



YOUR LOGO HERE!

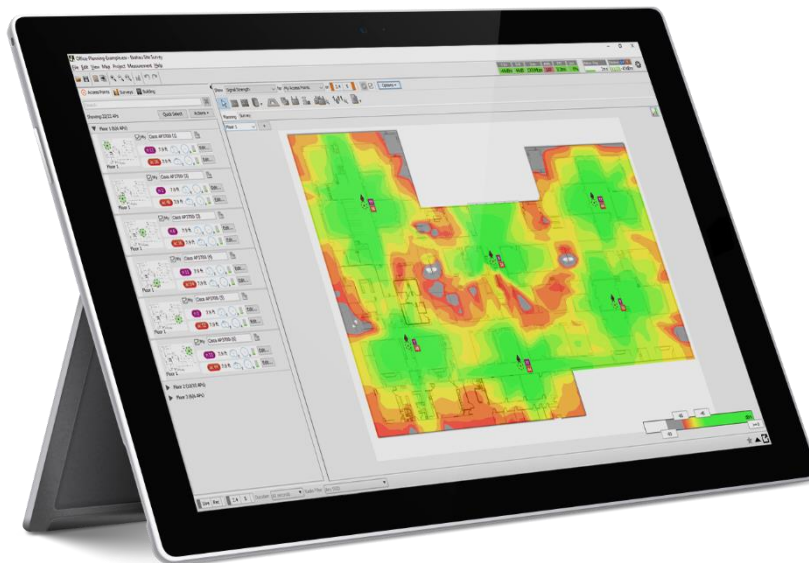
Fictional Hotel



PROPERTY NAME HERE!

Predictive Wireless Design Report

*Prepared by *your name here**



EVERYTHING IS CUSTOMISABLE!



CHANGEABLE COLOURS!

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Executive Summary

This Predictive Wireless Design has been considered for a full hotel and has been designed accordingly.

Using our wireless engineering software, we created a design based on the buildings plans to predict and design the wireless network.

The AP placement and Channel design has been specifically configured to maximize the effectiveness of the network under load.

Aps have been placed specifically for their intended purpose and should be mounted as per the mounting instructions at the end of this report. APS have been set to a height of 2 meters off the ground.

This report is intended to be a predictive model for the purposes of illustration, and installation. To validate the findings, it is recommended performing an on-site validation survey after the network has been completed where some configuration changes may need to be made.



EDITABLE CONTENT!

Level 1 - Hotel

Survey routes and Access Points for Level 3 – Restaurant.



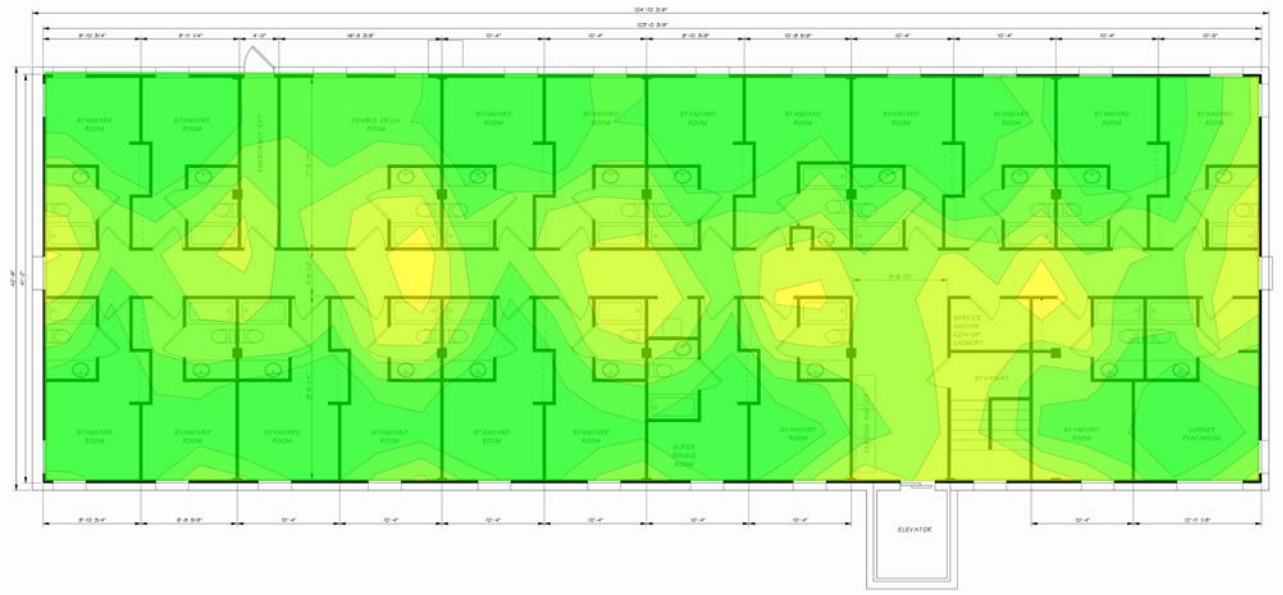
Level 1 - Hotel. (504.0 m²)

