

## Datasheet: OneTouch™ AT G2 Network Assistant

### *Reduce access network deployment project risk and troubleshooting time*

*More than 70% of IT organizations lack standardized processes to validate deployment and solve problems. This results in more than 1 hour (average) to resolve problems. In addition, 40% of IT tickets are not solved the first time and require escalation. Intermittent problems can take twice as long to resolve.*

*By automating and standardizing the validation & troubleshooting process, the OneTouch AT Network Assistant empowers novice network technicians to validate performance easily, solve more problems faster, and escalate issues more efficiently – allowing more IT projects to be completed on time and with quality, freeing up engineer's time.*



### Empower IT professional teams to effectively validate, and troubleshoot Ethernet and Wi-Fi access networks

- **All-in-one:** a handheld tester combining infrastructure, network service and end-to-end path performance measurement in one tool
- **Versatile:** The OneTouch AT has a modular design: select the G2 module that has dual 10/100/1G copper/fiber Ethernet test ports and 802.11a/b/g/n/ac Wi-Fi radio, or the 10G module that has 100M/1/10G copper and fiber Ethernet test ports.
- **Standardize:** Network engineer can pre-program AutoTest profiles for field technician to choose that automatically run a suite of test with the press of a button, enabling identification of the most common problems in about a minute
- **Authoritative:** Measure end-to-end path performance prior and after the deployment of new services or network infrastructure to assess network readiness and post deployment to prove SLA compliance
- **Visibility:** Switched Ethernet and Wi-Fi discovery and analysis provides visibility and documentation into connected devices, key device properties and problems
- **Collaborative:** Engineers can take full remote control of the OneTouch to collaborate with on-site technicians and speed isolation of issues
- **VoIP ready:** The G2 Module troubleshoots desktop SIP/SCCP based VoIP problems in real-time with inline call monitoring, logging and scoring
- **Capture friendly:** Wired or Wi-Fi packet capture streamlines collaboration and escalation of the most complex issues. Capture wireline traffic using the G2 module's inline capture features avoids the need for SPAN port or TAP
- **Centralized Management:** The Link-Live.com cloud portal offers visibility to all of the test results and project progress from any NETSCOUT portable tools, LinkSprinter, LinkRunner AT, AirCheck G2 and OneTouch AT, when the tester is dispatched for troubleshooting or validating network installation or change projects. Test results can be organized by project and recalled as baseline. User can also remote control OneTouch AT from the cloud and remotely update software of all OneTouch AT units claimed by their organization

## OneTouch AT features

### Versatile copper, fiber and Wi-Fi troubleshooting

Be ready for a broad range of troubleshooting scenarios with the handheld OneTouch AT G2 Network Assistant. The tester incorporates dual copper and fiber optic test ports to facilitate troubleshooting of 10/100/1000 Mbps twisted pair and 100/1000 Mbps fiber Ethernet networks. The dual ports simplify inline packet capture and VoIP monitoring by eliminating the need for mirror ports or taps. For troubleshooting Wi-Fi networks the OneTouch AT G2 tester incorporates an 802.11ac dual-band Wi-Fi radio with a 3x3 antenna. When connected to both wired and Wi-Fi networks the tester displays test results side-by-side on a single page to aid in problem domain isolation.

The OneTouch AT Network Assistant has a modular design. A 10G module is available for testing wired 100Mbps to 10Gbps Ethernet switch port and link performance at up to 10Gbps rate.

### All-in-one testing from the patch cable & Wi-Fi to the cloud

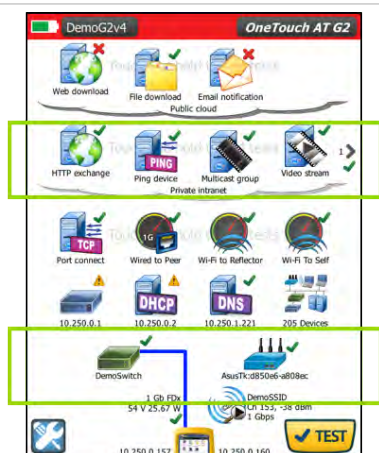
When validating and troubleshooting the access network, one needs to test from where the client device is connected to the network—where the device could be a PC, tablet, smart phone, IP phone, printer, POS terminal, industrial equipment controller, a medical imager etc. The OneTouch AT can prove that the network is good —by emulating the client device and measuring network performance. It measures, analyzes and documents the performance of each the critical network elements: the network cabling, the delivery of Power over Ethernet (PoE), the connection to the nearest switch, the connection to the nearest access point, and the performance of key network services and server-based applications in the intranet, and cloud or internet.

### Standardized network validation and troubleshooting

Use the intuitive touch interface and the Setup Wizard to create test profiles, where a profile is a set of tests, tailored to specific networks, services, and applications. Build profiles to accommodate different types of users, devices, locations or technologies. Profiles can be very simple with just a few tests or advanced with dozens of tests. Once created, profiles can be saved for quick and easy reuse. Create a library of standardized profiles to elevate the troubleshooting know-how of the entire network support staff. Share profiles with other OneTouch AT users. Use the profiles to establish best practices for consistent, faster, more productive troubleshooting and network acceptance testing.

