



HP WLAN Assessment Service

Results for <Customer Name>

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1.0 Introduction

Thank you for purchasing the HP Wireless LAN <Small, Medium or Large Site> Assessment. This report contains the results of the assessment conducted by HP at <Customer Location> on <Assessment Date>. It contains the information necessary to determine the technical feasibility of a Wireless LAN in your environment including the compatibility of the Wireless LAN with your existing network infrastructure. The report content also prepares HP to continue with the successful installation of a wireless solution within that environment.

1.1 Customer Information Table

HP Care Pack Number:	
Date of Assessment:	
Location of Assessment:	
Site ID:	
Customer Name:	
Customer Contact:	
Telephone:	
FAX:	
Customer E-mail:	
Delivery Agent Contact Name:	
Delivery Agent Contact Phone:	
Delivery Contact E-mail:	

End of Chapter

2.0 Review of HP Capabilities

Overview

HP, in conjunction with qualified partners, is proud to provide a unique set of Wireless LAN consulting and implementation services to the SMB marketplace. HP is engaging with servicing partners who have demonstrated proficiency in the delivery of HP-branded services and who employ certified Wireless LAN design professionals.

This combination of vendor developed services methodology and local service professionals afford the “best of both worlds” for you, the HP customer. This section of the document reviews our capabilities that pertain specifically to this assessment services as well as any follow-on implementation services you may require.

2.1 HP Mobility Services

HP offers two services that make it easy for SMBs to access the specialized resources they need to configure and implement the wLAN solution that’s right for them ... quickly and affordably.

HP Wireless LAN Site Assessment Services

The HP wLAN Site Assessment Service provides a personalized assessment resulting in a predictive wLAN site survey report that can be invaluable in planning for and selecting the right wLAN solution. This report provides information on the quantity, placement and coverage of 802.11a, b or g wireless access points. The service includes:

- wLAN assessment service planning and preparation – A wireless technical specialist collects site-specific information such as intended usage, required coverage and bandwidth, location of obstacles and wiring closets, and other key variables that could impact the implementation of a wireless network
- wLAN assessment service delivery - Powerful software uses information about technical/business requirements and building layout drawings to quickly and accurately identify the most appropriate location and setting for each access point
- wLAN assessment service report and recommendations – A detailed report provides diagrams of the proposed wireless network environment. The diagrams show the location of access points and associated coverage maps, plus vendor descriptions of selected Wireless LAN components

Three service levels are available: small (up to 30,000 sq. ft.); medium (30,000 – 60,000 sq. ft.); and large (60,000 – 100,000 sq. ft.). Each service level is limited to 2 stories of a building.

HP Wireless LAN Installation and Startup Service

This service helps ensure enjoyment of top performance and availability from a wLAN solution right from the start. It provides the installation and startup of a specific number of Wireless LAN (wLAN) access points and three client wireless PC devices and includes:

- Hardware pre-installation planning – Includes a review via phone of implementation activities to be performed and determination of a corresponding project schedule.
- Access point deployment - Involves physically installing and connecting access point(s), configuring the Wired Equivalent Privacy (WEP) encryption or static WPA (WiFi Protected Access) key, configuring the SSID on each access point as appropriate, and configuring channel and power settings to maximize performance.
- Installation verification tests (IVT) – Includes basic wireless network detection survey, basic connectivity test to ensure that the access point(s) are wirelessly accessible, and basic coverage assessment to determine WLAN availability.
- Customer orientation session – Covers product usage and special features

Three service levels are available for 1, 5, and 10 access points, each including up to three wireless devices. Multiple HP Care Pack services may be combined to accommodate any number of access points over 10. A separate service is also available for installation of 5 additional client wireless PC devices.

End of chapter

3.0 Situation Overview and Analysis

Overview

<Customer> has purchased a Wireless Site Survey to determine the location, frequency, and type of WLAN access point to use at <location>.

The open conference room design and the sheetrock and stud construction work together to pass the RF to cover the areas with WLAN signals. This limits the number of access points that can be installed without using same channel interference. The 802.11b/g standard only allows for 3 non-overlapping frequencies. This survey takes into consideration, the number of users and the numbers of users per access point. The access points are configured with the lowest possible power settings and lowest gain antennas to help reduce the number of users per AP. This is necessary for effective use of the wireless network.