Coverage Requirement: Voice + Data	Signal Strength Min	-67.0 dBm
	Signal-to-noise Ratio Min	20.0 dB
	Data rate Min	20 Mbps
	Number of Access Points Min	2 at min. -75.0 dBm
	Channel Overlap Max	2 at min. -85.0 dBm
	Round Trip Time (RTT) Max	200ms
	Packet Loss Max	2.0 %

Signal Strength for Level 1 - Hotel

on 2.4 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



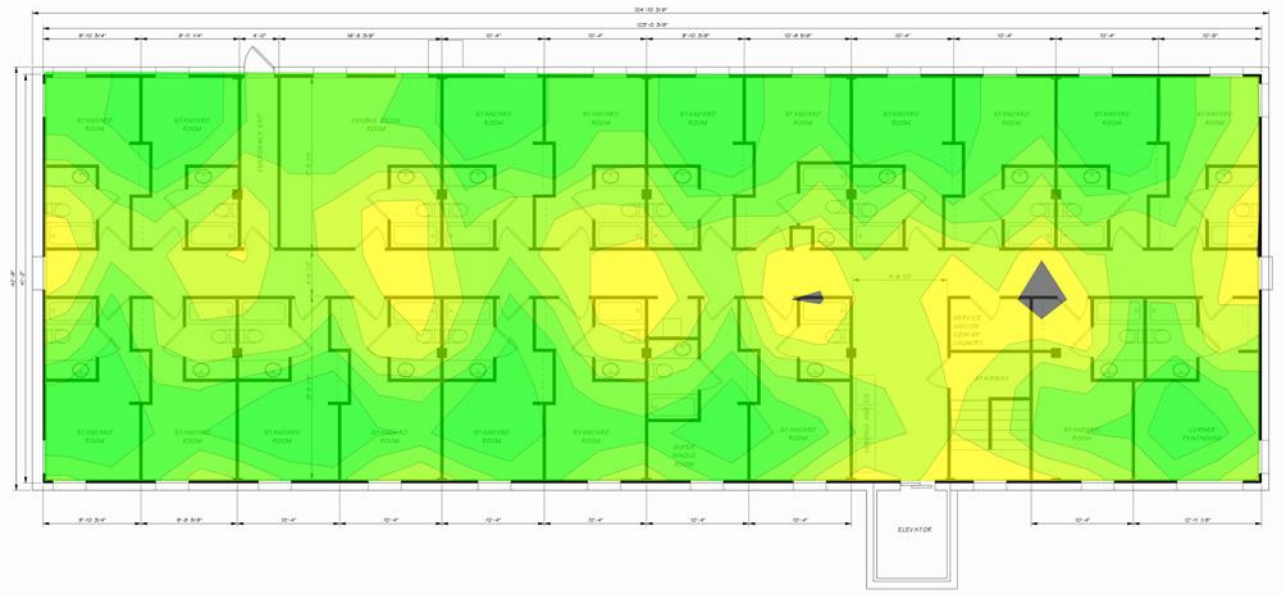
-80.0dBm

≥ -45.0dBm

Signal Strength for Level 1 - Hotel

on 5 GHz band

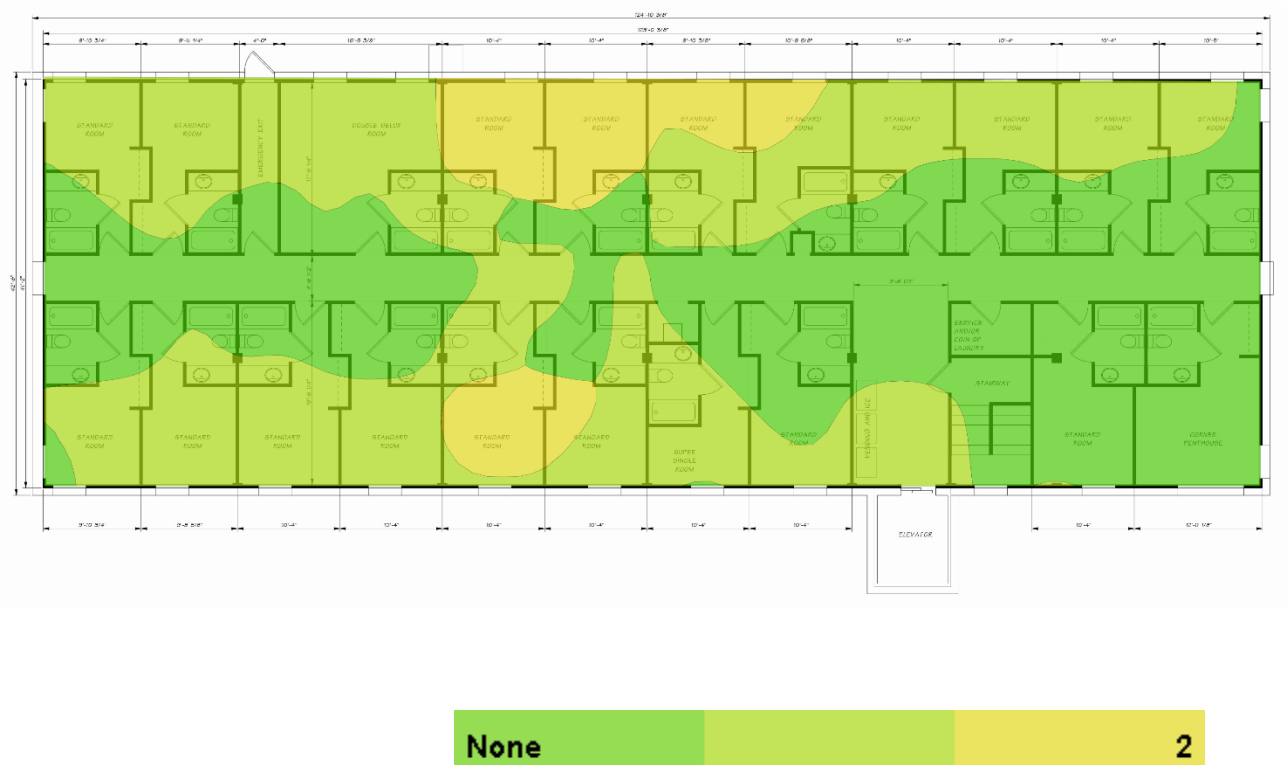
Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