## Automated suite of test with pass/fail analysis

Test everything defined in a profile automatically with the one button AutoTest. The AutoTest progresses from the physical layer of the network through the wired and wireless infrastructure, to network services and user-defined applications. Clear pass/fail and warning indicators highlight potential problems. A top-level pass/fail indicator provides the overall AutoTest status at a glance.



### User defined Performance Tests

Connectivity & response time test to application/servers, and performance test to end-point(s) in all three network layers: the local broadcast domain, the private intranet and the public cloud (Internet).

### Client network Analysis

Cable & nearest switch test, Wi-Fi network accessibility test, Wired and Wi-Fi access network/device discovery & network service tests: DHCP & DNS & 802.1x

Figure 1. The AutoTest provides a comprehensive measurement of network performance from the end user point-of-view, from cable to services and applications (Test result from OneTouch AT with G2 Modules for both Wired and Wi-Fi network shown)

## Centralize Cloud-based management

Organizations can claim their OneTouch AT units to the Link-Live.com cloud portal. Claimed units will be visible from the cloud portal as long as they are connected to the internet. They can be remotely managed when and where convenient using a smart device through its web browser. Users can upload test results, download latest software and test profiles, and remote control their OneTouch AT. Users can view and analyze test result on the cloud portal.

## Centralize report management

Link-Live.com supports storing and viewing of test results from other NETSCOUT handheld network test products, such as LinkSprinter, LinkRunner AT, and AirCheck G2. After each test, test results and reports from these test units can be exported and stored to Link-Live.com. A user can setup such that an email will be sent to the operator of the OneTouch so that he can enter comments, such as test location, and/or upload picture(s) of the test environment. Multiple parties can access the Link-live Cloud Portal over the web at anytime from anywhere using a smart device or PC via a web browser. Free-string match search, and filter condition make it easy to locate the test report(s) of interest by text in comment or the test result.

Time	Test	PoE	Link	Access	DHCP	Gateway	WWW
Apr 25 '15 Wednesday 4:23:17pm	Name: 000017-C200E9 Device: OneTouchAT Profile: SE Training Test Type: wireless AutoTest: 90917ed Images: 0 Comments: 0	802.11 Type: n PHY Data Rate: 72222 Signal (dBm): -48 Noise (dBm): -99 SNR (dB): 51	SSID: Cisco4400 AP Name: Cisco1252-3Cart BSSID: Cisco001748-e101d1 Channel: 1 Channel Util: 14% Non-802.11 URB: 3%	IP: 10.250.9.79 Subnet: 255.255.254.0 DNS1: 10.250.1.221 DNS2: 129.196.196.24 DNS Lookup (ms): 1	IP: 10.250.8.1 Subnet: 255.255.254.0 DNS1: 10.250.1.221 DNS2: 129.196.196.24 DNS Lookup (ms): 1	IP: 10.250.1.221 Subnet: 255.255.254.0 DNS1: 10.250.1.221 DNS2: 129.196.196.24 DNS Lookup (ms): 1	TCP: 10.250.1.221:80 IP: 10.250.1.221 Time (ms): 87 Web: www.sallix.com IP: 10.250.1.221 Time (ms): 1 Data/Total Txfer (ms): 172 / 701 Rate (bps): 3077148 Web: www.sallix.com IP: 10.250.1.221 Time (ms): 1 Data/Total Txfer (ms): 172 / 701 Rate (bps): 3077148 Web: www.sallix.com IP: 10.250.1.221 Time (ms): 1 Data/Total Txfer (ms): 172 / 701 Rate (bps): 3077148
Apr 25 '15 Wednesday 4:23:17pm	Name: 000017-C200E9 Device: OneTouchAT Profile: SE Training Test Type: wireless AutoTest: 90917ed Images: 0 Comments: 0	802.11 Type: n PHY Data Rate: 72222 Signal (dBm): -48 Noise (dBm): -99 SNR (dB): 51	SSID: Cisco4400 AP Name: Cisco1252-3Cart BSSID: Cisco001748-e101d1 Channel: 1 Channel Util: 14% Non-802.11 URB: 3%	IP: 10.250.9.79 Subnet: 255.255.254.0 DNS1: 10.250.1.221 DNS2: 129.196.196.24 DNS Lookup (ms): 1	IP: 10.250.8.1 Subnet: 255.255.254.0 DNS1: 10.250.1.221 DNS2: 129.196.196.24 DNS Lookup (ms): 1	IP: 10.250.1.221 Subnet: 255.255.254.0 DNS1: 10.250.1.221 DNS2: 129.196.196.24 DNS Lookup (ms): 1	TCP: 10.250.1.221:80 IP: 10.250.1.221 Time (ms): 87 Web: www.sallix.com IP: 10.250.1.221 Time (ms): 1 Data/Total Txfer (ms): 172 / 701 Rate (bps): 3077148 Web: www.sallix.com IP: 10.250.1.221 Time (ms): 1 Data/Total Txfer (ms): 172 / 701 Rate (bps): 3077148

Figure 2. Link-live consolidate test results from OneTouch AT and other NETSCOUT Handheld Network Test products.

