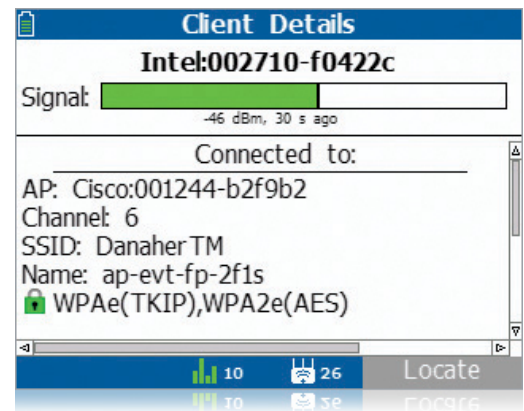


View the process steps on the display and store them in a log for troubleshooting. Quickly test performance and quality of the connection by using the continuous ping response, loss-rate, and connection-range features.



Client Details

Easily find misconfigured or failed client devices. Quickly drill into client details to see signal level, AP MAC and name, channel, SSID, type and determine the channels and frequencies on which the client is probing.



AirCheck Manager Software

This software is included with AirCheck and provides two capabilities: the ability to manage AirCheck profiles and manage sessions recorded with AirCheck.

Profiles

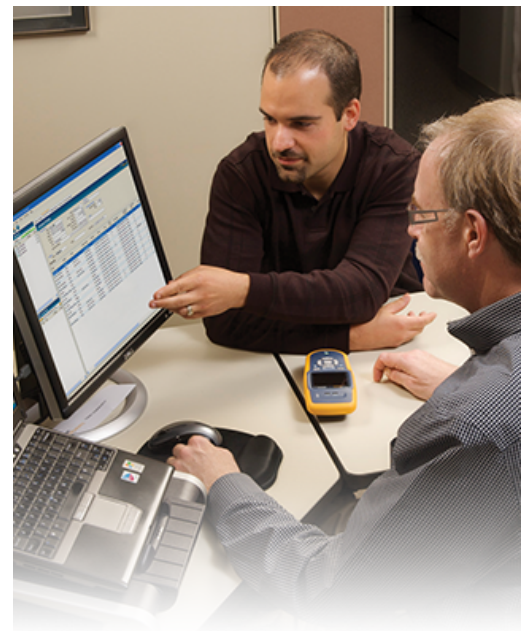
Easily configure, manage, and control the use of your AirCheck – or an entire fleet of them - with the Profiles feature, which allows configuration of security settings, AutoTest limits, and target devices for connectivity.

Name and transfer multiple profiles into AirCheck, as needed for different facilities. You can also transfer profiles from AirCheck to AirCheck Manager software.

Profiles are password protected, both in AirCheck and in AirCheck Manager, eliminating worry about unauthorized access to your network if your AirCheck is lost or stolen.

Record Session

Document what AirCheck is seeing to share or archive. Create summary or detailed reports allowing you to quickly close a trouble ticket or provide documentation for problem escalation. Press one key to record all collected details including AirCheck configuration, AutoTest results, lists of AP's / clients and channel usage. Transfer sessions to a PC and easily view/store them using AirCheck Manager software.



Technical Specifications

Environmental

Operating temperature and relative humidity	32°F to 113°F (0°C to +45°C) Note: The battery will not charge if the internal temperature of the tester is above 113°F (45°C)
Operating relative humidity (% RH without condensation)	90% (50°F to 95°F; 10°C to 35°C) 75% (95°F to 113°F; 35°C to 45°C)
Storage temperature	-4°F to 140°F (-20°C to +60°C)
Shock and vibration	Random, 2 g, 5 Hz-500 Hz (Class 2) 1 m drop test
Safety	EN 61010-1 2nd edition
Altitude	4,000 m; Storage: 12,000 m
EMC	FCC Part 15 Class A, EN 61326-1
Certifications and compliance	CE Conforms to relevant European Union directives
	Conforms to relevant Australian standards
	Listed by the Canadian Standards Association
	Conforms to FCC Rules, Parts 15.107, 15.109

