

WiFi Advisor™

The first wireless LAN analyzer built for installers at all skill levels

Increasingly, end users depend on WiFi to reliably deliver premium services such as video and IPTV to endpoints throughout their homes. However, the highly dynamic nature of WiFi networks (including spurious interferers, in-channel or channel-overlapping networks added by other parties, and growing numbers of WiFi devices) has a continuous impact on performance and QoE. As a result, 40% of all trouble calls are now WiFi related. Technicians who install and maintain WiFi in the home require robust installation methods and rapid troubleshooting capabilities.

The WiFi Advisor consists of an iPad app and one or more WFED-300AC test devices. It is the first test solution to meet the specific needs of installation professionals at all skill levels. Providing a new, visually rich approach to testing, its intuitive capabilities enable rapid characterization, optimization, and troubleshooting of highly changeable and vulnerable home WiFi networks. It shows a whole-home view of real WiFi performance/throughput margin and can deliver easy-to-understand performance information directly to the end customer.

Troubleshooting and Optimization



Troubleshooting, Optimization, and Site Assessment



Key Benefits

- Improves QoE, reduces trouble calls and repeats
- Reduces mean-time-to-repair
- Assesses a wide range of end-user device classes
- Educates customers about true performance
- Enables test conformance and repeatability across your workforce

Key Features

- Site performance report educates customers
- TrueMargin™ optimizes WiFi site throughput
- Intuitive and easy user interface recommends best channel and optimization steps
- Highly-configurable radio supports 2.4 G 802.11b/g/n and 5 G 802.11a/n/ac up to 3x3 with MIMO
- Associates job- or work-ticket information with site assessment results for export to the cloud for storage and analysis

Applications

- WiFi troubleshooting and optimization
- Whole-home WiFi performance mapping and throughput analysis
- Wireless IPTV service installation
- End-user education

Troubleshooting and Optimization

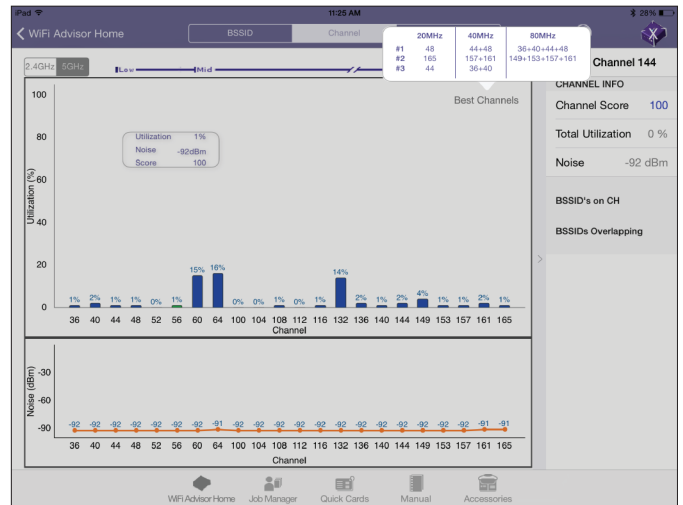
Using a single WFED-300AC device, users can quickly visualize, optimize, and troubleshoot WiFi networks with the BSSID, Channel, and Spectral views.

BSSID view provides quick visibility into active wireless networks and identifies the least-crowded channel to use for your access point. The application plots each in-range BSSID by channel and signal strength and identifies access points sharing a channel (co-channel interferers) or overlapping a channel (adjacent interferers) for each channel in the band. It also displays continuously-updated trend graphs of BSSID signal strength, noise, and channel utilization as the installer moves through the site.



Channel occupancy with BSSID view

Channel view finds the best channels for an access point by showing utilization, noise, co-channel interferers, adjacent channel interferers, and an overall channel score for each channel. Simply pressing the Best Channels button lists the top three channels for each channel width within the selected band.