## Remote visibility, control and file access

Use the built-in RJ-45 management port or optional USB Wi-Fi adapter to remotely control the OneTouch AT and access saved files. Any action that can be performed directly on the OneTouch AT using the touch screen can be performed remotely using a PC, laptop, tablet or smart phone. Minimize the time, expense and inconvenience of traveling to the client location where the problem was reported. Webcam support enables live, remote viewing of the physical environment near the tester. Remote control of units via the Cloud Service also allows traversal of NAT devices, which is very advantageous when troubleshooting from outside the office.

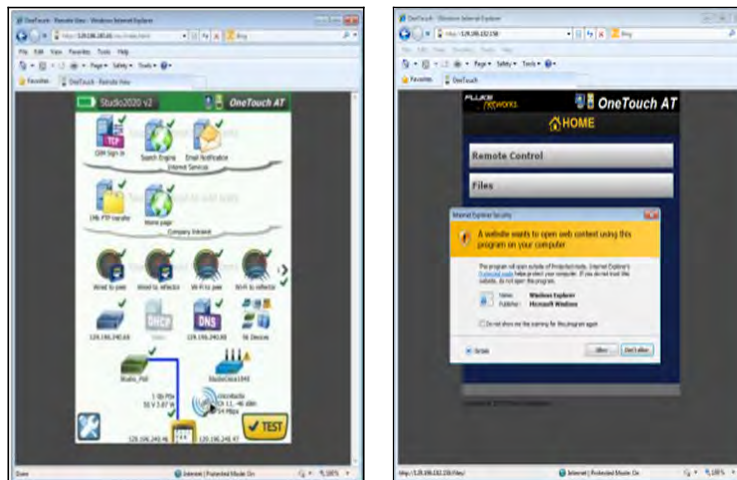


Figure 3. Remotely control the OneTouch AT and access saved files using a PC, laptop, tablet or smart phone

## Test Features

### Copper and fiber optic cable testing

Troubleshoot cable performance quickly by measuring twisted pair cable wiremap and length. Use cable identifiers and tone probe, such as Fluke Networks Intellitone™, to locate and identify cables. Measure the optical power received through fiber optic links. Verify the cleanliness of fiber optic connections by viewing connector end faces with the optional USB video probe, such as Fluke Networks FiberInspector™.

### PoE testing (Supported with OneTouch AT G2 Module)

Verify the successful delivery of PoE with the TruePower™ load test. Emulate an 802.3at (PoE+) class 1-4 powered device and measure power up to 25.5 watts. See the requested and received PoE class, the pairs used, the PSE type, measured PoE voltage unloaded and under load, and PoE power under load.

### Wi-Fi and wired client devices connectivity testing

Understand how a client device connects to the wired infrastructure by testing link negotiation, identifying the nearest switch, and monitoring key switch port statistics. The OneTouch AT with G2 Module tests IEEE 802.11a, .11b, .11g, .11n and .11ac Wi-Fi networks. It shows understand how a client device connects to the Wi-Fi infrastructure by testing the link between the client and the nearest access point, identifying the AP name, channel and security type, observing the authentication and association process, and monitoring key AP and network statistics, including roaming details by AP. For Wired client, the OneTouch AT with G2 Module tests 10/100/1000BASE-T twisted pair and 100BASE-FX/1000BASE-X fiber optic Ethernet networks, while the OneTouch AT with 10G Module test RJ-45 test port for 100/1000/10GBASE-T and 1000 BASE-X SFP/10 G BASE-SR/LR SFP+ Ethernet over optical fiber Network.

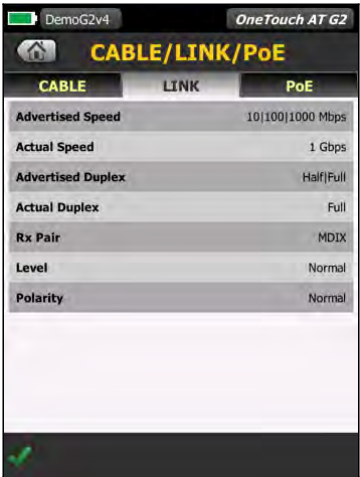


Figure 4. Test link speed over twisted pair and fiber optic links at rates up to 1Gbps and measure POE voltage with the G2 Module

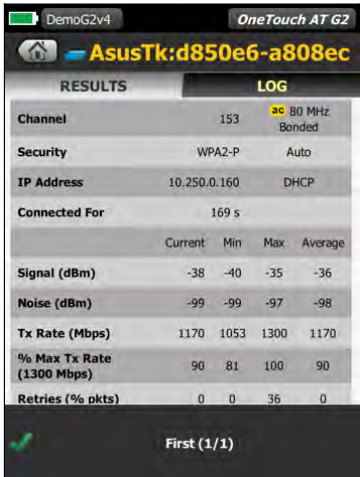


Figure 5. Test a Wi-Fi connection at up to 802.11ac rates and verify channel width, signal and noise level.

