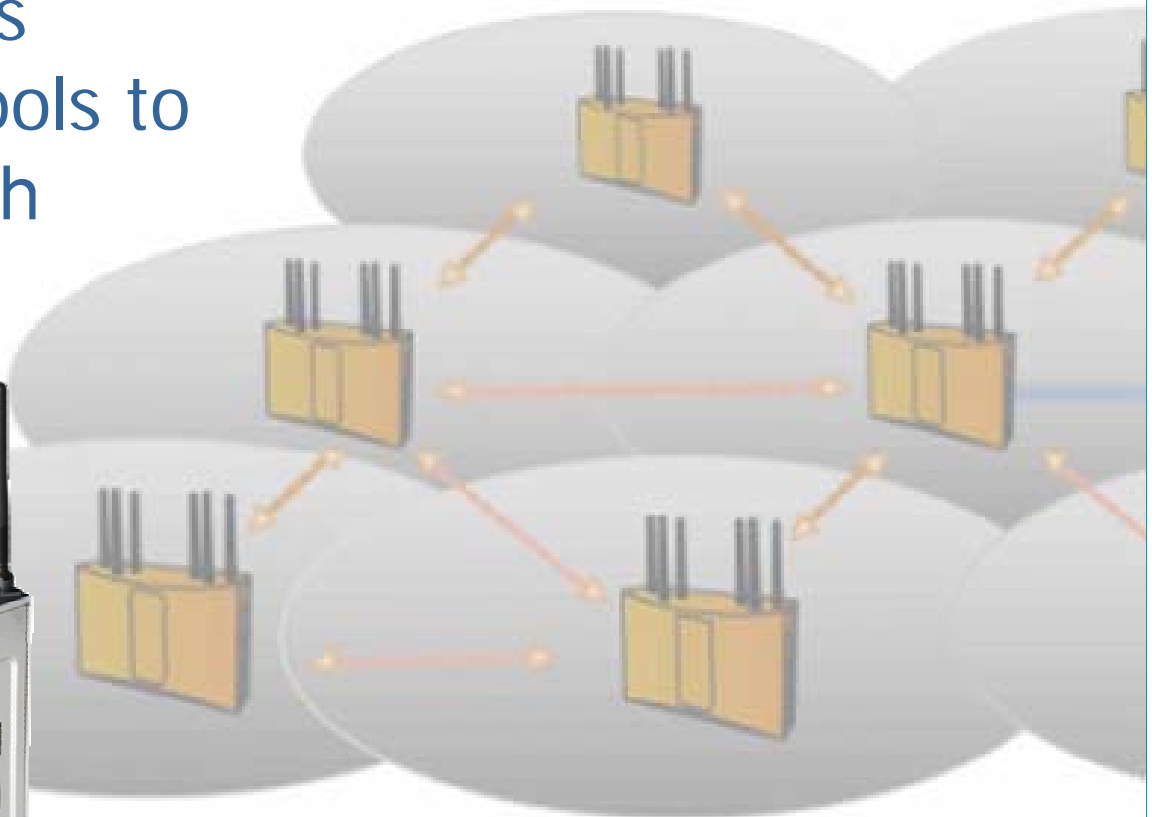


# Application Note: MIMO Switch AP

## Centralized RF Management

AeroGuard™ provides embedded graphic tools to Monitor wireless Mesh conditions.



108Mbps Wireless Mesh Backhuls



# Introduction

AeroGuard™ MIMO includes embedded WLAN Switch functions in each AP. When enabled, a MIMO Switch AP can provide the following RF statistics and monitoring data:

- Backhaul Mesh performance.
- AP to Client performance
  - Signal quality
  - Signal strength
  - Data rate

# Trunk Performance Monitoring

## MIMO Wireless Backhaul Mesh

Access Point 10.32.73.101 - Microsoft Internet Explorer

Address: https://10.32.73.101/aniWebUIMain.html

**SOHware** AeroGuard AGN1200 Series Access Point AP Explorer

LINK CRITERIA | CANDIDATE APs | TRUNK TABLE | **TRUNK STATS**

Wireless Services | Backhaul Configuration | Trunk Statistics

Below are details pertaining to wireless backhaul operating statistics on a radio interface basis.

**Trunk Statistics Table**

<input type="checkbox"/>	Interface	Rx Bytes	Rx Pkts	Tx Bytes	Tx Pkts	Rx Multicast Pkts
<input type="checkbox"/>	wlan0.tk0	35859669	114329	16362519	88626	54455
<input type="checkbox"/>	wlan0.tk1	8982381	25348	8097301	41047	12131

CLEAR STATISTICS

From the AeroGuard Switch AP, locate the 'Trunk Stats' tab for wireless backhaul statistics.

Available statistics:  
Rx – bytes & packets  
Tx – bytes & packets.