When the 802.11b/g access point is set to 1 mW output and omni directional dipole antennas are used, the WLAN coverage is optimized for a large number of users and smaller cell coverage. The coverage patterns are intended to be small since each conference room may have up to <??> users on the network at the same time.

The access points can be installed just above the tile ceiling. The antennas are directly attached to the AP and should also be above the ceiling. The locations of the access points are optimized for ease of mounting, distance from wiring closets, and wireless coverage.

It is desirable to use access points that can take power over the Ethernet connection to minimize the installation costs. Some access points would require the installation of electrical outlets in the ceiling to power the units. Other desirable features may be 802.1x security, and the ability to manage multiple Access Points simultaneously. All these features can be found in the Cisco 1200 series AP that the survey tool used for these predictions.

3.1 Site Specific Information

The first and mezzanine floor of the conference center is mainly comprised of the two floor high conference rooms, and the auditorium. Some offices located on the mezzanine will be provided wireless coverage from the access points above and below the mezzanine. There are no access points installed on the mezzanine level. A total of 14 access points are required to completely cover this area and provide acceptable WLAN access speeds. Acceptable speeds are described as 11 Mbps. Diagram 1 shows the placement of these access points. The circles only show that the antennas are omni directional, not the coverage area.

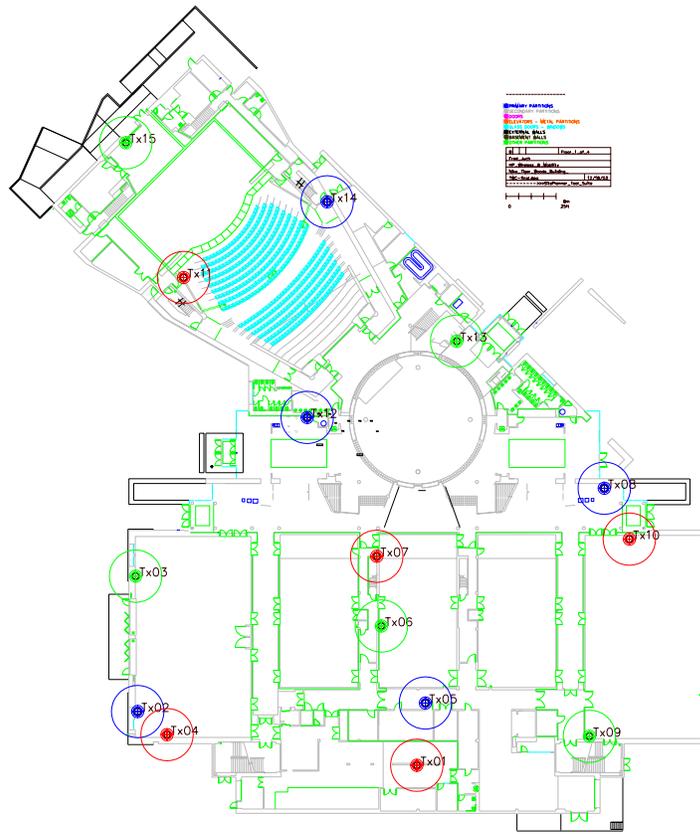


Diagram 1 - First Floor AP Placement

The following table shows the Access Points, and the selected frequencies and power settings for an 802.11b/g implementation.

AP Name	B/G Channel #	Actual Frequency	Power setting
Tx01	1	2412	1 mW
Tx02	2	2437	1 mW
Tx03	3	2462	1 mW
Tx04	1	2412	1 mW
Tx05	2	2437	1 mW
Tx06	3	2462	1 mW
Tx07	1	2412	1 mW
Tx08	2	2437	1 mW
Tx09	3	2462	1 mW
Tx10	1	2412	1 mW
Tx11	1	2412	1 mW
Tx12	2	2437	1 mW
Tx13	3	2462	1 mW
Tx14	2	2437	1 mW
Tx15	3	2462	1 mW

The following drawings show the predicted coverage for each floor. The Circles indicate the antennas are omni directional. The color indicates the 802.11 B/G channel number. Red is 1, Blue is 6, and Green is 11. The shapes around the antennas predict the coverage area for that specific access point. Circles or shapes without a transmitter name in the center, are wireless coverage from access points on a different floor. These are shown to help assign the frequencies in order to not allow overlap between floors. These pictures are available, and will be provided as AutoCAD files or WMF files, as specified by the customer.