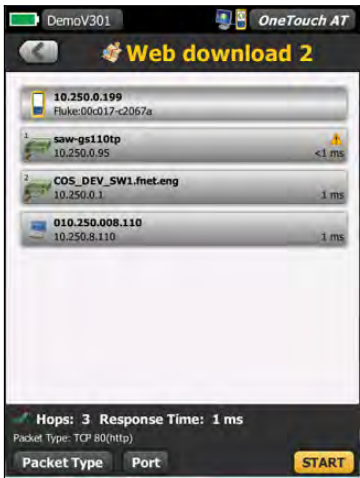
## Network services testing

Test DHCP server responsiveness. Identify the wired and Wi-Fi DHCP servers and view the offer and acceptance timing and the lease information. Test DNS server responsiveness. Identify the wired and Wi-Fi DNS servers and view the DNS lookup time. Also, determine if a second DHCP address is being offered. If unexpected or is a potential rogue server, use the path analysis tool - a layer 2 and layer 3 trace route - to track down the device to mitigate a problem situation.



SETUP		RESULTS	
IPv4	Wired	Wi-Fi	
Server IP	10.250.0.2	10.250.0.2	
Server Name	cos_dev_sw1.finet.eng	cos_dev_sw1.finet.eng	
Offer	10.250.1.137	10.250.1.143	
Offer Time	44 ms	65 ms	
Accept	10.250.1.137	10.250.1.143	
Total Time	48 ms	68 ms	
Subnet	255.255.254.0	255.255.254.0	
Subnet ID	10.250.0.0 / 23	10.250.0.0 / 23	
Lease Time	24 h	24 h	
Expires	05/22/2013 9:07:25 am	05/22/2013 9:07:28 am	

Figure 6. Detailed breakdown of DHCP provisioning and response performance



Web download 2	
10.250.0.199	Fluke:00:0D:17:C2067a
1 saw-gs110tp	10.250.0.95 <1 ms
2 COS_DEV_SW1.finet.eng	10.250.0.1 1 ms
010.250.008.110	10.250.8.110 1 ms

Hops: 3 Response Time: 1 ms  
Packet Type: TCP 80(http)  
Packet Type Port START

Figure 7. Path Analysis showing the path through switches from OneTouch to a client.



## Network application testing

Determine if a server-based application is the root cause of a reported problem by measuring availability and response metrics. Add to the AutoTest profile the performance test appropriate for the application: ping (ICMP), connect (TCP), web (HTTP), file (FTP), multicast (IGMP), video (RTSP) or email (SMTP). Each test is graphically represented on the OneTouch AT home page as an icon. After running the AutoTest, touch a test icon on the home page to get a detailed breakdown of application performance including DNS lookup time, server response time and data rate. The test results are presented side-by-side for easy wired/Wi-Fi and IPv4/IPv6 performance comparisons. A few examples: ping your WLAN controller, connect to port 2000 on your VoIP call manager, download a page of an application with a web interface, upload or download a file from a server, subscribe to a multicast group, access video content from an on-demand streaming video server or email a text message to your mobile phone.

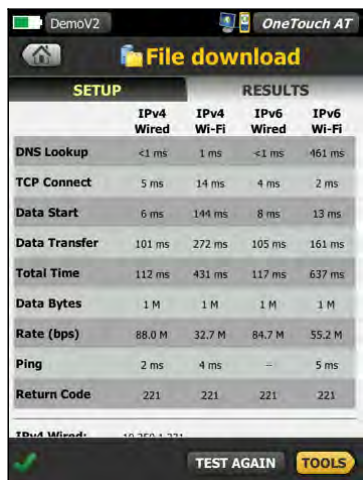


Figure 8. Detailed breakdown of network-hosted application performance

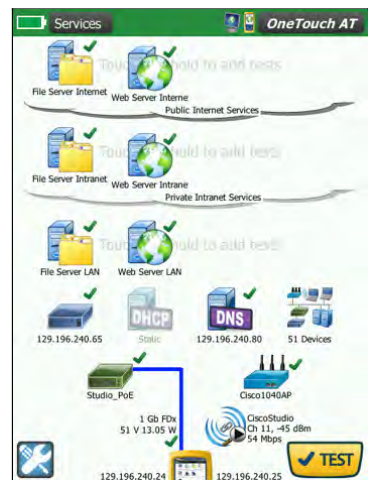


Figure 9. Group tests by hosting location – local, intranet, internet



## Local, intranet and internet performance

Understand the performance of network services and server-based applications wherever they are hosted: locally in the datacenter, on a corporate intranet server or on a server reached via the public internet. Create location centric AutoTest profiles by grouping together co-located services and applications. Measure service levels to the different groups to quickly spot problems.

Enterprise network managers use the Wired Performance tests for:

- Assessing network performance prior to deployment of new services or network infrastructure
- Validating the performance of newly installed network infrastructure and critical network links within the LAN or data center
- Troubleshooting network and service performance problems
- Verifying independently that service providers are meeting agreed upon service levels (SLAs) and maintaining QoS end-to-end

Service providers and system integrators use the Wired Performance tests for:

- Documenting network performance from layer 1 to 7 where the documentation serves as proof that the services they provided were delivered successfully
- Providing value-added service to their enterprise customers in the form of network assessments and troubleshooting

## 1G and Wi-Fi End-to-end path performance measurement

Ensure that newly installed or upgraded wired and Wi-Fi networks meet SLA objectives and are ready for new high-bandwidth applications by measuring end-to-end path performance. Measure throughput, frame loss, latency and jitter between a local OneTouch AT G2 connected to Wi-Fi or wired client network, and a remote OneTouch AT peer or a remote LinkRunner reflector connected to the end of path to test. A remote peer provides upstream and downstream results while a remote reflector yields round trip results. Measure performance at rates up to 1 Gbps on copper and fiber networks and 600 Mbps on Wi-Fi networks. A special use model exists that enables testing from the OneTouch AT wired interface to the Wi-Fi interface on the same instrument for testing without a remote.