Channel overlap for Level 1 - Hotel

on 2.4 GHz band

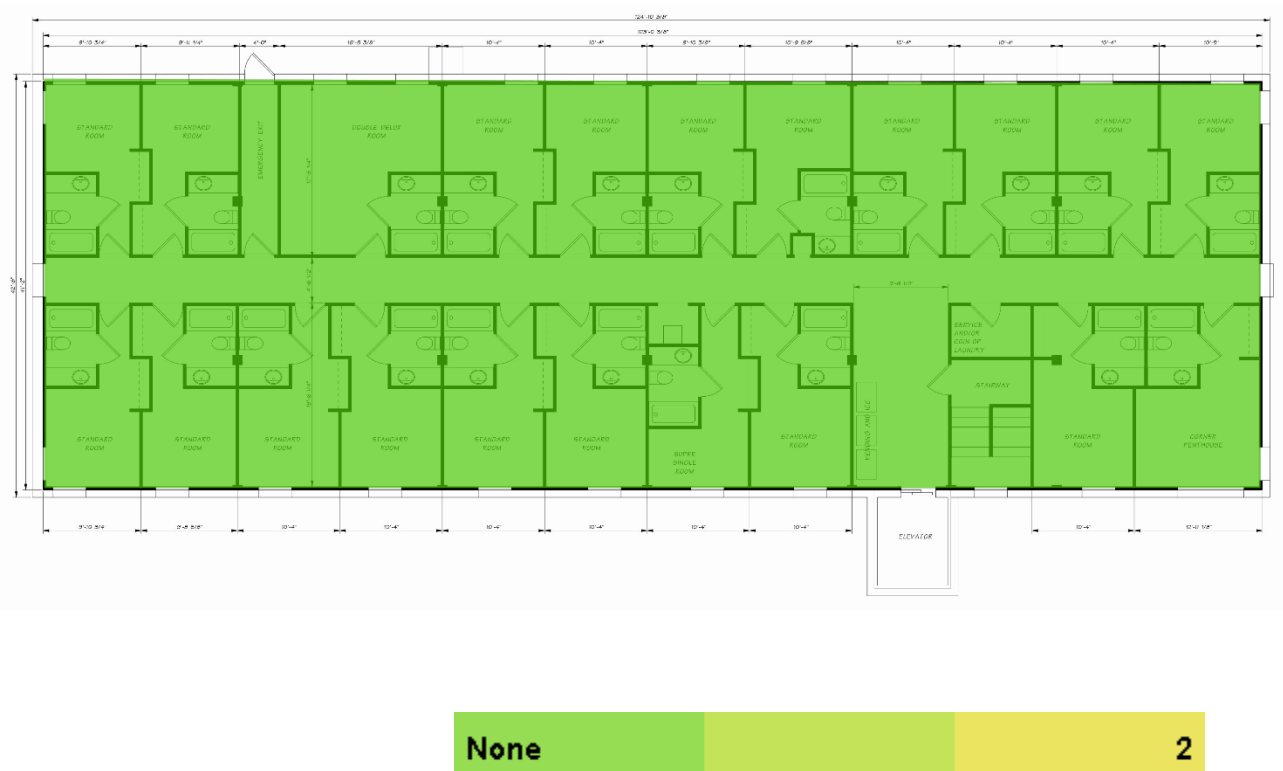
Channel overlap indicates the number of access points audible at each location in a single channel.