# Radio Diagnostics

The screenshot shows the SOHOWare interface for an AeroGuard AGN1200 Series Access Point. The left sidebar contains a navigation menu with categories: AP Quick Start, System Services, Wireless Services, Networking Services, and Alarms. The 'Radio Diagnostics' option is highlighted with a red arrow. The main content area is titled 'AeroGuard AGN1200 Series Access Point AP Explorer' and has a 'LINK TEST' tab selected. Below the tab is a text box explaining the Link Test facility. A table titled 'Link Test Table' contains one entry for 'wlan1'. At the bottom, there are buttons for 'ADD', 'DELETE', 'STOP', and 'GRAPH', with the 'GRAPH' button circled in red.

**SOHOWare** AeroGuard AGN1200 Series Access Point AP Explorer

LINK TEST WALK TEST HELP

Wireless Services | Radio Diagnostics | Link Test

The Link Test is a facility to test radio link between an AP and a Station. This report lists all the current link-tests and their state which are running on this AP. It provides tools to add, delete or stop existing link tests and to graph data of a specific link test.

Interface	Station/Trunk MAC	Packet Size	Test Duration	A
wlan1	00:11:f5:46:18:aa	128	360	1

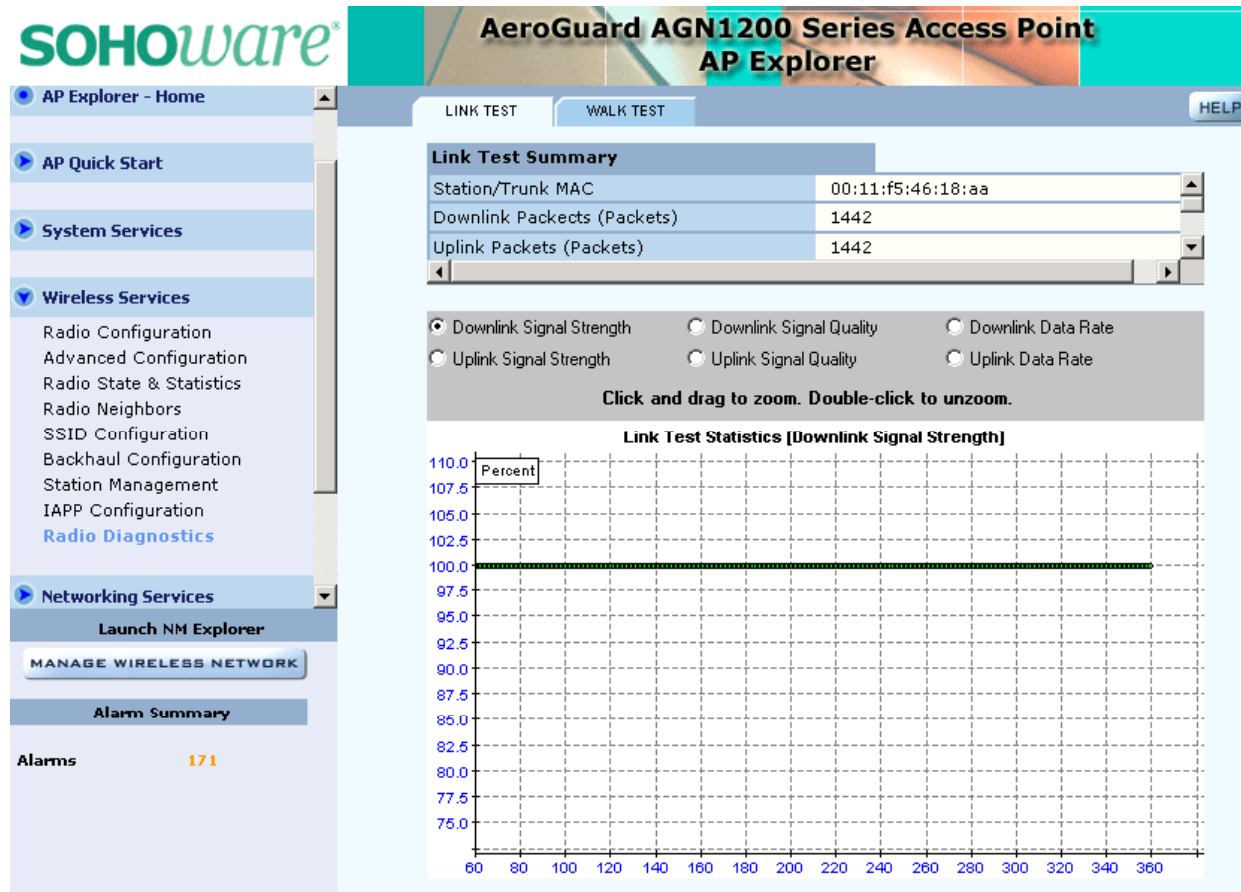
ADD DELETE STOP GRAPH

Under Radio Diagnostics is the 'Link Test' tab where specific links between the AP and a Client can be monitored.