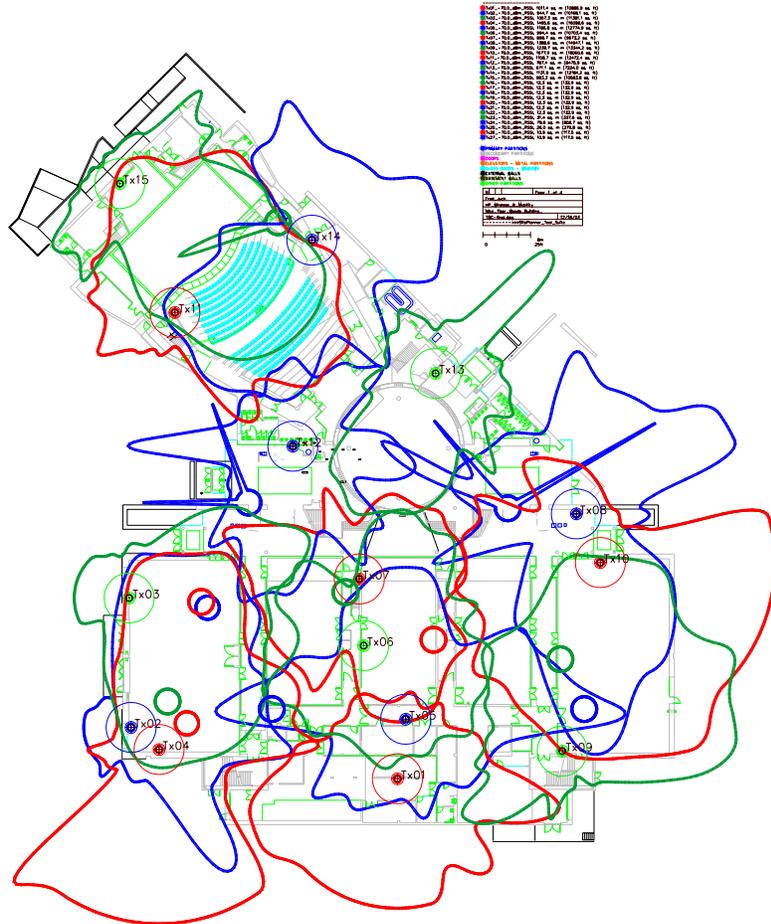


Diagram 2 – First floor Wireless coverage

Cabling to the AP should be to the closest IDF. Switch ports should be made available on existing switches, or new switches added. Inline power injectors should be used there to reduce installation costs.

3.2 Site Details

This installation should create a very large flat switched network. This will make it easy for users to roam throughout the center without having to renegotiate a new IP address. Care should be taken to keep broadcasts to a minimum. If broadcasts become a large percentage of the network traffic, the network may

need to be segmented using a router. Preliminary user broadcasts will need to occur, in order to understand whether or not this may be necessary.

This network may also greatly benefit from a proxy server, which can also be provided by <Supplier>. Since the users will likely be using the network to visit similar locations during a conference, at the same time, this proxy server will serve up (present in a more timely manner), those cached pages and greatly enhance the users experience using the Internet."

"A sample equipment list is shown for reference:

Product	Description	Quantity
AIR-AP1231G-A-K9	802.11g IOS AP w/Avail CBus Slot, FCC Cnfg	15
AIR-PWR-CORD-NA	AIR Line Cord North America	15
AIR-PWRINJ3	Power Injector for 1100, 1200 Series	15
S12W7K9-12213JA	Cisco 1200 Series IOS WIRELESS LAN	15
AIR-CONCAB1200	1200 Platform Console Cable	1
CON-OS-1231GAK9	ONSITE 8X5XNBD 802.11b IOS AP w/Ava	15
AIR-ANT4941	2.4 GHz,2.2 dBi Dipole Antenna w/ RP-TNC Connect.	30

Cisco also offers a device called the Wireless LAN Solution Engine (WLSE) that will manage many access points at the same time. Information on it can be found at <http://www.cisco.com/en/US/partner/products/sw/cscowork/ps3915/ps5297/index.html>.

Another suggestion is for the customer to implement a Bluesocket wireless gateway. This network device can authenticate authorized users and allow them secure access to the internal network while allowing unauthorized users access only to a walled garden or the Internet. Information can be found at <http://www.bluesocket.com>. A redundant pair of WG-2100s with 1000Base-T interfaces should serve the <location> adequately.