Channel overlap for Level 1 - Hotel

on 5 GHz band

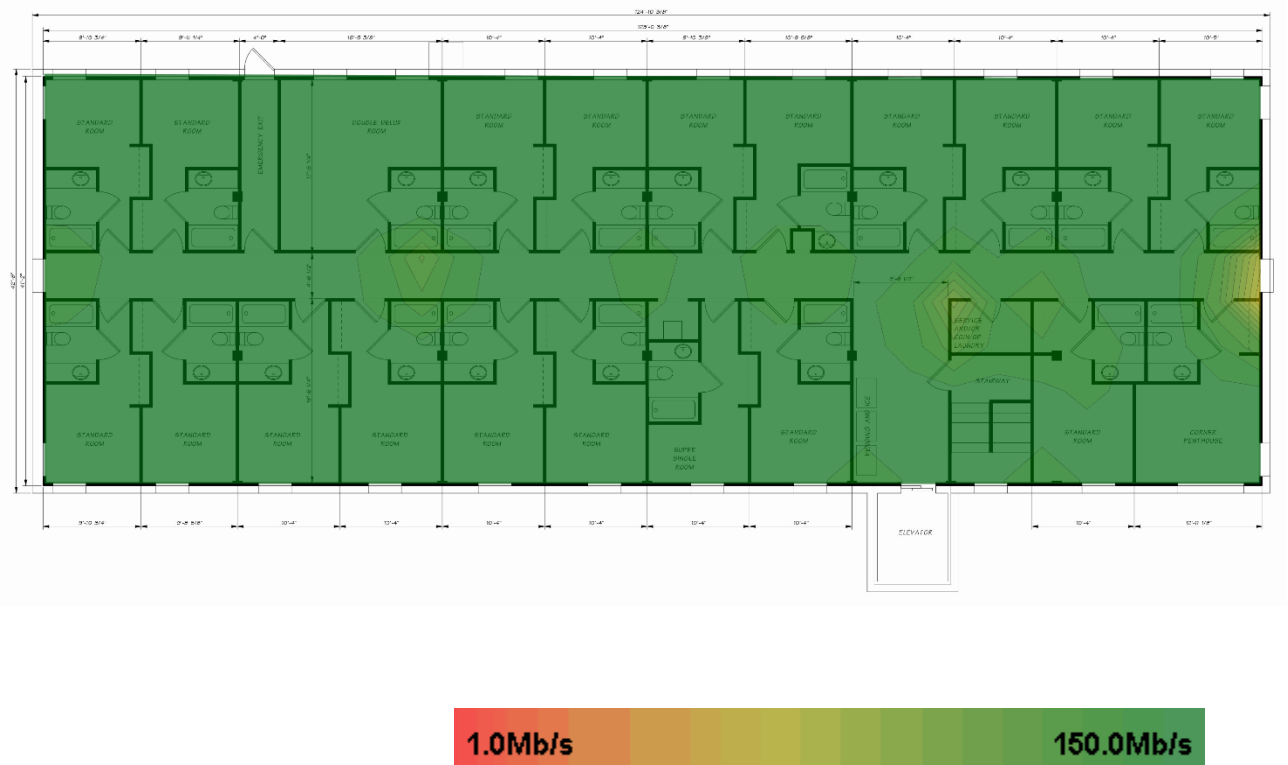
Channel overlap indicates the number of access points audible at each location in a single channel.