Select a Client

Generate graph reports (see following examples)

# Signal Quality – Rx & Tx



# Signal Strength – Tx & Rx

**SOHware** AeroGuard AGN1200 Series Access Point  
AP Explorer

LINK TEST WALK TEST HELP

**Link Test Summary**

Station/Trunk MAC	00:11:f5:46:18:aa
Downlink Packets (Packets)	1442
Uplink Packets (Packets)	1442

Downlink Signal Strength     Downlink Signal Quality     Downlink Data Rate  
 Uplink Signal Strength     Uplink Signal Quality     Uplink Data Rate

Click and drag to zoom. Double-click to unzoom.

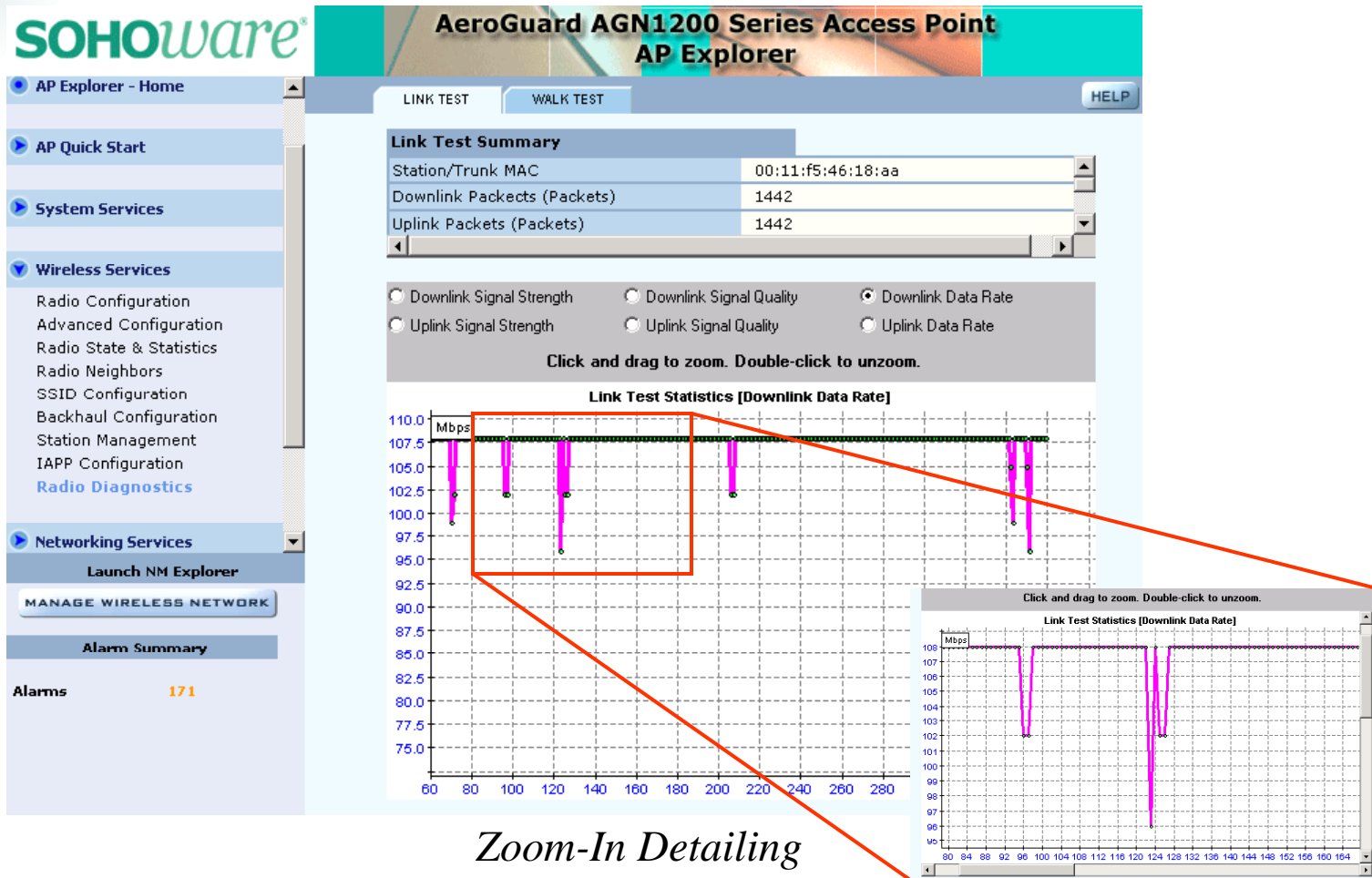
**Link Test Statistics [Downlink Signal Quality]**

Percent

110.0  
107.5  
105.0  
102.5  
100.0  
97.5  
95.0  
92.5  
90.0  
87.5  
85.0  
82.5  
80.0  
77.5  
75.0

60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360

# Data Rate – Tx & Rx



*Zoom-In Detailing*