General

Dimensions	3.5 in x 7.8 in x 1.9 in (8.9 cm x 19.8 cm x 4.8 cm)
Weight	14 oz (0.4 kg)
Battery	Removable, rechargeable lithium-ion battery pack (18.5 Watt-hrs)
Battery life	Typical operating life is 5.5 hours; Typical charge time is 3 hours
External AC adapter/charger	AC input 90 to 264 Vac 48 to 62 Hz input power DC output 15 Vdc at 1.2 amps
Display	2.8 in color LCD (320 x 240 pixels)
Keypad	12-key elastomeric
LEDs	2 LEDs (transmit and link Indicators)
Host interface	USB 5-pin mini-B
Wireless antenna	Internal
External antenna port	Input only; Reverse-polarity SMA connector
Language support	English, French, German, Spanish, Portuguese, Russian, Japanese, Simplified Chinese, and Korean

Wireless


Specification compliance	IEEE 802.11a, 11b, 11g, 11n, 11ac (at 802.11n rates or lower)
Receive Channel Frequencies	2.4 GHz Band* 2412-2484 MHz (Channel 1 to Channel 14)
	5 GHz Band* 5170-5320 MHz, 5500-5700 MHz, 5745-5825 MHz (Channels 34, 36, 38, 40, 42, 44, 46, 48, 52, 56, 60, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165)
*Notes: 1. AirCheck receives on all of these frequencies in every country. 2. These are the center frequencies of the channels that AirCheck supports.	
Transmit Channel Frequencies	2.4 GHz Band** <ul style="list-style-type: none"> 802.11b 2412-2484 MHz (Channel 1 to Channel 14) 802.11 g/n 20 MHz BW (HT20) 2412-2472 MHz (Channel 1 to Channel 13) 802.11n 40 MHz BW (HT40) 2422-2462 MHz (All legal bonded channel pair combinations)
	5 GHz Band** <ul style="list-style-type: none"> 802.11 a /n 20 MHz BW (HT20) 5180-5320 MHz, 5500-5700 MHz, 5745-5825 MHz (Channels 36, 40, 44, 48, 52, 56, 60, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165) 802.11 n 40 MHz BW (HT40) 5190-5310 MHz, 5510-5670 MHz, 5755-5795 MHz (All legal bonded channel pair combinations)
*Notes: 1. AirCheck transmits only on frequencies allowed in the country where it operates. 2. These are the center frequencies of the channels that AirCheck supports.	
Regulatory domain	World Mode, 802.11d compliant
External unidirectional antenna	Frequency range: 2.4 GHz to 2.5 GHz and 4.9 GHz to 5.9 GHz; Minimum gain: 5.0 dBi in the 2.4 GHz band and 7.0 dBi in the 5 GHz band Connector: Reverse-polarity SMA plug

AirCheck Manager Software

Supported operating systems	Windows Vista; Windows XP; Windows 7, Windows 8.1
Processor	400 MHz Pentium processor or equivalent (minimum); 1 GHz Pentium processor or equivalent (recommended)
RAM	96 MB (minimum); 256 MB (recommended)
Hard disk	Up to 500 MB of available space may be required
Display	1024 x 768 high color, 32-bit (recommended)
Hardware	USB Port

AirCheck does not support mesh/bridge APs

Ordering Information

Model	Description
AirCheck 	AirCheck Wi-Fi Tester includes: AirCheck tester, USB cable, soft case, Getting Started Guide, and CD with AirCheck Manager software and User Manual
AIRCHECK-LE	AirCheck Wi-Fi Tester for Law Enforcement includes: AirCheck tester, AirCheck holster, External directional antenna, Auto charger and AirCheck Getting Started Guide for Law Enforcement
AIRCHECK-5PK*	AirCheck 5 Pack: includes five (5) AirCheck testers and five (5) free external directional antennas
AIRCHECK-10PK*	AirCheck 10 pack: includes a bonus free AirCheck tester, so you receive 11 AirCheck testers, and 11 free directional antennas
ACK-LRAT2000	Includes AirCheck™ tester, LinkRunner™ AT 2000 tester, AirCheck external directional antenna, spare Li-ion battery for either AirCheck or LinkRunner and deluxe carrying case.
ACK-LRAT-CIQ	Includes AirCheck™ tester, LinkRunner™ AT 2000 tester, AirCheck external directional antenna, spare Li-ion battery for either AirCheck or LinkRunner, deluxe carrying case and a CableIQ™ Qualification tester.
GLD-ACK	AirCheck Gold support services, 1 yr

*These bundles are only available in the US, Canada, Europe, the Middle East, and Africa.