Data Rate for Level 1 - Hotel

on 2.4 GHz band

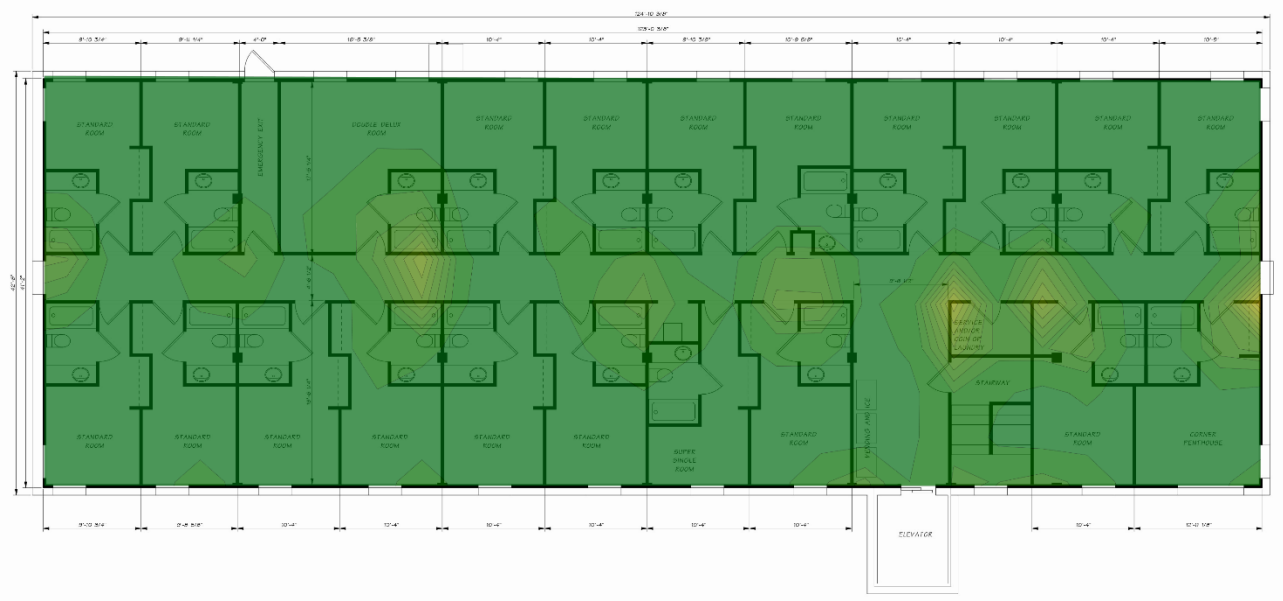
Data Rate is the highest possible speed (measured in megabits per second) at which the wireless devices will be transmitting data. Typically the true data throughput is about half of the data rate or less.



Data Rate for Level 1 - Hotel

on 5 GHz band

Data Rate is the highest possible speed (measured in megabits per second) at which the wireless devices will be transmitting data. Typically the true data throughput is about half of the data rate or less.