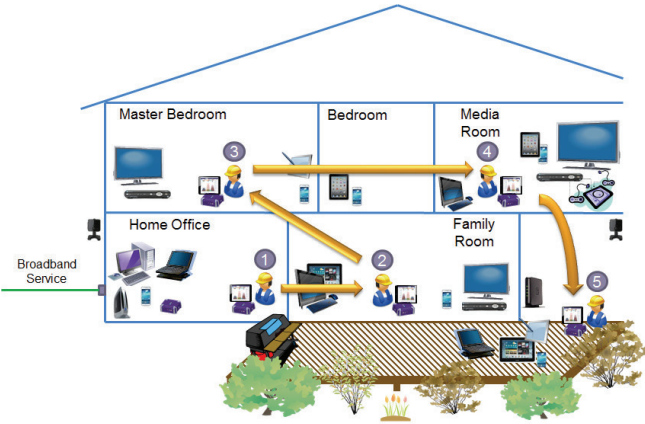
Channel view shows best channels

Spectral view shows damaging RF interference with a real-time spectral analyzer configurable by 802.11 band, channel, and channel width. It helps find interfering signals by showing all RF energy within a given channel/channel width of interest.



Spectral view shows interference within a channel

Site Assessment

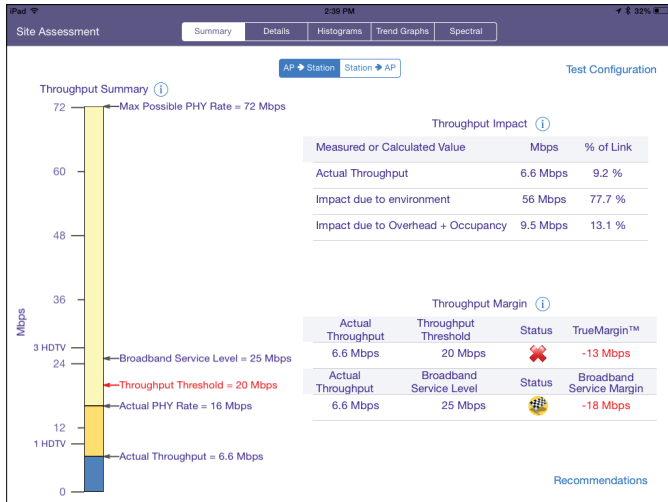


WiFi Advisor test architecture

Showing actual Layer 3 performance and determining the sources of loss throughout a site, the WiFi Advisor:

- Determines the maximum packet throughput capacity for a WiFi connection under test
- Provides visibility into factors impacting throughput
- Calculates throughput margin relative to the configured service level threshold

Actual Layer 3 throughput margin is the key factor for determining the tolerance of connections to changes in the WiFi and/or RF environment. A high throughput margin equates to a high WiFi resiliency and a reduced likelihood of call-backs and repeats. It is especially important when installing wireless IPTV service.

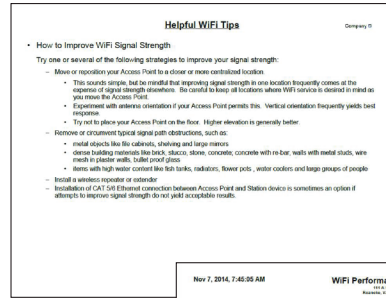


Site assessment analyze throughput and identifies slowdowns

Simple test profile configuration, guided test flows, and free-form test location sequencing make site assessment fast and easy, rapidly mapping WiFi performance across physical, link, and packet layers simultaneously. The test flow also allows for rapid “what if?” testing: if the end user wants to understand how a wireless set top box would work outside on the patio, it’s a simple matter to add that location to the test flow.

Educating Customers

Educating customers about their installed WiFi network is key to reducing callbacks and repeats. To this end, the WiFi Advisor gathers test results from all locations and all device profiles and creates a highly informative report that sets proper expectations. It can be e-mailed directly to the end user from the host application. The net result is a standardized approach to WiFi testing that thoroughly evaluates actual performance at each location of interest throughout the site and provides highly informative, leave-behind information.