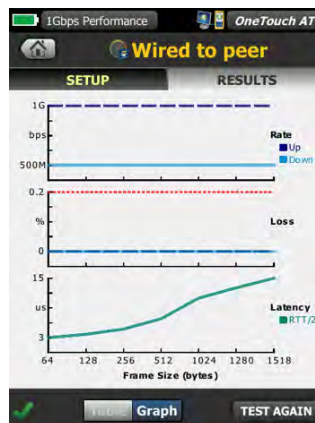


Figure 10. End-to-end path performance measurement validates link readiness and SLA compliance

The OneTouch AT with G2 Module will be located at one end. There are options for the test instrument to be located at the other end of the link. The OneTouch AT with G2 Module also support loop back testing to itself from its Wire to its WiFi interface.



	Remote Tester (End-Point)	
OneTouch AT G2 as local	LinkRunner AT 2000	OneTouch AT G2 (wired)
< 600Mbps Wi-Fi	✓	✓
≤ 1 Gbps rate	✓	✓
1 traffic stream	✓	✓
IETF RFC 2544 test method	✓	✓
Round trip results	✓	
Bi-directional results		OneTouch AT G2 (wired)
Frame loss, latency, jitter	✓	✓

10G End-to-end path performance measurement

The OneTouch AT with 10G Module features 10G and 1G Wired Performance tests for validating and troubleshooting end-to-end network path performance. These Wired Performance tests facilitate measurement of throughput, frame loss, latency and jitter across wide area networks, local area networks and within sites and datacenters.

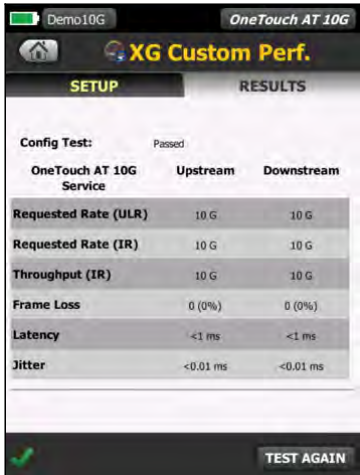


Figure 11. Detailed breakdown of XG custom performance



Figure 12. Detailed breakdown of wired to peer performance

The OneTouch AT with 10G module will be located at one end. There are options for the test instrument to be located at the other end of the link.



OneTouch AT 10G



LinkRunner AT



OneTouch AT G2



OneTouch AT 10G



OptiView XG

	Remote Tester (End-Point)			
OneTouch AT 10G as local	LinkRunner AT 2000	OneTouch AT G2	OneTouch AT 10G	OptiView XG
≤ 1 Gbps rate	✓	✓	✓	
1 traffic stream	✓	✓	✓	
IETF RFC 2544 test method	✓	✓	✓	
Round trip results	✓			
Bi-directional results		✓	✓	
Frame loss, latency, jitter	✓	✓	✓	
≤ 10 Gbps rate				✓
≤ 4 traffic streams				✓
ITU Y.1564 test method				✓
Throughput, availability, information rate, burst rate				✓
Class of service testing, traffic policing				✓

## Wired network discovery and analysis

Automatically discover copper and fiber-connected devices and key device properties. Select from among fourteen different sorts to obtain different views into the wired network. For example, sort by IPv4 or IPv6 address to identify used and available addresses. Or sort by switch name/slot/port to understand where on the network devices are connected. Sort by discovered problems to quickly identify potential issues. Additional discovery-assisted analysis tools aid with troubleshooting and profile creation. For example, the Multiport Statistics tool provides visibility into switch, router and AP port statistics including speed, duplex, slot, port, VLANs, host count, utilization, discards and errors. The Devices on Port tool provides visibility into the devices connected to an individual switch port. The Path Analysis tool provides a layer 2 and 3 trace route from the OneTouch AT to a target device including time to each hop and SNMP switch and router port statistics.

## Wi-Fi discovery and analysis (supported by OneTouch AT with G2 Module)

Automatically discover Wi-Fi devices and key device properties. Select from among twenty context-relative sorts to obtain different views into the wireless network. For example, sort by signal strength to troubleshoot Wi-Fi coverage issues. Sort by MAC manufacturer to discover Wi-Fi devices by type and to understand how they are connected relative to SSID, AP and channel. Sort by channel to identify channel spacing and usage problems. Sort by authorization status to find potential security violations. Additional discovery-assisted analysis tools aid with troubleshooting and security enforcement. If a Wi-Fi device is also discovered via Wired Analysis, the Cross Link feature enables one-button toggling between wired and Wi-Fi analysis views.

