



Improve your Wi-Fi Coverage ! No More Wi-Fi Dead Spots

[Wi-Fi in the office](#) is great. It reduces the amount of network Ethernet cabling, and it lets smartphones and tablets work inside the network. The only problem is that it might not reach everywhere. The office space might be too large to reach the usable end of the Wi-Fi signal. There might be dead spots with no Wi-Fi signal. It could be helpful to extend coverage past the building walls. With a little extra effort, it's possible to do these things.

Locating the problems

The first step is to see exactly where the problems are. Is the problem mainly one of range, or are there particular areas that aren't getting a good signal? Software that lets you map signal strength will let you answer this question. Tools include HeatMapper for Windows, NetSpot for Mac OS, and WiFi Analyzer for Android. If you are able to provide building diagrams or blueprints, we can design a comprehensive Wi-Fi coverage project map commonly referred to as a heat map.

Locating weak spots or interference areas may point to the reasons for the poor signal quality. A brick or concrete wall might be significantly blocking the Wi-Fi signal. The access points might be near electrical equipment, microwave ovens, or large metal objects. A slight rearrangement of equipment might eliminate those problems.

Some areas might be too far from the access point, or they might be in areas with interference problems that don't have an easy fix. In these cases, improvements to the wireless network are necessary.

Enhancing the access point

The first place to look for improvement is in the Wi-Fi access point. A wireless network access point is far more powerful and preferred over a consumer grade router. Having an access point that supports a recent version of the wireless protocol will help. The very latest protocol is 802.11ac, with most new mobile products having support for this protocol. A device that supports 802.11n or 802.11ac will have the broadest range of frequencies to choose from, which can often improve connections. A good quality access point is a modest investment, and critical if wireless is important to operations or supports your BYOD [Bring Your Own Device] strategy.

Next, check the access point location. If there's just one, it should have a central location so that all the devices are reasonably close to it. It should be away from any sources of radio interference or reflections. The device should sit out in the open and as high as possible. Access points should never be installed in a cabinet or in a low area. The positioning of access points can make a big difference. Often parts of the building structure inhibits the Wi-Fi signal. A good wireless design process will discover problems before installation.

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Adding points of connection

One access point might not be enough, even under the best of conditions. You likely will need to install additional access points.

Additional access points can go anywhere that you have Ethernet wiring. A comprehensive wireless design will provide the optimum number of access points and their location. Having too many or too little access points can impact the wireless signal dramatically. Location is also very important.

Weatherproof access points or bridge access points are a possibility for outdoor areas. Often a Wi-Fi signal will cover a greater area or distance than you might think.

Positioning equipment better, upgrading an access point, or adding additional access points may be all that you need to get superior Wi-Fi coverage everywhere that you need it. It shouldn't take a huge amount of money or effort to end the frustration of dead spots and slow connections.

Combined Systems Technology can provide the solutions to your IT problems. Our wireless network engineers can provide a strong & dense yet secure wireless network for your business. We are specialists in wireless network technology. [Contact us](#) to learn more about improving the Wi-Fi at your company, 515-270-5300.



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