Station Type / Name	Common Device Types
802.11bg adapter (2.4 GHz)	Commoned 802.11bg devices, such as USB adapters for PC's / laptops Phone: 3C3378
802.11n 1x1 adapter (2.4 GHz)	iPhone 4/5 Google Nexus S / Gion Amiconi Nexus HD E7
802.11n 1x1 adapter (5 GHz)	iPhone 4/5/GiGAC PHI T237/376i/Mini Apple TV Samsung Galaxy S3 Samsung Galaxy Tab 4 T.0
802.11n 2x2 adapter (5 GHz)	PHI T237 / 376i / Mini Google Nexus S Google Nexus E
802.11n: 1x1 adapter (5 GHz)	Samsung Galaxy S4 Samsung Galaxy Tab S 8.4 Samsung Galaxy Note 3 / Note 10.1 / Note Pro 10.1 Google Nexus S
802.11n: 2x2 adapter (5 GHz)	Galaxy S5 Samsung Galaxy Note Pro 12.2 Samsung Galaxy Tab S 10.5 Amiconi Nexus HD 9

Station Location	Station Type	Channel	Throughput (Mbps)	Signal Strength (dBm)	SNR (dB)	Link Loss (dB)	AP Power (dBm)	AP TX Power (dBm)	AP TX Power (dBm)
Home Office	802.11n 2x2 adapter (5 GHz)	36	6.6	-72	15	58	15	15	15
Home Office	802.11n 1x1 adapter (5 GHz)	36	6.6	-72	15	58	15	15	15
Home Office	802.11n 1x1 adapter (2.4 GHz)	11	6.6	-72	15	58	15	15	15
Home Office	802.11n 2x2 adapter (2.4 GHz)	11	6.6	-72	15	58	15	15	15

WiFi site assessment test summary

Specifications

WFED-300AC Test Device	
Supported 802.11 standards	2.4 GHz: b/g/n 5 GHz: a/n/ac
Number of streams	1x1, 2x2, and 3x3
Maximum achievable PHY rate	1.3 Gbps
Maximum UDP throughput	512 Mbps
Battery life	4 to 6 hours typical use
DC input voltage	+12 V DC ±2 V
Maximum DC input current	3 A
Connectors	1 mini USB 2.0 (device) 1 USB 2.0 Type A (host) 1 RJ45 Ethernet 10/100/1000M 12 V DC input
Unit height	65 mm
Unit width	177 mm
Unit depth	154 mm
Weight	0.82 kg
Humidity range	10% to 90% noncondensing
Operating temperature range	0 to +40°C
Storage temperature range	-30 to +60°C
Hazardous materials rating	RoHS-5
iOS Software Application	
Minimum iOS version	iOS 8.1.0
Minimum iPad hardware	iPad 2, 16 GB
Maximum number of stored job files	50

Ordering Information

Description	Part Number
WiFi Advisor standard package: WFED-300AC WiFi Advisor test device, carrying case, USB cable, AC power supply, and power cord	WFED300AC-1PC
WiFi Advisor installer package: two WFED-300AC WiFi Advisor test devices, carrying case, USB cable, two AC power supplies, and two power cords	WiFi Advisor installer package: two WFED-300AC WiFi Advisor test devices, carrying case, USB cable, two AC power supplies, and two power cords
WiFi Advisor test device – 802.11ac 3x3	WFED-300AC
WiFi Advisor case, two-device capacity	CC-000302
Power supply desktop AC three-pin connection	AD-21165101
USB cable 6 ft – USB to micro USB	SMARTID-USBCABLE-6FT
Lithium ion battery 4 cell, rechargeable	SCHMLIONBATT4
VSE interface (iPad Air, WiFi, 16 G)	VSE-INTERFACE



Contact Us **+1 844 GO VIAVI**
(+1 844 468 4284)

To reach the Viavi office nearest you,
visit viavisolutions.com/contacts.

© 2015 Viavi Solutions, Inc.
Product specifications and descriptions in this document are subject to change without notice.
wifiadvisor-ds-maa-nse-ae
30176043 900 0115