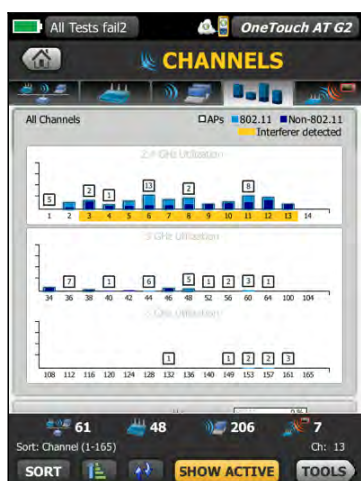


Figure 13. Analyze Wi-Fi health by each available channels.



Figure 14. Visibility into each Wi-Fi channel, showing bandwidth occupied by 802.11 and non-802.11 traffic

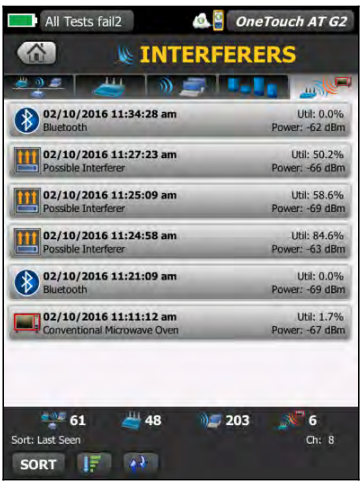


Figure 15. Unique Interferer analysis classify sources of non-802.11

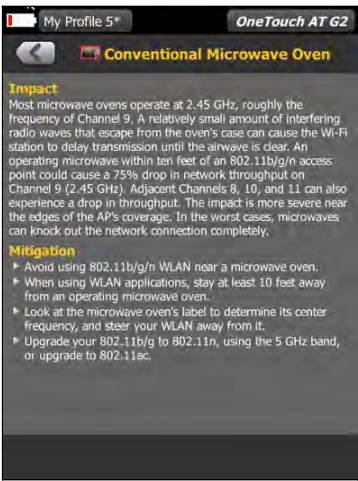


Figure 16. Explanation of non-802.11 sources and how to mitigate

Inline VoIP analysis (Supported by OneTouch AT G2 Module only)

Connect the OneTouch AT inline between an IP phone and the network for real-time troubleshooting and analysis. The VoIP analysis test reveals issues related to PoE, DHCP, TFTP, SIP, and SCCP. The test provides visibility into unencrypted SIP and SCCP traffic to debug VoIP phone problems and quantify the quality of a VoIP call. Simultaneous capture of the VoIP conversation is optional.



Figure 17. Inline VoIP analysis simplifies troubleshooting of desktop VoIP problems in real-time without TAPs or switch mirror ports



Figure 18. VoIP Analysis shows the entire call setup process as well as quality of the VoIP call in each direction

## Packet capture

Capture wired and AutoTest traffic when a packet-level view is required to solve a complex network or application issue. Filter the traffic to capture what is most important. Export the capture file to a PC for decoding and analysis using protocol analysis software. Capture wired traffic on a single port, on two ports aggregated, or inline between a client device and the network. Inline capture avoids the complexity, time and cost associated with standalone taps or configuring switch mirror ports. The OneTouch AT with G2 Module can capture VoIP traffic, and Wi-Fi traffic by channel and mode (20 MHz or 40 MHz+).



Figure 19. Inline packet capture simplifies documentation of client application problems without TAPs or SPAN ports

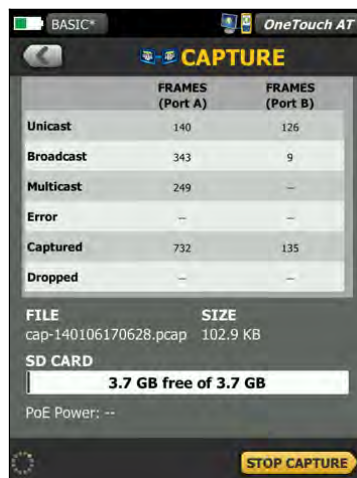


Figure 20. Capture packets to solve complex issues

## Streamline collaboration

Collaborate with peers, consultants, integrators and vendors more effectively by sharing packet captures, screen shots and AutoTest reports. Remotely control and view the user interface and remotely access files using a PC, tablet or smart phone. Attach a web cam to the OneTouch AT to share a view of the test environment.

## Save test results

Save the test results to share with colleagues or outside parties. A report serves as trouble ticket documentation, as a record of historical performance for benchmarking or as a certification report after new infrastructure deployment and turn up. Define which test results to include in the report (AutoTest, Wired Analysis, Wi-Fi Analysis, Tools Settings, and VoIP Analysis) and the report format (PDF, XML). Open the results in a spreadsheet for flexibility in results analysis.



## Setup wizard

Simplify AutoTest profile creation while learning about the tester's capabilities by running the Setup Wizard. The wizard simplifies profile creation with step-by-step guided instructions, yes/no prompts, on-screen help and graphical progress indicators. Experienced users can bypass the wizard if desired.