1.0Mb/s

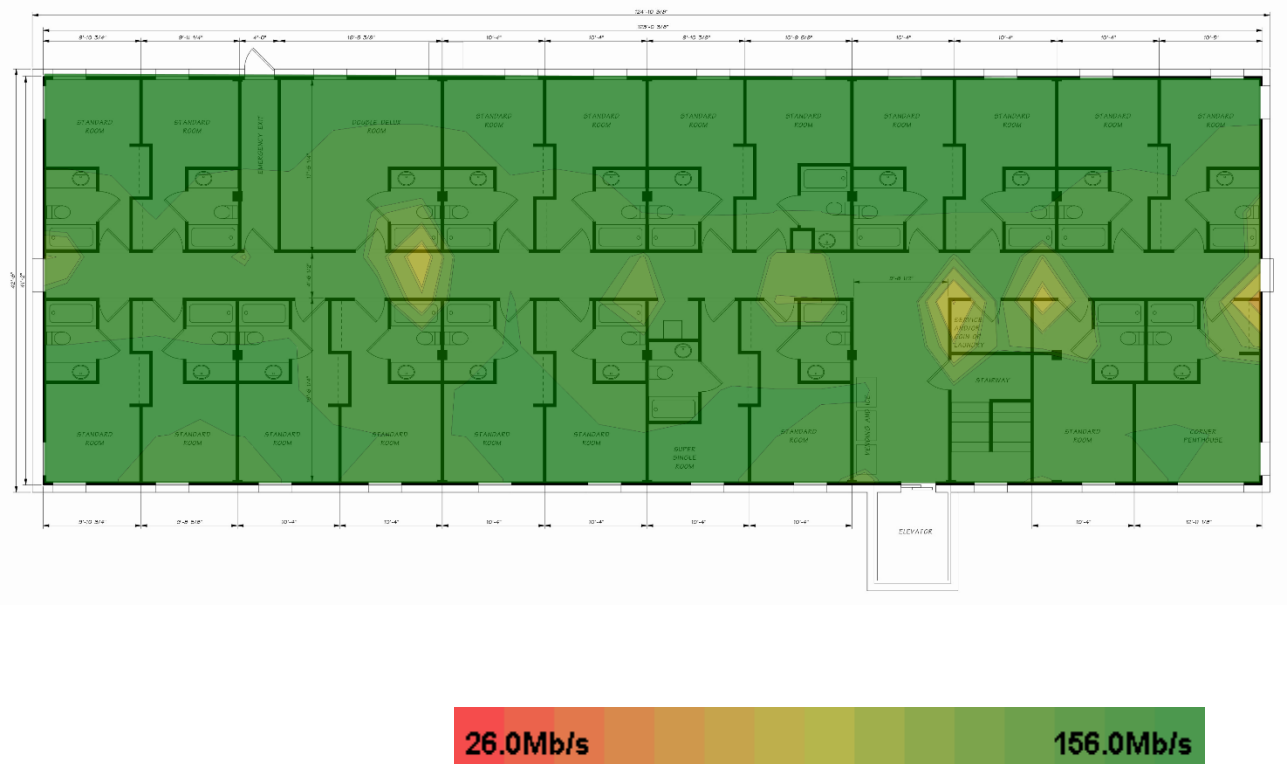
180.0Mb/s

on 2.4 GHz band



on 5 GHz band

Displays the measured throughput. If no measured throughput is available, then the estimated maximum throughput is shown instead.



Channel Bandwidth for Level 1 - Hotel

on 2.4 GHz band

Shows the maximum channel bandwidth available in each area.



on 5 GHz band

Shows the maximum channel bandwidth available in each area.



Access Point Placement / Configuration

Level 1 - Hotel



Simulated Access Points on Level 1 - Hotel

AP #	Access Point			
1	Room 102			
	802.11n	11	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	165	25 mW	Ruckus ZoneFlex H510 5GHz
2	Room 104			
	802.11n	1	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	40	25 mW	Ruckus ZoneFlex H510 5GHz
3	Room 106			
	802.11n	6	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	56	25 mW	Ruckus ZoneFlex H510 5GHz
4	Room 108			
	802.11n	11	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	48	25 mW	Ruckus ZoneFlex H510 5GHz
5	Room 110			
	802.11n	1	20 mW	Ruckus ZoneFlex H510 2.4GHz

	802.11ac	149	25 mW	Ruckus ZoneFlex H510 5GHz
6	Room 112			
	802.11n	6	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	36	25 mW	Ruckus ZoneFlex H510 5GHz
7	Room 115			
	802.11n	1	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	161	25 mW	Ruckus ZoneFlex H510 5GHz
8	Room 117			
	802.11n	11	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	153	25 mW	Ruckus ZoneFlex H510 5GHz
9	Room 119			
	802.11n	6	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	64	25 mW	Ruckus ZoneFlex H510 5GHz
10	Room 121			
	802.11n	1	20 mW	Ruckus ZoneFlex H510 2.4GHz
	802.11ac	52	25 mW	Ruckus ZoneFlex H510 5GHz

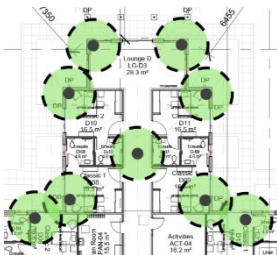
Installation

Best practices for placing AP's



(cisco ap shown as a reference)

Most AP's are designed to be mounted on a ceiling, facing downwards. Unless otherwise specified in the design please follow this method. Don't place AP's above ceiling tiles as this will dramatically affect signal.



The AP design is specific within 1 meter. If the installer runs into a pole or an obstacle, that is fine to move the location of the AP within a meter.



Sprinkler manufacturers spray patterns will vary, but generally make sure the placement of the AP is over a meter away from a fire sprinkler or any other type of sensors such as smoke.



Don't place AP's on, or behind metal objects. If necessary, construct a bracket to drop the AP below the lowest metal object. Or place AP on a piece of wood that is attached to the metal and make sure the AP is parallel to the ground.