Miscellaneous fasteners may be necessary for mounting the access points. Cisco does include many different fasteners with the access point. If the power injector above is used, additional Category 5e jumpers will be needed to connect the access point to the switch. This and other options are shown here:

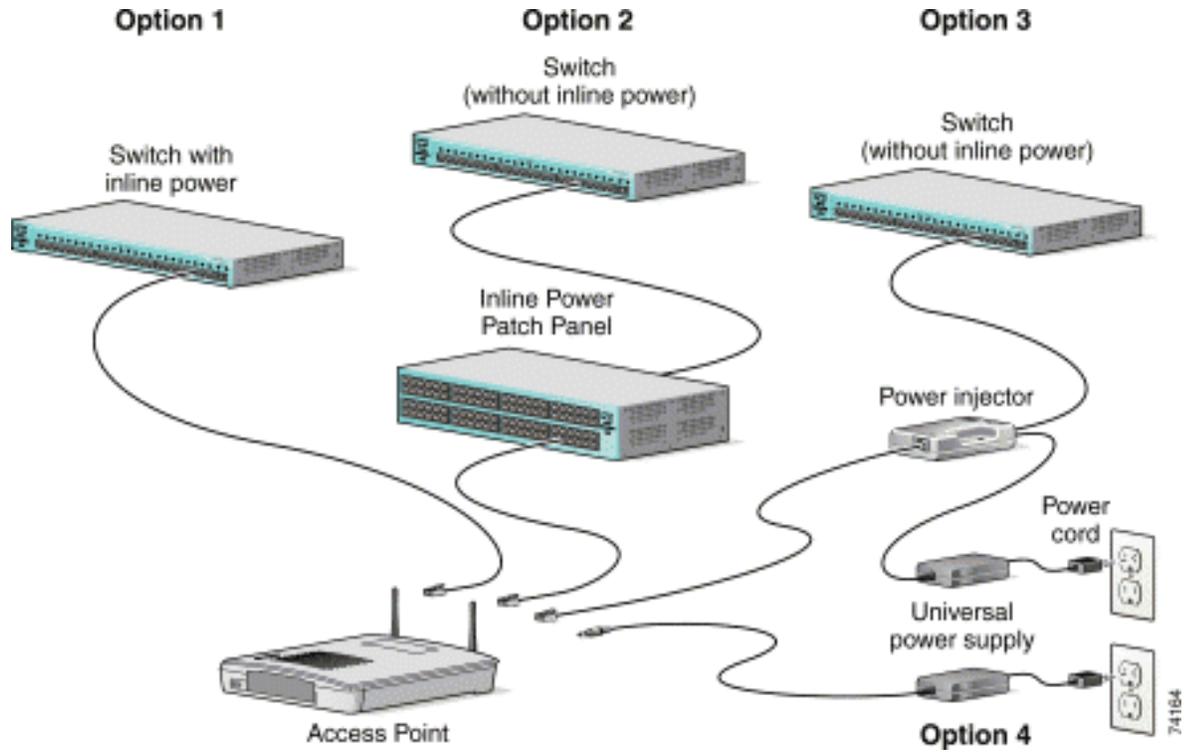


Diagram 3 – POE connection options

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End of Chapter

4.0 Additional Services

HP can also install the access points and provide other services in the Complex. Here is a short summary of these services and budgetary prices for the services:

Indoor AP configuration & installation:

WLAN Services product number	Description of Service	Quote
UC209E	HP Startup wLAN 1 Access Point Service	Contact any of our worldwide sales offices or an HP Authorized Reseller, or visit our Web site for at: www.hp.com/go/carepack
UC210E	HP Startup wLAN 5 Access Point Service	Contact any of our worldwide sales offices or an HP Authorized Reseller, or visit our Web site for at: www.hp.com/go/carepack
UC211E	HP Startup wLAN 10 Access Point Service	Contact any of our worldwide sales offices or an HP Authorized Reseller, or visit our Web site for at: www.hp.com/go/carepack
UC214E	HP Startup 5 Wireless Device Service	Contact any of our worldwide sales offices or an HP Authorized Reseller, or visit our Web site for at: www.hp.com/go/carepack

Cabling indoor: available upon request

Many other network design, implementation and troubleshooting services are available. Please contact [<Contact Information>](#), and request more information if you are interested.

4.1 Closure Document (Optionally Included in Assessment Report)

Please sign the attached Completion Document and return to [<Contact>](#).



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End of chapter