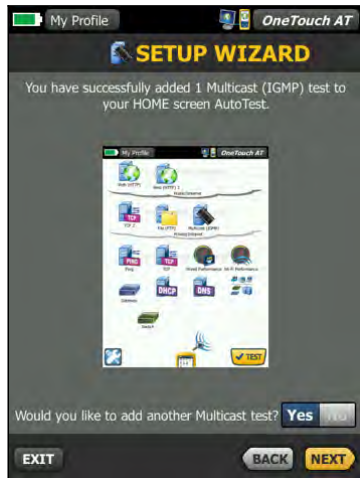


Figure 21. Setup Wizard simplifies creation of AutoTest profiles



Figure 22. Detailed breakdown of network service performance

## Purpose-built for use by field team

The OneTouch AT is engineered specifically for network support professionals on the go. Useful test and management tools include a web browser, Telnet/SSH client, cable toner, webcam support and optional fiber optic connector inspection camera. Remote control over web-browser enable collaboration between field team and skilled engineering resources in back-office. The durable platform provides years of reliable operation in tough environments.

## Gold Support

Protect your investment with Gold Support. Gold Support benefits include free software upgrades and MIB updates, unlimited priority repair service with loaner units, annual factory performance verification, free accessory replacement and 24x7 technical support with priority members-only access numbers.

## Technical Specifications

General	
Dimensions (with module and battery installed)	10.3 in x 5.3 in x 2.9 in (26.2 cm x 13.5 cm x 7.3 cm)
Weight (with module and battery installed)	3.5 lb. (1.6 kg)
Display	5.7 in (14.5 cm) LCD with projected capacitance touch screen, 480 x 640 pixels
AC adapter	Input: 100-240 VAC, 50-60 Hz, 1.0 A Output: +15 VDC, 2.0 A
Battery type	Lithium ion battery pack, 7.2 V
Battery life	Approximately 3-4 hours depending on type of usage, 4 hours to charge from 10% capacity to 90% capacity with the unit powered off
Memory	Internal: 2 GB shared between system and user files SD card: 4/8 GB, brand and model selected for optimal performance USB 2.0 type A port: for use with USB mass storage devices
Management port	One RJ-45 10/100BASE-T Ethernet One USB 802.11 (requires optional adapter)

G2 Module Network Interfaces	
Network analysis ports	Two RJ-45 10/100/1000BASE-T Ethernet Two SFP 100BASE-FX/1000BASE-X Ethernet
Wi-Fi adapter data rate	802.11a: 6/9/12/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/24/36/48/54 Mbps 802.11n (20 MHz): MCS0-23, up to 216 Mbps 802.11n (40 MHz): MCS0-23, up to 450 Mbps 802.11ac (80 MHz): MCS0NSS1-MCS9NSS3, up to 1.3 Gbps
Wi-Fi adapter operating frequency	2.412 ~ 2.484 GHz (Industrial Scientific Medical Band) 5.170 ~ 5.825 GHz
Wi-Fi security	64/128-Bit WEP Key, WPA/WPA2 personal, WPA/WPA2 enterprise, 802.1X

## 10G Module Network Interfaces

Network analysis ports	100/1000/10 G BASE-T RJ-45 Ethernet over twisted pair 1000 BASE-X SFP/10 G BASE-SR/LR SFP+ Ethernet over optical fiber
Management port	One RJ-45 10/100 BASE-T Ethernet One USB 802.11 (requires optional adapter)
Supported network standards	IEEE 100 BASE-T, IEEE 1000 BASE-T, IEEE 10 G BASE-T, IEEE 1000 BASE-X, IEEE 10 GB BASE-SR, IEEE 10 G BASE-LR
RFCs and standard MIBs used	1213, 1231, 1239, 1285, 1493, 1512, 1513, 1643, 1757, 1759, 2021, 2108, 2115, 2127, 2233, 2495, 2515, 2558, 2618, 2737, 2790, 2819, 3592, 3895, 3896, 4188, 4502.

*Note: The OneTouch AT analyzer is NOT designed for connection to a telephone network, ISDN line. Do not connect to a telephone network or ISDN line except through a regulatory agency compliant computer network modem device.*





## Copper Cables Test

Cable types	100 $\Omega$ Unshielded Twisted Pair (UTP) LAN cables. 100 $\Omega$ Shielded or Screened Twisted Pair (STP) LAN cables. TIA Category 3, 4, 5, 5e, and 6. ISO Class C, D, E and F.		
Cable length measurement	Measurable cable lengths are from 3 feet (1 meter) to 656 feet (200 meters).	Accuracy: $\pm$ 30 feet ( $\pm$ 10 meters).	Length measurement is based on Nominal Velocity of Propagation (NVP) for CAT 5e cable.

## Environmental and Regulatory

Operating temperature	32°F to 122°F (0°C to 50°C)
Battery charging temperature	32°F to 104°F (0°C to 40°C)
Storage temperature	-40°F to 160°F (-40°C to 71°C) -4°F to 122°F (-20°C to 50°C) for periods longer than 1 week
Operating relative humidity (% RH without condensation)	5% to 45% at 32°F to 122°F (0°C to 50°C) 5% to 75% at 32°F to 104°F (0°C to 40°C) 5% to 95% at 32°F to 86°F (0°C to 30°C)
Shock and vibration	Meets the requirements of MIL-PRF-28800F for Class 3 Equipment
Safety	CAN/CSA-C22.2 No. 61010-1-04, IEC 61010-1:2001
Operating altitude	13,123 ft (4,000 m), 10,500 ft (3,200 m) with AC adapter
Storage altitude	39,370 ft (12,000 m)
Pollution degree	2
EMC	EN 61326-1:2006

## Certifications and Compliance

	Conformite Europeene. Conforms to the requirements of the European Union and the European Free Trade Association (EFTA).
	Listed by the Canadian Standards Association.
	Conforms to relevant Australian standards.
	Conforms to relevant South Korean EMC Standards.

## Models, Options and Accessories

Mainframes:	
Model	Description
1TG2-1500	ONETOUCH AT G2 ETHERNET TESTER
1TG2-3000	ONETOUCH AT G2 ETHERNET WI-FI TESTER
1T10G-1000	ONETOUCH AT 10G ETHERNET TESTER

### Gold Support:

One year and three year gold support is available for mainframes, bundles and upgrades. We encourage customers to purchase Gold Support at the time of purchase. Purchase of Gold Support after product was shipped will be subjected to back-date charge. Please contact your nearest NETSCOUT sales representative for model and pricing.

Item	Description
1TG2-1500-1YS	1 Year Gold Tools Support for 1TG2-1500
1TG2-1500-3YS	3 Year Gold Tools Support for 1TG2-1500
1TG2-3000-1YS	1 Year Gold Tools Support for 1TG2-3000
1TG2-3000-3YS	3 Year Gold Tools Support for 1TG2-3000
1T10G-1000-1YS	1 Year Gold Tools Support for 1T10G-1000
1T10G-1000-3YS	3 Year Gold Tools Support for 1T10G-1000

## Options & Accessories:

Model	Description
1TG2-3000-MOD	1TG2-3000-MOD,ONETOUCH AT G2 ETHERNET WI-FI TEST MODULE
1T10G-1000-MOD	1T10G-1000-MOD,ONETOUCH AT 10G ETHERNET TEST MODULE
1TG2-ETH-OPT	1TG2-ETH-OPT,ONETOUCH AT G2 ETHERNET UPGRADE
1TG2-WIFI-OPT	1TG2-WIFI-OPT,ONETOUCH AT G2 WI-FI UPGRADE
1T-ANT	1T-ANT,ONETOUCH AT EXTERNAL DIRECTIONAL ANTENNA
SFP-1000LX	SFP-1000LX,LX GIG FIBER DDM SFP TRANSCEIVER
SFP-1000SX	SFP-1000SX,SX GIG FIBER DDM SFP TRANSCEIVER
SFP-1000ZX	SFP-1000ZX,ZX GIG FIBER DDM SFP TRANSCEIVER
SFP-100FX	SFP-100FX,100BASE-FX FIBER DDM SFP TRANSCEIVER
WIREVIEW 1	WIREVIEW 1,WIREVIEW WIREMAPPER #1
WIREVIEW 2-6	WIREVIEW 2-6,WIREVIEW CABLE ID SET 2 THRU 6

## Bundles:

Model	Description
1TG2-1500/GLD	1TG2-1500/GLD,ONETOUCH AT G2 1500 AND 1 YR GOLD SUPPORT
1TG2-3000/GLD	1TG2-3000/GLD,ONETOUCH AT G2 3000 AND 1 YR GOLD SUPPORT
1T10G-1000/GLD	1T10G-1000/GLD,ONETOUCH AT 10G 1000 AND 1 YR GOLD SUPPORT
1TG2-3000-1T10G1M	1TG2-3000-1T10G1M,ONETOUCH AT G2 3000 AND ONETOUCH AT 10G 1000 MODULE
1TG2-1500-LRAT2	1TG2-1500-LRAT2,ONETOUCH AT G2 1500 AND LINKRUNNER AT 2000
1TG2-3000-LRAT2	1TG2-3000-LRAT2,ONETOUCH AT G2 3000 AND LINKRUNNER AT 2000
1TG2-1500-2PK	1TG2-1500-2PK,ONETOUCH AT G2 1500 2-PACK

## Gold Support for Bundles:

Model	Description
1TG2-1500-2PK-1YS	1 Year Gold Tools Support for 1TG2-1500-2PK
1TG2-1500-2PK-3YS	3 Year Gold Tools Support for 1TG2-1500-2PK
1TG2-1500-LRAT2-1YS	1 Year Gold Tools Support for 1TG2-1500-LRAT2
1TG2-1500-LRAT2-3YS	3 Year Gold Tools Support for 1TG2-1500-LRAT2
1TG2-30001T10G1M-1YS	1 Year Gold Tools Support for 1TG2-3000-1T10G1M
1TG2-30001T10G1M-3YS	3 Year Gold Tools Support for 1TG2-3000-1T10G1M
1TG2-3000-LRAT2-1YS	1 Year Gold Tools Support for 1TG2-3000-LRAT2
1TG2-3000-LRAT2-3YS	3 Year Gold Tools Support for 1TG2-3000-LRAT2